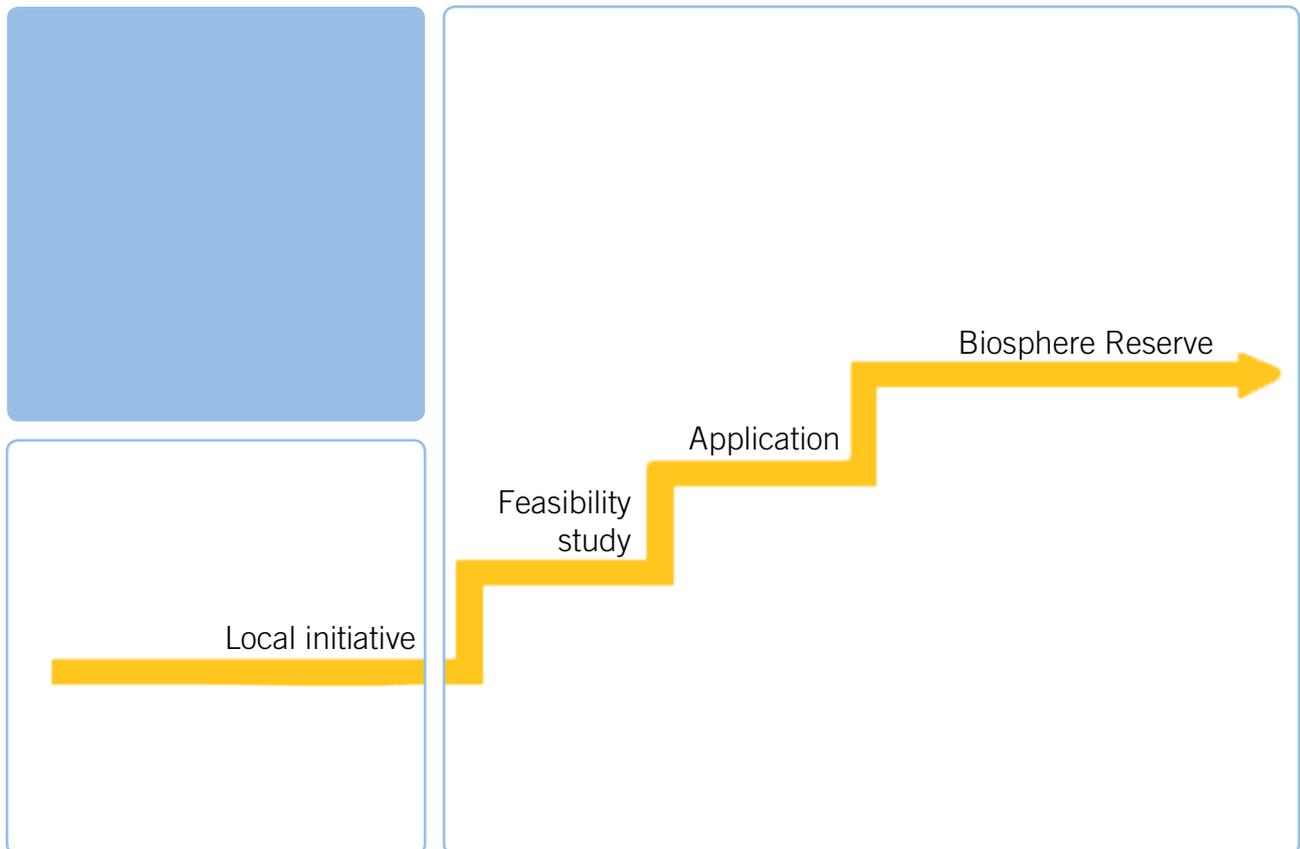


The process of creating Biosphere Reserves

An evaluation of experiences from implementation processes in five Swedish Biosphere Reserves

EMIL SANDSTRÖM OCH ANNA OLSSON

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processes in five Swedish Biosphere Reserves

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Preface

Since 2002, the Swedish Environmental Protection Agency has actively supported the work with Biosphere Reserves in Sweden. The Agency has also headed the MAB (Man and the Biosphere) Committee since 2010. The purpose is to support and promote locally established work with long-term sustainable development, within a limited number of selected areas where the ecological dimensions, interact with the social and economic dimensions.

Biosphere Reserves are, in the view of The Swedish Environmental Protection Agency, model areas for an approach which complements the other forms of support and incentives available for the achievement of environmental goals and long-term sustainable development. It is furthermore an important part of conservation work to protect valuable environment. Decisions on Biosphere Reserves do not provide protection in the legal sense and do not in themselves provide any restrictions or increase demands on existing protected areas. The role of the areas, through coordinated planning and collaboration, is primarily to combine the conservation of particular valuable and utilised core areas within larger areas.

In that all five of the previous candidate reserves are now Biosphere Reserves designated by UNESCO, the Swedish efforts can shift focus somewhat. At the same time it is important to learn from the implementation processes of the five Biosphere Reserves, in the face of continuing work and for possible new areas seeking accreditation. Evaluation is one part of the Swedish Environmental Protection Agency's long-term goal of disseminating experiences, good practice and effective methods for collaboration and sustainable management of natural resources.

The task in brief has been to compile experiences, and to analyse the implementation processes of achieving Biosphere Reserve status in Sweden's five Biosphere Reserves.

The evaluation has been carried out by Emil Sandström and Anna Olsson at the Department of Urban and Rural Development of the University of Agricultural Sciences (SLU), commissioned by the Swedish Environmental Protection Agency. A large number of people with different connections to Biosphere Reserves have also contributed to this work (see appendix 1). To all of the above we extend warm thanks. The report's layout and conclusions are the author's responsibility.

The Swedish Environmental Protection Agency November 2012

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Abbreviations

EU	The European Union
Leader	Liaison entre actions de développement de l'économie rurale, translation: Collaboration on methods to strengthen the rural economy
LONA	Lokala Naturvårdsbidrag (Local Environment Protection Contribution)
LRF	Lantbrukarnas Riksförbund (The Federation of Swedish Farmers)
MAB	Man and the Biosphere
NeDa	Nedre Dalälvsamarbetet (Nedre Dalälvs Collaboration)
NEDAB	Nedre Dalälvens Utvecklingsaktiebolag (Nedre Dalälvs Development Company)
SKL	Sveriges Kommuner och Landsting (Swedish Association of Local Authorities and Regions)
SLU	Sveriges lantbruksuniversitet (The Swedish University of Agricultural Science)
SNF	Naturskyddsföreningen (SSNC Swedish Society for Nature Conservation)
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WWF	Världsnaturfonden (World Wildlife Fund)

1 Introduction

During autumn 2011 The Swedish University of Agricultural Science (SLU) was given the task by the Swedish Environmental Protection Agency, to evaluate the implementation processes involved in establishing Biosphere Reserve status in five Swedish Biosphere Reserves (of which one is still in candidate phase).

The evaluation also aims to be proactive, in order that the conclusions and recommendations prepare the ground for further work on Biosphere Reserves. The long-term goal of the Swedish Environmental Protection Agency, with this and other evaluations, is to disseminate experience and good practice with respect to effective methods for collaboration, and long-term management of natural resources.

Within UNESCO's "Man and the Biosphere" (MAB) programme, Biosphere Reserves are important tools. MAB as a concept originated in the 1960s and was from the start a scientific initiative. The original idea of the MAB programme was, amongst other things, to find through research, relevant solutions through sensible use and conservation of natural resources. The Biosphere Reserve as an idea and tool was introduced into the programme in 1973.

Today there are circa 580 areas in over 100 countries worldwide that are internationally recognised by UNESCO. Sweden enlisted in the MAB programme in 1986 and the development of Biosphere Reserves as determined by what is known as the Seville Strategy ¹ (1995) has been on-going since the beginning of 2000. Interest in Biosphere Reserves has grown since then and in the last five years UNESCO has designated four new zones in Sweden (a fifth zone is nominated and will be designated in July 2012). The Swedish Environmental Protection Agency, which supports the handling processes of the applications for nomination to Biosphere Reserves by UNESCO has, together with the applicants involved, seen the need to collate the experiences of the application and implementation processes for designation to Biosphere Reserves.

The vision of the Swedish MAB programme is that "Society ensures the basis for human welfare through the conservation of biological diversity and sustainable use of ecosystem services" (<http://www.biosfaromrade.org/>, April 2012). It is intended that the Biosphere Reserves will function as a cohesive unit in order that different stakeholders get the opportunity to interact in a strategic way, and create the conditions for learning. The purpose of the Swedish MAB programme is to "Create conditions for Biosphere Reserves to serve as model areas for sustainable development, and stimulate the research which strengthens the role of the Biosphere Reserves in the learning process on sustainable use of ecosystem services, as well as to interact with, and inspire in order to translate experience and knowledge from the model areas" (<http://www.biosfaromrade.org/>, April 2012).

¹ <http://unesdoc.unesco.org/images/0010/001038/103849Eb.pdf>

The Programme Committee for the Swedish MAB has a decision-making and financing function. The Swedish Environmental Protection Agency heads the Committee and also holds the Chair. In addition the Committee comprises representatives from research funding bodies, research institutions, The Swedish Association of Local Authorities and Regions and The Biosphere Council. The Biosphere Council has the task of developing the programme and is the MAB Committee's Executive Agency. The membership comprises the national MAB Coordinator and all of the Biosphere Coordinators. Within MAB there is also a Biosphere network, which is intended to work as a reference network made up of stakeholders and those active within the Biosphere Reserve and the MAB programme.

1.1 Evaluation objectives, issues and demarcations

The evaluation objectives are:

- To compile the knowledge acquired from the work associated with achieving Biosphere Reserve status, in five Swedish Biosphere Reserves.
- To analyse the implementation processes involved in achieving Biosphere Reserve status.
- To be proactive and through conclusions and proposals, form a basis for continued work with Biosphere Reserves.

To describe the work processes, we have sought answers to the following questions:

- What are the origins of the work processes concerning Biosphere Reserves?
- Which other stakeholders have been involved in the processes?
- On what basis have potential stakeholders been excluded from the processes?
- How has the working process been affected by other activities/projects in the area?
- Have they appeared competitive/inhibited by the work with Biosphere Reserves or conversely supportive of the process?
- How have the relevant local stakeholders been involved, and what is their attitude to the work/process?
- How has the work been funded and how is future financing expected to be resolved?
- How have problems and challenges been handled?
- Do problems/conflicts remain?
- How have potential conflicts been handled?
- Which success factors have been identified?
- How have organisational and administrative arrangements been resolved?

- How well related are the basic principles of MAB and the key issues which form MAB's core values?
- How is the role of research in Biosphere Reserves considered?

2 Evaluation model and methodological approach

2.1 Evaluation model

In the task of evaluation we have used an evaluation model in five stages (figure 1).

- i) Initially we collected the information on the different Biosphere Reserves
 1. prerequisites (the origin and background of Biosphere applications)
 2. the work process
 3. the result (i.e. which organisational arrangements have finally been arrived at)
- ii) These three parts of the evaluation have thus provided the basis from which to
 4. draw conclusions and
 5. make recommendations

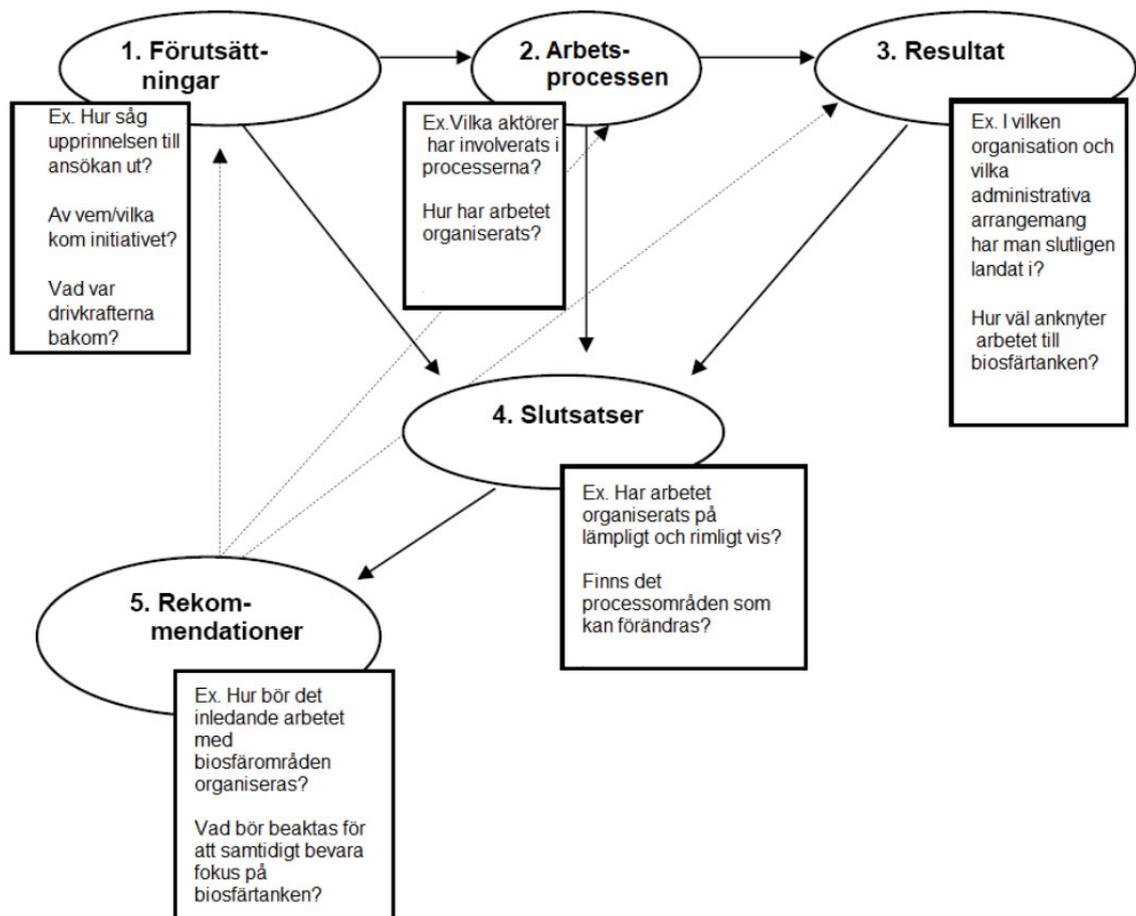


Figure 1: Evaluation model (modified from Norrby, Sandström and Westberg 2011)

- 1) Prerequisites: e.g. What was the origin of the application? From whom did the initiative come? What was the motivation behind it?

- 2) Work process: e.g. Which stakeholders have been involved in the processes? How has the work been organised? (See further key questions in the chapter's introduction)
- 3) The result: Which organisation and which administrative arrangements have finally been arrived at? How well does the work relate to the Biosphere concept?
- 4) Conclusions: Has the work been organised in an appropriate/reasonable way?
- 5) Recommendations: How should the initial work with Biosphere Reserves be organised? What should be taken into account in order to maintain the focus on the Biosphere concept?

2.1.1 Prerequisites

In order to evaluate the work processes involved in achieving Biosphere Reserve status, we have considered it necessary to also have an understanding of the origin of the application to become a Biosphere Reserve. We have thus, in addition to questions on the work processes themselves, also tried to trace the prior history of the emergence of the Biosphere candidates. From whom did the initiative come to establish a Biosphere Reserve? What was the motivation behind the application to form a Biosphere Reserve? Pre-conceptions of the process before the areas acquire candidate status, have provided the evaluation with important information for interpreting later work processes and events/results.

2.1.2 Process

So that descriptions of the work processes associated with the Biosphere Reserves are not too tightly produced as the result of the involvement of individuals in the issue, it is important also to focus on organisational and administrative arrangements. Through studying how the work processes are incorporated in different networks and organisational activities, the opportunity to highlight the work processes as a collective social process is offered.

Work collaboration at a local level (users, residents etc.), as well as higher up in the different decision-making hierarchies, is described to illustrate the legitimacy of the process in a broader context. Those who contributed to, took part in, and not least influenced the process, are described. Showing the roles and responsibilities of the various stakeholders in the process, is of central importance in order to learn from the work and the results achieved.

Studying the work process between the various stakeholders as a collaborative process, is of major significance to the evaluation. How is the decision made? Who is involved in the decision? Who is invited to participate in the context in which decisions are taken? Are the work processes characterised by flexibility and mutual understanding or by "top-down"? Have other societal projects or activities that have significance for the locality, affected the work processes of the Biosphere Reserves? Has anything arisen in the collaboration that was not planned (positive

and/or negative)? Has the work created new contexts, e.g. learning and/or increased or limited flexibility of the various stakeholders? It is also important to study how the funding opportunities affect the work process. To what extent do those involved in the work processes deem that the funding opportunities steer the work?

2.1.3 Results

The results of the evaluation should be considered in relation to the objective of obtaining a basis for continued work with Biosphere Reserves and the Swedish Environmental Protection Agency's long-term goal to disseminate experiences, good practices and effective methods and models for sustainable management of natural resources. Evaluation in this context refers to, among other things, generating new empirically based knowledge on organisational and administrative solutions finally arrived at by the different Biosphere Reserves. Description and examination of the processes should also result in increased knowledge on the extent to which the work appears to strike a balance, between sustainable use and conservation (environmental quality objectives), and the extent to which the work is permeated by "the Biosphere concept".

2.1.4 Conclusions and Recommendations

In the conclusions, a summary analysis of the answers to the questions posed is conducted, in which we make nuanced judgements on the work processes' differing qualities. Lessons from the work in the respective Biosphere Reserves allow the opportunity to discuss both unique and general experiences from respective areas.

In the summary analysis of the evaluation results, we have linked to current experience and research within the field. There we discuss the Biosphere Reserve's implementation processes, based on theories of so-called interactive governance. In the conclusions of the evaluation the analysis is thus linked to the transition from what may be described as more hierarchical regulated governance, to a more collaboration-focused and network-based governance. This transition is characterised, among other things by a wish to involve a diversity of stakeholders, and is seen in many cases as a solution to establish decisions taken and facilitate implementation (Hedlund and Montin, 2009).

The recommendations focus on the described and analysed work processes' potential, and are behind proposals and support for continued work with Biosphere Reserves. Recommendations also become, to some extent, linked to the more long-term goal of evaluation, namely disseminating experience, good practice and effective methods for collaboration and sustainable management of natural resources. Recommendations will therefore include handling of difficulties that typically arise in the collaboration processes between a diversity of stakeholders, and also when adapting and integrating new management tools with existing, is concerned.

2.2 Methodological Approach

The evaluation's methodological approach is qualitative and explorative, partly in order to create a deeper understanding of the individual Biosphere Reserve's work processes, and partly in order to describe the work processes involved in achieving Biosphere Reserve status in a broader societal context. Thus the evaluation does not focus solely on understanding the individual Biosphere Reserve's work processes (in depth interest), rather the evaluation is also interested in similarities and differences in a broader sense.

In order to get a better understanding of that which is unique and that which is mutual respectively, to the work processes of the individual Biosphere Reserve, we use a comparative procedure, (a comparative analysis). A comparative analysis stimulates the evaluation to reinterpret, which would otherwise be more difficult to implement without a comparative approach. Comparative studies are characterised by the acceptance that there are similarities and differences in the areas of enquiry, which are important to study in order to gain understanding of the areas/work processes being examined. A comparative analysis of similar processes with different prerequisites, also contributes to obtaining a "rich picture" which allows triangulation of different aspects of the work processes for achieving Biosphere Reserve status.

The data sources in the evaluation are made up of a combination of interviews and document studies. In this case, document studies meant reading and checking information relevant to the evaluation. The information was made up partly of the application documents for the respective areas and diverse reports and steering documents to do with the Biosphere Reserves in Sweden, and partly collected material in the form of protocols and minutes from meetings, websites etc., as well as research material. We have conducted an overall analysis of the different documents and then extracted the information relevant to the evaluation.

The interviews were conducted with the important key personnel in the processes, including the coordinators of Biosphere work, and involved local councillors in their respective areas. The interviews were carried out in a semi-structured format. Supplementary telephone interviews, some of which were in questionnaire format, were also used for other people who were involved in different ways in the work process or were knowledgeable about Biosphere work.

The interviews have provided the evaluation with information from relevant stakeholders on their view of the work and their considerations with regard to the work and results. The interviews also provided information on what those who produced the plans, personally consider to be the greatest challenges in the work, and how these were dealt with. In order to get a wider picture of the work process, information was also collected through more unstructured conversations with a number of people with connections to the Biosphere processes. The questions were of a type that gave the interviewees the encouragement and scope to critically look both forward and backward. The interviews could be seen not only as an opportunity for learning and self-reflection on the work processes with an established Biosphere

reserve, but they also allowed for increased understanding of how the Biosphere work could be developed in the future.

3 Description of the work processes of Biosphere Reserves

In this chapter we describe the various Biosphere Reserves. Each Biosphere Reserve is described and analysed based on the questions posed in the evaluation. The descriptions of the different Biosphere Reserves are divided in the following way; *i) the origin, ii) involved stakeholders and organisations, iii) financing, iv) challenges and success factors*. Each description concludes with a summary reflection.



3.1 Kristianstads Vattenrike (Kristianstad Wetland)

The Kristianstad Wetland Biosphere Reserve includes most of Kristianstad's Municipality and is one of the country's most diverse Nature Reserves (Nekoro & Svedén, 2009). The area incorporates wetlands along the River Helge (Helgeån) and the forests in Linderödsåsen as well as the coastal parts of Hanöbukten, with Kristianstad in the centre. About 70,000 people live within this area of approximately 100,000 hectares. Kristianstad Wetland is characterised by a diversity of nature, which has been formed to a large extent by several hundred years of human activity and usage. The core area of Kristianstad Wetland consists of a Nature Reserve, Habitat Protection Areas and Natura 2000 Areas. Protected under Swedish law, the area amounts to 7,179 hectares. The conservation objective within the protected parts of the area is linked above all to sea surfaces that connect to shoreline, swamp and coastal forest (Kristianstads Vattenrike, 2005).

3.1.1 The Origin²

The ideas behind developing the area into what today is Kristianstads Vattenrike (Kristianstad Wetland) began to take shape at the end of the 1980s, when the representatives for nature conservation in the area realised that the work creating the reserves and the local nature conservation work was not enough. Initiators and the driving force behind the whole process of developing the wetland in Kristianstad, from an Eco Museum, to the designation of Biosphere Reserve and now most recently the forming of *naturum Vattenriket* (The Wetland Visitor Centre), have been employees within Kristianstad Municipality and the County Administrative Board in Kristianstad. During the course of the work more people have become allied to the process. Certain in-depth expertise in the limnological processes and the areas ecological position, have been co-opted when needed, as well as skills related to planning and management.

Thoughts and plans to convert the wetlands into a Biosphere Reserve began to materialise in 1988 after a meeting with the Research Council Board, and a chance meeting with a former student colleague of one of the Municipality's employees who knew about the Biosphere concept and thought it would be well suited to the work with the Wetland. At the end of the 90s when the Wetland and the Eco Museum had taken shape, it became clear that it was possible to breath life into the Biosphere concept. By then the guidelines for Biosphere Reserves had also altered in accordance with what was called the Seville Strategy. The new guidelines with the idea of sustainability as the central concept, were considered an appropriate link to the existing wetlands and the activities in Kristianstad's Municipality.

Our view is that it is not first and foremost the area's high natural value that led to the initiative of establishing a Wetland, but rather the idea of the area's potential as a recreational zone close to the city, and the opportunity to organise outdoor education.

The close collaboration with the Municipality and local politicians, meant that the plans concerning the Wetland and the Eco Museum could become a reality. Good contact with individual local politicians, who were promoting the importance of nature schools for the municipalities work with the sustainability issues, was of significant assistance with regard to anchoring and legitimising the work.

The Eco Museum Kristianstad Wetland has, since 1989, created more than 20 visitor locations in the area. In 1989 "The Eco Mobile Kristianstad Nature School" was also started, targeting primary and high school children. In order to facilitate the operation and make specific projects possible, the Eco Museum also developed a logistic support function providing cars, boats and venues for researchers, inventory-takers and graduate students among others. A website reflecting the activities

² Kristianstad Wetland and the organisational arrangements that were the basis of the work, have been studied closely by researchers, mainly from Stockholm's Resilience Centre. Our evaluation stems in part from other issues, so for a more detailed picture of the Wetland's organisation we reference among others, the following articles: Hahn (2011) and Hahn (2006)

has also been produced. During the Biosphere Reserve candidature, the Eco Museum functioned as a “Biosphere Candidature Office” and has, since the designation to Biosphere Reserve, functioned as the area’s Biosphere Office.

In conjunction with the preparations for the development of the Biosphere Reserve, a series of questions arose concerning how the Biosphere concept should be interpreted and implemented. A number of areas outwith Sweden were studied, amongst which were some areas in former East Germany. These areas however had more similarities with the Swedish equivalent of National Parks and at the same time a clearer natural science focus. Experience of the processes involved in the designation of Torneträsk as a Biosphere Reserve were not relevant, as this appointment took place under the old guidelines for Biosphere Reserves.

Initially when the plans to concretise the Biosphere work began to take shape, understanding UNESCO’s criteria that the area should be zoned in core zones (protected areas), buffer zones and so-called development zones appeared complicated. It was clear early on that dealing with the creating of reserves, would get the work nowhere. When it became clear that the prospective Biosphere Reserve needed no new reserves to be created, proceeding with the work of the Biosphere application became possible.

The problem in showing UNESCO how the core area was protected still remained however. Doubts as to which areas should be defined as core areas, complicated the work. In this case an English “Biosphere expert”, who sat on UNESCO’s “Advisory Committee” was contacted. He was invited to Kristianstad’s Municipality to give advice. Accordingly the English expert considered the selected core areas were sufficiently protected, and believed there was sufficient interest to continue with a future Biosphere application.

During the work process of defining the borders of the area, there was discussion from the outset on whether to include the whole water drainage area for the River Helge, but it became a somewhat tighter demarcation, due to lack of time and resources. The on-going, parallel and far-reaching work with the Wetland had also begun to show results, which led to the area defined since 1988 as the Wetland, becoming synonymous with the Biosphere area.

During the spring of 2001 the Municipality worked with a new civic logo that would show the association to water. However the work to produce a new logo did not appear to be particularly anchored with the inhabitants of the Municipality. The Eco Museum was not included in the work either, which led to animated criticism in the media, which attracted negative attention for the activities of the Eco Museum Wetland. The motivators within the Eco Museum Wetland, convened a meeting with the municipal authorities and other concerned parties working with the logo to try to persuade the Municipality to abandon the project. In this context a proposal was also tabled that the Municipality should instead concentrate on getting the Wetland designated as a Biosphere Reserve. The municipal authorities thought this to be a good proposal and gave the management group for the Wetland the task of presenting a proposal on the Biosphere Reserve to the municipal government. In

connection with this process, the Biosphere plans began to concretise. The first estimate of how much time the work was expected to take, and the costs that would be associated with it, was presented. In a proposal to the municipal government it was estimated that the anchoring work and the involvement of potential collaborating stakeholders alone would take several years.

Within the work of establishing the Biosphere Reserve, which was closely connected to Kristianstad Wetland, there had never been an ambition to “mass inform” the general public about Biosphere work. Clarification and design of the Biosphere Reserve has instead been an initiative on different activities in project form and it is through these, often concrete projects, that dissemination of knowledge on Biosphere processes to the general public and those interested has taken place. In this outreach work the concept of Biosphere also appears rather as a subheading to the more established concept of Kristianstad Wetland.

3.1.2 Involved stakeholders and organisations

Specific to this Biosphere example is that it has developed entirely as a municipal process. During the period other collaborative stakeholders for specific projects have been strategically chosen dependent on what was required.

Also distinctive of how the work was designed is that stakeholders involved in Kristianstad Wetland were the first in Sweden to apply for Biosphere Reserve status, in accordance with the guidelines adopted in 1995. To participate in shaping, interpreting and translating the international guidelines into a Swedish context, appropriate to local and regional levels, also characterised the Biosphere processes in Kristianstad Wetland. The operation linked to the Wetland and the Biosphere Reserve, is from a conservation perspective, strategic work. By building a Visitor Centre (Naturum), restoring the surrounding wetlands and developing management of these, it has been possible to circumvent discussion on establishment of reserves in the area.

During the preparation of the Wetland, a group was formed for consultative meetings. This advisory group is representative of people with different interests in the area, such as local organisations and associations, municipal officials and politicians, local entrepreneurs as well as people from the regional authorities. The advisory group, which meets several times a year, has a consultative role and makes proposals and recommendations concerning the on-going development work.

The Biosphere Office, which does not have its own administrative function, coordinates internally initiated operations in the area, as well as supporting and following up activities provided by other stakeholders, in connection with the Biosphere Reserve. The operation that the Biosphere Office supports, originated from the management plan and policies for the area based on the criteria of conservation and development for Biosphere work. The Biosphere Office functions today as a referral body for a range of conservation and planning matters in the Municipality. Working from a landscape perspective and developing solutions where conserva-

tion and development go hand in hand, are activities that are prioritised by the Biosphere Office. An example of this is the work in creating a multifunctional golf course by Åhus, and preparing a publication on the multifunctionality of the landscape with grants and assistance from the Nordic Council of Ministers.

The activities of the Biosphere Reserve in Kristianstad Wetland, have a clear position in the “conservation function” and have, to a limited extent, involved stakeholders from the local business community. However there are plans to expand the collaboration with local entrepreneurs in order to also strengthen the development section of the Biosphere concept. Collaboration and anchoring occurred primarily among the municipality’s politicians, and a prioritised goal has been to keep local politicians updated on how the work is progressing.

The integration of research in the Biosphere Reserve has not developed as hoped, but it has been resolved somewhat in recent years. Today Kristianstad University is involved in several projects, and there are a number of projects that are run by the Stockholm Resilience Centre. Through the Stockholm Resilience Centre’s activities in the area, knowledge about Kristianstad Wetland and what is being achieved there also exists in settings outwith both the Municipality and Biosphere circles. However the hope is that in future there will be more research on ecological and above all limnological issues.

Much of the Biosphere work in Kristianstad Wetland has been about establishing concrete credibility-building operations, which are for the main part carried out through initiation of, and partaking in different projects with stakeholders in non-profit making nature conservation, and with schools. Through the years the Biosphere work has become more and more institutionalised and is now something that people in the Municipality are familiar with, and something that many relate to. The important informative and communicative work has existed as a strategy in the different projects from the start, and driven the Biosphere work forward. The preparation of an annual report that is available to the public for example, and the use of social media to reach and interact with the public, constituted at an early stage, an important part of the operation.

Our view is that the work is driven by results and goal orientation, and that there is a will to achieve something concrete. This concrete and result-orientated work, which is often carried out in project form, has meant among other things, that it has been relatively unproblematic to communicate the work to, for example, the media.



Multifunctional golf course at Åhus. Photo: Patrik Olofsson.

3.1.3 Financing

Since the beginning of the Biosphere work, it has been possible to finance 2-3 employees at the Biosphere Office. The development of Eco Museum and the Wetland have, for the most part been financed by the Municipality, which has until now contributed a basic sum of around 2 million Swedish kronor per year. Since 2001 the Swedish Environmental Protection Agency have financed about 1.5 million Swedish kronor per year (including a grant to establish a Visitor Centre [Naturum]). Since the establishment of the Naturum the Municipality has further invested approximately 3 million Swedish kronor in running costs and 7 million Swedish kronor in rental costs. In conjunction with any special project, the Municipality provides additional funding. Money is also solicited annually from various external financiers for special projects. In 2011 for example about 1.8 million Swedish kronor was used for twelve different externally funded projects.

Several national companies have also been involved in sponsorship of different projects within the area over the years: e.g. SE Bank Mortgages who sponsored the Nature Reserve for the stork's feeding grounds, the crisp company OLW sponsored 2.5 million Swedish kronor for operations alongside, and in the river Vrams in connection with the cultivation of potatoes for crisps, along with arable land adjacent to the river.

There are also collaborative funding solutions with non-profit making and public sector sources e.g. the project for restocking cat-fish and restoration work on shoreline meadows for ducks and waders, which was undertaken in cooperation with the World Wildlife Fund (WWF), Swedish Agency for Marine and Water Management etc.

3.1.4 Success factors and challenges

The Kristianstad Wetland's Biosphere Office has succeeded well in anchoring the minds of the Municipality on Biospheres. Support from the Municipality means that in dialogue with the Wetland, the project is presented as important for the Municipality's "reputation", and at the same time could mean increased relocations to the area and establishment of companies.

The group, who together originated the work with the Wetland and the Biosphere Reserve, was made up of committed officials with unswerving belief in the direction of the work and the significance for the area's conservation function. It has also been a provident and strategic choice to work with only one municipality. The motive for this choice was the belief that it was better to have the practical results as leverage, in order to be able to expand the Biosphere Reserve upstream to the drainage basin of the River Hälge in the future. Work to create a "River Helge Model Forest" can be seen as a strategic example on this course.

At the beginning of the work process to present the Biosphere application, it was perceived as difficult to get sympathy for ideas, but it has proved to be patience that is required to accomplish the anchoring processes. The fact that part of the County Administrative Board moved from Kristianstad to Malmö has been perceived as problematic from certain points of view, but could also have been considered in some ways to be a fresh start for other activities. The Municipality's employment market function, which was also suspended during that time, had earlier been an important resource with regard to nature conservation education with the so-called Alu-grant, for further maintenance of the area.

Most problematic in latter years has been that the authorities and power-shifts "have thrown a spanner in the works" regarding routines and that the work has become much more bureaucratic. The special and untraditional way in which the organisation is formed requires acceptance and trust.

There is also a challenge to strengthen the development portion of all the Biosphere work. To continue to support and see entrepreneurs as an important resource, is a part of the strategy to stimulate the development section of the Biosphere work. However more collaborative stakeholders have made it harder to implement strategic plans. It seems that it is not so easy to scale up an organisation, get everyone on-board and exploit the specific project competencies that have been built up over many years.

3.1.5 Summary reflections

Kristianstad Wetland was first in Sweden to apply for Biosphere Reserve status in accordance with the new guidelines adopted in 1995, and has thus contributed to the interpretation of the rules in a Swedish context. The Kristianstad Wetland Biosphere Reserve is rooted in a parallel process with the forming of the Wetland, which itself becomes the starting point for the work and establishment of the Biosphere Reserve. The Biosphere Reserve is geographically concentrated in a munic-

ipality that is also the official principal of the area. The activities that can be associated with the Biosphere Reserve, have above all focused on the concept's conservation function, but a will to develop collaboration with the local business community and entrepreneurs has been expressed. The implementation processes have been supported by the Municipality, which resulted in relatively good funding opportunities. The inception of the work was initiated by officials with a genuine interest in Biosphere. Our view is that the work was purposefully conducted in project form, which meant the result could regularly be presented to the general public, the media and the municipal officials. The purposeful and result-orientated work has contributed to the legitimacy, and with that also to on-going funding possibilities for the operations.



3.2 Vänerskärgården med Kinnekulle (Lake Vänern Archipelago and Kinnekulle)

The Biosphere Reserve, designated as such since 2010, includes the southeast section and archipelago of Lake Vänern as well as the KinneKulle Plateau Mountain and Lugnå Mountain, a part of Lidan's and Mariedalsån's ravine system, as well as the easterly part of Dättern. The area, which comprises 278,600 hectares has a rich and diverse flora and fauna and a total of 16,281 hectares of the area is designated as a core area protected by Swedish law in the form of National Park, Nature Reserve, Natura 2000 Areas and forested Habitat Protected Areas. Approximately 60,000 people inhabit the area (Vänerskärgården med Kinnekulle, 2008).

3.2.1 Origins

The initiative to make a concrete effort to develop the Lake Vänern Archipelago with Mount Kinnekulle Biosphere Reserve, was taken collectively by the three municipalities, Mariestad, Lidköping and Götene during the autumn of 2004. In addition to representatives from the three municipalities, a number of stakeholders from the local community have been involved in the process to develop the Biosphere Reserve.

The Origin of the work can, to a large extent be linked to the Life Project "Kinnekulle Plateau Mountain – Restoration and Conservation", a nature conservation project that has been running since 2002. The initiators in the Life Project were the County Administrative Board in Västra Göteland's County who together with Götene Municipality and the Swedish Forest Agency, engaged interested landowners and gamekeepers. The project was nominated in 2010 as one of the most successful nature conservation projects within the EU.

The Life Project was organised in the form of a partnership run by the County Administrative Board with the Götene Municipality and the Swedish Forest Agency as partners. Engaged people within non-profit making nature conservation, and representatives from the municipalities of Mariestad and Lidköping were invited in to consider what possibilities, and what interest existed, in extending the project.

Before this initiative there was little experience of working across municipality borders. When the Swedish Environmental Protection Agency launched their programme “Lokala naturvårdsbidrag” LONA³ (Local Environmental Protection Contribution) the collaboration was formalised, and in the autumn of 2004 the three municipalities decided to conduct a feasibility study, to investigate the possibilities of forming a Biosphere Reserve in the area, along Lake Vänern’s south eastern shore. In 2005 a Biosphere Coordinator was employed with the purpose of leading the feasibility study. A steering group and a working group were attached to this study. The steering group consisted of an official and a politician from each municipality, a representative from the County Administrative Board and three representatives from research/academia. Also attached to the feasibility study, was a working group comprising the Biosphere Coordinator, and officials with subject-specific competencies from the three municipalities. In the beginning the work was organised municipality-wise, and the coordinator of the feasibility study distributed his time across the various municipal offices i.e. a work place in each municipality. The feasibility study was thus conducted in three municipalities, in collaboration with three different reference groups that were made up of non-profit making people who wished to contribute to the development of the Biosphere Reserve. The study allowed for a period of listening to the possibilities and areas of interest that characterise each municipality, and what resources were available. During the work of the feasibility study, focus was principally on the non-profit making sector and non-profit making nature conservation organisations, but business associations also had a prominent role in the development work. The County Administrative Board was similarly involved in the work.

3.2.2 Involved stakeholders and organisations

During 2006 the feasibility study was approved by the Svenska MAB-kommittén (The Swedish Man and Biosphere Committee) and the candidature application could proceed. The working group and the steering group that were formed in connection with the feasibility study, continued to work on until 2009, when a non-profit making interim Association Board was formed with nine members. The members of the Board who represented different sectors of the community were divided so that each municipality was represented by a municipal politician, the County Administrative Board with one representative, and a representative from the fishing industry/Lake Vänern issues. Other members represent businesses, research/education, agricultural sciences and the non-profit making sector. According to the statutes the number of members representing the public sector may not be in the majority, nor may they sit as chairman. The Board sits in session once a month and the remuneration is 500 Swedish kronor per meeting. A working com-

³ The Swedish Environmental Protection Agency's special focus on the Local Environmental Protection Contribution (LONA), which aims to provide grants to organisations, companies and individuals who want to run local conservation projects.

mittee has also been formed which meets two weeks before the Board meeting. In the association there are about sixty members and the majority of them belong to companies and associations. In addition to the Board there are a number of smaller working groups who contribute to the development of the Biosphere work, such as a group comprising municipal managers, a cultural group, a group for information/communication and a business group etc.

In the discussions on the boundaries of the Biosphere Reserve, the point of departure was the geographical boundaries of the LONA project. The LONA project's geographical boundaries were based on protected areas such as Reserves, Shore Conservations and Natura 2000 areas. However the working group chose to eliminate Lake Östen as it was already the subject of a project financed by EU funding. The working group feared that it could not overset the EU funding with further funding. This concern proved to be unfounded as Biosphere Reserves are not EU funded as a whole. An airport was also eliminated as the group assumed it was not possible to include an airport in a Biosphere Reserve. The discussions on working out a suitable geographical area concerned getting as much nature protected as possible, in combination with including the local communities in active collective programmes. Generally the boundaries were discussed with concerned municipal leaders. Opening up to and inviting in more municipalities than those already involved in the on-going collaboration, also ensued in this phase of the work. The steering group however came to the conclusion that it would be difficult to collaborate with more stakeholders in more municipalities.

The working processes during the Biosphere candidature were marked, in our opinion, by meaningful anchoring work with different stakeholders. The working group chose to work with open invitations concerning different themes, such as Eco-tourism, business, free-range meat, Biosphere Ambassadors etc.

Municipal officials have to a large extent been involved in order to propel the Biosphere work forward. However municipal politicians have not always been so informed on the work as to have an initiating or visionary function, with the exception of the politicians who are directly engaged in the work of the Board.

One way to invite participants into the Biosphere work has been via what are known as Biosphere Ambassadors and "green businessmen", a network of Eco-tourist companies who voluntarily associated themselves with the Biosphere Reserve's core values and who voluntarily take measures in order to increase the aspects of sustainability in their operations. The companies meet several times a year and together develop packaged Eco-experiences which are marketed through a mutual homepage for the tourist industry. The programme for Biosphere Ambassadors was initiated in 2007. When the programme began, the need for information in the field was great and as part of the developing communication with the general public, the idea of Biosphere Ambassadors was born. The Ambassadors have varying backgrounds and are united in their wish to be a part of the development of the Biosphere Reserve into a model area for sustainable development. The varied backgrounds of the Ambassadors also make it possible to reach out to other opera-

tions, contributing to the development of the Biosphere work's contact network. At present, 23 different Biosphere Ambassadors have received a short training, which allows them to function as spokespersons for the area, and communicate with the public.

During the candidature, the coordinator and working group first worked in "wish list" mode. A number of large open meetings were arranged, where questions were aired on what the Biosphere concept in the current area could entail. Material with proposals of activities and measures was gathered. To offer tourists and other visitors a sustainable alternative way to discover the high value of the landscape became a priority issue, and proposals on this were for example, hiking trails, cycle paths and hotels. In connection with these large meetings, a group was formed of so-called "system operators", comprising public transport companies and stakeholders from the tourism industry. The group worked out most of the joint action plan, which was included in the Biosphere application.

The work during the Biosphere candidature was carried out in such a way that when the application was complete, the "Biospheric" process was already under way. Thus during the candidature phase several projects were launched, among them "Ecotourism Destinations 2012" and the EU sponsored project "Fishing Area Vänern Archipelago and Mount Kinnekulle". The project Ecotourism Destinations 2012 which was operated jointly with the County Administrative Board in Västra Götalands County and involved stakeholders, aimed to develop an action plan for the development of an Ecotourism infrastructure in the area.

The Fishing Area Vänern Archipelago and Mount Kinnekulle project, was launched in 2009 for the same geographical region, and with the same organisation and representation, as the Biosphere Reserve. The Fishing Area was funded through the European Fisheries Fund, Swedish Agency for Marine and Water Management, the Västra Götaland's Region and the Biosphere Reserve's three municipalities: Lidköping, Götene and Mariestad. The aim of the project is to strengthen, maintain and further develop local sustainable fishing in Lidköping, Götene and Mariestad's municipalities, which private and public sector stakeholders can turn to, in order to seek funding. The overall vision for the Fishing Area is to create economic growth and generate new working opportunities through development of new forms of collaboration, which can give a higher value to the product or the services associated with the area. Here both the private and public sectors can apply for subsidies for new project ideas, within the five different themes⁴.

The working group did not have the business issues in particular focus from the start. However by the end of the candidature period the work and the interaction

⁴ The area has five themes for which a project grant may be sought; 1. Product development and quality assurance of Lake Vänern products 2. Strengthening and ensuring local processing, receiving and distribution capacity 3. Creating opportunities for supplementary activities 4. Strengthening the cooperation between the fishing industry and the local regional restaurant businesses respectively, in order that the fish produce be better utilised and improved 5. Market development of Lake Vänern's products to ensure outlets for the produce. (<http://www.vanerkulle.org/>, april 2012)

with local businesses had developed progressively. So far the research carried out within the area had been focused on the study of the process itself and the interactive work attached to the Biosphere Reserve's activities, and now research that could add further dimensions to the Biosphere Reserve's development was sought.

On the 2 June 2010 the *Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle* was officially designated a Biosphere Reserve and the following year played host to the European MAB Conference. After the area had become officially designated as a Biosphere Reserve the economic dimensions of the work was further accentuated, and a project dealing with developing an innovation system for Biosphere entrepreneurs was launched.



Mount Kinnekulle from Lake Vänern Archipelago. Photograph Johanna Olsson

3.2.3 Financing

During the candidature phase there was an annual budget of 1,200,000 Swedish kronor, which was allocated as follows; National financing: 570,000 Swedish kronor (47.5%); Regional financing: 210,000 Swedish kronor (17.5%) and Municipal financing: 420,000 Swedish kronor (35%). Today there are four employees at the Biosphere Office in Mariestad, including the Biosphere Coordinator who is the spokesperson of the working committee and the Board. Since the beginning of the work, the Biosphere activities have generated nearly 30 million Swedish kronor in project funds. During 2011 the Biosphere Office had a net turnover of 8 million Swedish kronor. Core funding for this came from the Swedish Environmental Protection Agency (circa 400,000 Swedish kronor) and the municipalities (circa 600,000 Swedish kronor). Further financing was obtained via project activities, of which a large part of the funding came from different EU programmes and the Västra Götaland's Region. The municipalities also co-financed in the form of their

own work, but also earmarked certain capital for specific projects. The funding of the Biosphere Reserve's development (core activities) via Leader, has not happened. On the other hand the Biosphere Reserve has been included in a number of Leader projects. In conjunction with increased project grants as well as increased private funding, plans to couple the project activities to a company have been discussed. This is so that non-profit making stakeholders will not be subject to the "unreasonable" risks attached to the large amount of funding turnover that organisations currently have.

3.2.4 Challenges and success factors

To get three municipalities to pull together has been perceived as a challenge. In conjunction with the municipalities taking decisions on some issues which link to the Biosphere Reserve, it takes a lot of time to anchor the ideas within the respective municipal councils. Challenges and controversies also ensue during the Biosphere process, when the concept of Biosphere is used as a pretext when differences of opinion arise. The Biosphere concept has been used for example as a motive both for and against the same issue, such as wind power. Similar experiences have also been reported from other Biosphere Reserves.

Nor has it been entirely unproblematic, with a comprehensive approach that characterises the current Biosphere work, to "control" which stakeholder is permitted to use the Biosphere logo. In order that the usage of the Logo is not "watered down" or associated with activities and/or products that are perceived to be contrary to the value system of the Biosphere work, a policy for the usage of the Logo, and likewise a protected trademark, has been developed. This policy includes the requirement that stakeholders must be granted permission to use the Logo by the Board of the Biosphere Reserve.

An important success factor for the working processes during the candidature phase, has been the parallel on-going work in initiating and launching a number of relatively large projects with a Biosphere profile. (e.g. "Ecotourism Destinations 2012" and "the Water Area of Lake Vänern Archipelago and Mount Kinnekulle"). These projects have, in our opinion, helped to concretise the work, at the same time as they gave the Biosphere work momentum after the official designation as a Biosphere Reserve. The projects have also contributed to the increase in contact with important stakeholders as well as contributing to ensuring legitimacy and financial stability for the Biosphere work. The work processes during the candidature phase can be identified/characterised in this context by an optimistic outlook/approach, and during the candidature phase the work was notable for its "as if one was already a Biosphere Reserve" approach. The work to educate and award diplomas to what are known as Biosphere Ambassadors, has also helped to spread the concept and functioned as a type of "outreach" to the community.

3.2.5 Summary reflections

The Lake Vänern and Mount Kinnekulle Biosphere Reserve includes three municipalities, all of which are represented in the association that is the principal for the area. The Origins of the Biosphere work can in some ways be linked to the nature conservation project, Life Project Kinnekulle, which has been on-going in the area since 2002. In our view, the implementation processes in the designation of Biosphere Reserve status have been characterised by an openness to local associations and the business community, and considerable time has been spent anchoring the Biosphere Reserve plans within the civil community's organisations. In recent times more and more of the activities have been concentrated on involving the local business community, first and foremost tourism entrepreneurs. The work processes are also characterised by an ability to pool various types of resources, where different stakeholders with different backgrounds collaborate to develop new contexts and activities, which would not ordinarily go together.



3.3 Blekinge Archipelago

Blekinge Archipelago Biosphere Reserve includes a large part of Blekinge's coast and archipelago. The area of approximately 200,000 hectares includes landscape and biological value, characterised by the coastal climate. Alternating sweet and brackish water has created specific conditions for a rich biological diversity; at the same time as a long tradition of natural resource use has formed a varied cultural landscape. The distinctive cultural landscape includes cultivated areas, meadows and pastures, a marine area including inner archipelago bays and sounds, deciduous and coniferous forests, as well as cities and urban areas. The protected areas comprise 37 Nature Reserves, 1 Culture Reserve and 72 Natura 2000 Areas.

3.3.1 The Origin

At the beginning of the 2000s, the forming of Reserves in Blekinge's eastern archipelago was discussed. Individual officials on the County Administrative Board in Karlskrona had however seen how conservation issues were managed in Kristianstad Wetland, and saw the potential to launch Biosphere work in Blekinge too. The problems involved in forming Reserves in the eastern archipelago were generally considered difficult to resolve, and officials of the County Administrative Board considered that Biosphere work was better suited than the traditional way of creating Reserves. Nature conservation experts at the County Administrative Board, who realised that the preservation of the highly valued nature and culture found in the area, could not take place other than with the collaboration of local stakeholders, saw that there were many advantages to the Biosphere concept. The Blekinge archipelago's very rich cultural and natural environment, combined with the regional political difficulties brought about by relocation from the region, meant the

county administration and the municipal politicians considered that the Biosphere plans fitted well in their future development plans for the area. The Biosphere Reserve concept with its clear focus on both conservation and development seemed to be well suited to solving the area's particular problems. When concerned with interpreting what is meant by Biosphere work, a wide definition was chosen. The County Administrative Board's Coordinator for the work considered that it was not possible to preserve without developing, and therefore saw infrastructure investments, such as different types of water and drainage solutions, as concrete work in line with the Biosphere concept.

3.3.2 Involved stakeholders and organisations

During 2005, the work to develop a feasibility study, so that on a future occasion an application for designation as a Biosphere Reserve might be possible, was initiated by the County Administrative Board.

In relation to the commencement of the work with the feasibility study, discussion on the level at which the work should be conducted was discussed. Who should take the lead in the application? Experience from Kristianstad spoke for the Municipality being the appropriate party, but because plans for the prospective Biosphere Reserve in Blekinge involved several municipalities that didn't have a tradition of working together either, it was decided that the County Administrative Board should take on the function of Coordinator.

From 2006 the County Administrative Board funded a Coordinator to lead the Biosphere work and preparation of the feasibility study. The County Administrative Board came up with the original initiative and asked Karlskrona and Ronneby if they were interested in being part of the feasibility study. Karlshamn's Municipality made contact when they became aware of this and wished to be included, thus it was natural to also consult the County's last coastal municipality, Sölvesborg. The four municipalities were invited in to take part in the Biosphere work. However after the feasibility study Sölvesborg Municipality chose not to join.

Municipal politicians from the municipalities involved, who were initially sceptical, realised after a visit to Kristianstad Wetland just what possibilities Biosphere work could encompass and what might be had from the Biosphere concept. A lot of dialogue and exchange of views was thus required to sort out and reach a consensus on what the Biosphere concept stands for.

Officially it is the Biosphere cooperation that runs the collaboration between four equal partners (Karlshamn's Municipality, Ronneby Municipality, Karlskrona Municipality and the County Administrative Board in Blekinge). In discussions and conversations with the different municipalities involved, concerning which areas and which boundaries should be adopted in the Biosphere work, the east archipelago was the starting point. The County Administrative Board's Coordinator thus saw that demarcation in the core and buffer areas respectively, meant difficulties in the intended Biosphere Reserve. The archipelago, which included fragments

of legally protected areas, led to certain reinterpretation of zoning being carried out. Zoning was done in complete accordance with UNESCO's guidelines, but because working with this mosaic of an area didn't function well, the concrete Biosphere work was focused instead on the forming of theme areas.

The Biosphere Coordinator collaborates with the personnel from the four partners, in the form of a Biosphere working group. The working group that was formed in conjunction with the feasibility study have effected efficient anchoring of the work in the respective organisations. The working group is to be considered as the Biosphere work's implementation group, and consists of officials with a broad representation of the principal's (County Administrative Board and municipalities) area's of expertise that are of significance for the Biosphere work, such as planning, tourism, business, environment and culture. A consultation group, The Archipelago Council, which has a central advisory function in the orientation of Biosphere activities, has also been linked to the work. The Archipelago Council consists of organisations, associations, authorities and other interest groups that help to direct the Biosphere work. The steering group that was formed consisted of municipal politicians nominated by the respective Municipal Boards, with the County Leader as chairman. Collaboration between the municipalities has however been difficult to synchronise and has been delayed by the respective municipalities' own routines, which were not suited to collaboration with other municipalities' arrangements.

The result after 2-3 years of meetings between the working groups, consisting of municipal officials amongst others, and the steering group with municipal politicians and county management, was however that the municipalities were finally on-board and decided on the work's direction and development. The structure with the steering group and the working group has been good, but it became obvious in retrospect that the steering group should have quickly taken more responsibility for the purpose and meaning of the work, to actively partake in and consolidate a common goal. The steering group's work and purpose has come to encompass getting access to more official resources, which would not have been possible without the politician's legitimisation of the work. In conjunction with the change of County Leader in 2008, the work within the steering group became focused on highlighting the importance of the entrepreneurs for the development of the area. What was perceived as a unilateral focus on entrepreneurs became difficult to manage in the Biosphere work, as the Coordinator's interpretation stood for a more holistic approach, with a good balance of conservation and development.

In the work with the feasibility study and also during the preparation of the application in the candidature phase, the Coordinator from the County Administrative Board has worked to anchor the idea of establishing a Biosphere Reserve. Out in the archipelago the Coordinator for the Biosphere operations was met with a certain amount of scepticism, as at the beginning the work was perceived as a covert way to introduce more restrictions in the area. The County Administrative Board Coordinator for the Biosphere process put a lot of time into trying to explain what a Biosphere Reserve represented. In conjunction with the anchoring work, other

interests have also been linked to the operations. Through collaboration with local associations in the archipelago and other interested organisations, these have also been able to make their mark. The fishermen have had a prominent role during the anchoring work, particularly the young fishermen, who are deemed to be of special importance for future development and conservation of the area. Reports on depletion and directives from the Swedish Agency for Marine and Water Management among others, on reduced fish quotas, have affected small-scale fishing to a large extent in the area, and over a longer period been detrimental to living and working in the area. The Biosphere process has been marked and affected by this rather complex change in the local community. The long series of stakeholders involved in the collaborative work mirrors a comprehensive mode of operation, where the Municipality, the County Administrative Board and other interest organisations have been the basis for the whole process.

In 2007 Blekinge Archipelago was nominated as a Biosphere candidate and the year after in the same area, the work to produce what was known as a collaborative plan for valuable coast and marine areas was launched. The collaborative plan for valuable coast and marine areas makes up a part of the implementation of the *Baltic Sea Action Plan* (BSAP), where Sweden committed to produce management plans for a number of specified *Baltic Sea Protected Areas*. Work with the collaboration plan for the BSPA area Torhamn's Archipelago, was run as an integrated part of the work with the Biosphere application. This mode of working, which was advocated for the collaboration plan for valuable coast and marine areas, has strong similarities to the Biosphere work. In that both of these projects ran in parallel, synergies arose in the work, which contributed to facilitating anchoring of the work (cf. Norrby, Sandström och Westberg, 2011).

The work with the Biosphere application also coincided with a new Leader Area being established. However, Leader in this collaboration did not become a significant input in the Biosphere work. The fact that there was not more cooperation between the Biosphere processes and the Leader processes, in the view of the County Administrative Board's Coordinator, was because there were other stakeholders with whom it would be more relevant to work. However the Leader was viewed as a possible party in conjunction with the financing of future concrete projects within the Biosphere Reserve.



M/S Tjärö by Tjärö jetty. Photograph: Heleen Podsedkowska

3.3.3 Financing

The County Administrative Board and the municipalities involved have to the greatest extent financed the feasibility study, primarily in the form of individual officials' working hours. During the candidature phase, which ran between 2007-2011, the Swedish Environmental Protection Agency's financial support has been significant in propelling the work forward. During the candidature phase the municipalities supported the Biosphere work, not only through officials' working hours, but also through direct financial support. During the application process, part of the work was also financed with project funds from the Swedish Environmental Protection Agency's project for collaboration plans for valuable coast and marine areas. The Swedish National Heritage Board also part co-funded.

The pressure put upon the steering group (through the municipalities) to show results during the work's progress, has to a certain extent steered the process. Politicians have felt the pressure, at an early stage, to demand results so as to obtain further mandates to finance the Biosphere work. At the same time the fact that it is costing the municipality, has been important in getting them on board in this work. If it had not cost, it is doubtful if they would have taken part to the extent that they actually did. However the pressure to show results has at times been felt as too forceful. In order to propel the work forward at a pace that really allows interaction, financial support from the Swedish Environmental Protection Agency at an early stage was sought. In this sensitive early stage, before the process was anchored locally and had won legitimacy, it was perceived difficult to access other financiers.

3.3.4 Success factors and challenges

The work toward being nominated as a Biosphere Reserve, in the case of Bleckinge Archipelago, progressed quickly in comparison to other areas. The feasibility study was conducted during 2006 and the candidature process took three years. The application was submitted in 2010 and passed in 2011. The Biosphere collaboration sees it as a success that it was possible to concentrate and get the work together in a relatively short period. It also appeared necessary to keep up the interest of the involved stakeholders.

That the work involved long-term collaboration between municipalities is of vital importance to the Biosphere process. It has not however been a totally unproblematic process to promote cooperation between municipalities, who are not familiar with the form of collaborative work surrounding such comprehensive questions as represented by the Biosphere work.

Collaborating stakeholders/organisations have during the process, made personal approaches to authorities that they have not had previous contact with. The Biosphere work has also enabled a dialogue around the themes chosen to focus on in the area.

It is firstly a challenge, but also a problem that it has been, and is so difficult to communicate what a Biosphere Reserve means. It concerns both communication with the public at large and when different initiatives are taken on different collaborative projects.

Change of Coordinators and County Managers partly accounts for the sluggish start after the designation. Cooperation with politicians could perhaps have been easier, if it had been possible in a clearer way to demonstrate the advantages of the Biosphere work. It seems a lot of time was also spent on anchoring and explaining the Biosphere concept to politicians in the affected municipalities.

It was perceived as a problem that the process of preparing the application and pushing the work forward was concentrated too much into the Coordinator's role. The involvement of the municipalities is crucial and necessary for the application, but occasionally neither the politicians nor the officials involved have had the commitment that the County Administrative Board would have wished. Representatives, first and foremost in the steering group, have been active and enquiring, but have not always taken responsibility to ensure the content of the Biosphere work. The involvement of the municipal politicians has at the same time meant that the process is forced forward when there is pressure to show the results of the municipalities' efforts. The role and responsibility of the steering group should have been more clearly defined from the start.

By and with the new County Leader's appointment (2008) the Biosphere work focus shifted to highlight the importance of entrepreneurs for the development of the region. Members of the working group perceived this as problematic, meaning that the process took a turn from finding a balance between usage and sustainabil-

ity, more towards a focus on development of business in the area. The working out of the Biosphere Reserves name and logo, led by outside consultants, came to mean important yet challenging processes. The logo decided upon brought the focus once again onto the importance of entrepreneurs in the development of the area.

Setting the process in motion, which has the intention of contributing to sustainable development, craves responsibility and maintenance. UNESCO's requirement that there must be a Coordinator for the Biosphere Reserve, is therefore useful for demonstrating the importance of long-term back-up to the work. Maintenance of the Biosphere work is not something that can be totally left to voluntary stakeholders and the local population. The long-term funding of Biosphere work has not been cleared and that is perceived as a challenge as it is not apparent who should take responsibility for the collaboration processes that were begun during the application period.

The Biosphere work has awakened a commitment to the Archipelago. An appreciated and well-visited "Archipelago Day" has annually implemented a range of activities, as well as lectures and dissemination of information on the Biosphere concept and sustainable development. Many new contexts for learning have been developed but an important challenge is, in our opinion, to keep them alive.

3.3.5 Summary reflections

The Blekinge Archipelago Biosphere Reserve is portrayed as an equal partnership between the three municipalities of Karlshamn, Karlskrona and Ronneby where the County Administrative Board holds the coordinating function. The initiative to launch the Biosphere work also came from the County Administrative Board. The application for a Biosphere Reserve was prepared in a relatively short period (three years from the feasibility study to the application). The Coordinator for the work felt that it was positive for the Biosphere processes to be conducted under time pressure, as it contributed to maintaining the initiative that was begun with the Biosphere work. The risk is however that the anchoring work that was carried out during the candidature period was not sufficient. The pressure to deliver results to the steering group with municipal politicians, could possibly explain the forceful approach. What has been significant for the whole working process was that the work coincided with the production of collaboration plans for valuable Coastal and Marine Reserves as part of the implementation of the "Baltic Sea Action Plan".



3.4 Älvlandskapet Nedre Dalälven (Nedre Dalälven River Landscape)

Nedre Dalälven River Landscape Biosphere Reserve includes 308,800 hectares spreading across 9 municipalities and stretching for 170 km along the Dalälven (the River Dal), from inland out to the sea. A total of just over 65,000 people inhabit the area. The Lower Dalälven's region which lies in the borderland between Dalarna, Västmanland, Uppsala and Gävleborg Counties is unique in that it forms a border-zone between northerly and southerly North European nature. The protected area within the core area comprises 23,400 hectares. As the principal for the area, Nedre Dalälven's Interest Association with daughter company Nedre Dalälven's Utvecklingsaktiebolag (NEDAB [Nedre Dalälven's Development Company]), which has since 1986 directed development issues with a basis in the unique natural and cultural heritage values that characterise the area (NeDa 2010 [Nedre Dalälven's Collaboration]).

3.4.1 The Origin

In the beginning of the 1970s the area was identified by the Nordic Council, as one of eleven Swedish regions with "*common Nordic nature conservation interests*". A development process in collaboration with municipalities in the area, started at that time with conservation issues, but already tourism was in focus. In 1975 the area was designated by the Swedish Environmental Protection Agency, as one of the country's 25 most important recreational areas (Primary Recreational Area). The area's high conservation value has been confirmed several times since then. In 1987 the area is identified as of national interest for its high natural and cultural heritage value and in 1998 the *Färnebofjärdens National Park* is created in the centre of Nedre Dalälven's region. Prior to this and also since, a series of Nature Reserves, Natura 2000 Areas and Ramsarområden (Ramsar Convention Areas) were formed.

The beginning of this municipalities' collaboration in the area can be related to the extensive relocation from the district, which began during the 1960s and 1970s. In the 60s over 20,000 people worked in forestry in the area and today the forestry

industry employs only about 400 people. Several iron works, which previously offered many employment opportunities, also closed down during this period. Thus tourism was seen as a solution to cope with the worrying state of the employment market.

To strengthen and stimulate the inter municipalities' collaboration further, public and private interests and stakeholders, formed in 1986, Nedre Dalälven's Interest Association and the daughter company NEDAB (Nedre Dalälven's Development Company). Together the Association and the Company was named NeDa (Nedre Dalälven's Collaboration). NeDa is owned by the members of the Association, which comprised 17 companies, 9 municipalities, and 3 independent organisations. The non-profit making sector has been involved in the NeDa collaboration to a large extent, initially in connection with the introduction of Leader, in 2000 (see appendix 2). The Boards of the Association and the Company have identical composition, and all the municipalities, over which the Biosphere Reserves extend geographically, are included in NeDa.

NeDa is represented by a majority of the area's land and water owners. In particular the constellation of large landowners and LRF (The Federation of Swedish Farmers), together with the municipalities, have been the basis for the whole collaboration, in respect of the agricultural industry's interests in association/balance with natural and cultural heritage interests. Previously a leading municipal politician held the chairmanship of NeDa but since 2011 the chair has been held by LRF, who represent the independent private landowners. Based on local conditions with the high and unique natural and cultural heritage value and the central position in the country, included in NeDa's business concept is to strive to give the region "*positive profiling, member benefits, tourism development and contribution to the influx of homes and businesses*". (<http://www.nedredalalven.se/>, March 2012)

NeDa has been active in the preparatory work for Färnebofjärdens National Park, which contributed to the perception of the Swedish Environmental Protection Agency, that the emergence took place without major conflict.

After committing in 1998, NeDa has had a place in the park's Maintenance Council. Ordinary places within the Maintenance Council are held by the County Administrative Board officials in Uppsala, Västmanland, Dalarna and Gävleborg County, the Swedish Environmental Protection Agency, The Upland's Foundation, The Society for Nature Conservation and Nedre Dalälven's Interest Association.

The first initiative towards the Biosphere work was taken by locally committed Inga Britt Persson, who among other things ran the Nature school within the area. In collaboration with NeDa she organised an introductory meeting with the Swedish Council for Planning and Coordination of Research, who were then responsible for processing and advising on Biosphere Reserves in Sweden so as to further investigate the possibilities of applying for Biosphere Reserve status.

Enthusiasm for establishing a Biosphere Reserve in Nedre Dalälven was not in the beginning especially great within NeDa, as a number of people felt that the area

already had a lot of nature conservation restrictions. When NeDa's members realised that the establishment of a Biosphere Reserve would not mean any new regulations or restrictive provisions, interest grew and in 2003 discussions were launched to prepare a feasibility study. When the main similarities between the Biosphere concept and the on-going Leader work, which coincided with NeDa's business concept, was evident, the decision to go ahead with the work was no longer controversial. Being designated a Biosphere Reserve was seen as an opportunity to give the region a positive profiling and give significance to the promotion of the area.

3.4.2 Involved stakeholders and organisations

To get pointers and support in respect of prerequisites and the approach to the Biosphere work, an exchange with Kristianstad Wetland, which had begun their Biosphere application, was arranged.

This happened in conjunction with NeDa's decision to begin a feasibility study. It was however clear that the starting point for the work was very different in Kristianstad principally that it was a more municipality steered process, which NeDa is not. In conjunction with the future seminar in Nedre Dalälves area it was thus realised that there was a strong link to Leader. Sustainable development, which permeates both Leader and the Biosphere concept brought together both institutions in the current process. NeDa was however from the start unsure of the requirements surrounding the leadership itself in the application and which organisational arrangements were permitted by UNESCO. Within NeDa a lot of time was dedicated at the beginning to sorting out how the organisation behind the application should look.

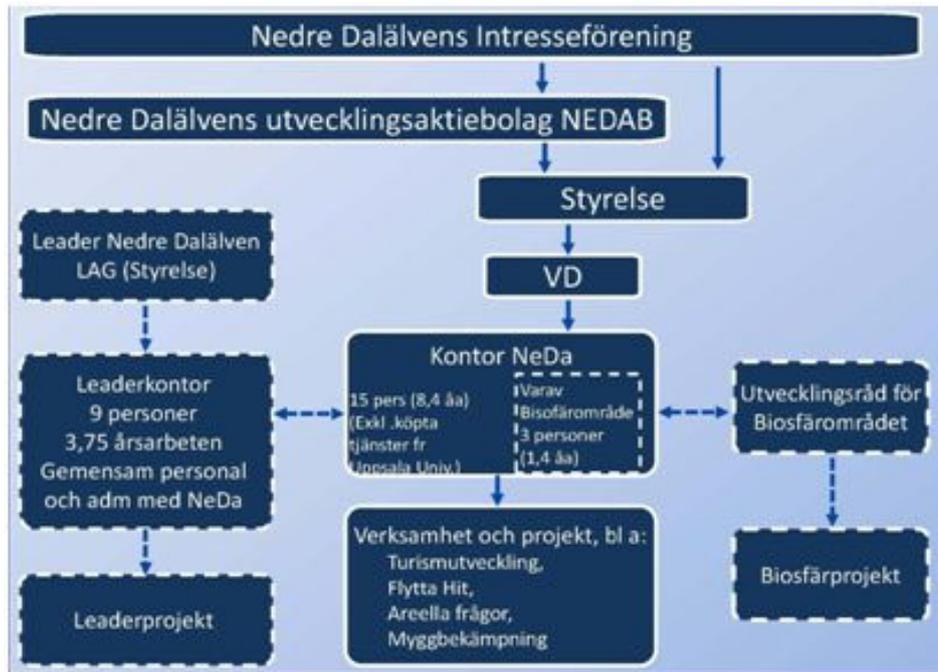
In conjunction with the work with the feasibility study, comprehensive discussions in NeDa's Board of Directors concerning the work's content and structure continued. The feasibility study began in 2003 and was financed within the framework for three Leader projects, and through the concerned municipalities' input of 20,000 Swedish kronor each per year. Within NeDa's Board, the municipal representatives were well in agreement to also support financially the feasibility study work. Common opinion implications within both Leader and Biosphere, from which policy was taken, were economic and social development and the importance of highlighting entrepreneurs as significant stakeholders in the area. Perhaps the strongest reason was the safeguarding of the open cultural landscape. In conjunction with a number of meetings, LRF were also in favour of the application. In 2006 the feasibility study was approved by the Swedish MAB Committee. The Swedish Environmental Protection Agency also gave their consent to move forward with the candidature.

In conjunction with the delimitation of the proposed Biosphere Reserve, NeDa's starting point was the drainage area of Nedre Dalälven. The area coincides to a large extent with the current Leader area. The difference between the Leader area and the Biosphere Reserve is that the Leader area is somewhat larger, and has es-

essentially administrative boundaries such as municipal boundaries and ward boundaries while the Biosphere Reserve starts in the drainage area and connects to the river landscape, which in some parts stretches far from the river itself.

After the work with the feasibility study, a full-time position keeps the Biosphere work going. The close cooperation with Leader has made possible synergies in the work, where several activities linked to the Biosphere and Leader work merge.

The organisational structure is shown in the diagram below.



Both in connection with the feasibility study and during the candidature phase, important work efforts have gone into anchoring the Biosphere concept among involved stakeholders such as landowners, the general public, associations and the County Administrative Board. A comprehensive meeting organisation with respect to the Biosphere work has been implemented. Involved municipalities and the large landowners, principally Bervik Skog (formerly Korsnäs AB and Stora Skog AB respectively, who still manage Bervik's holdings), Sveaskog and private forestry have from the beginning, through the LRF, been well rooted in the Biosphere concept through their representation in NeDa. The anchoring process has also been important to the tourism entrepreneurs in the area, of which a number have been appointed as Biosphere Ambassadors. The rationale behind Biosphere Ambassadors is that those who meet many people in their work or are simply interested in promoting the thinking behind Biosphere, receive basic training and access to information material.

The anchoring and marketing has, since the designation, also been an important part of the work input for those involved in Biosphere work. Nowadays it is also about producing plans for the type of activities that the work should be most involved with. For the moment three Leader projects have direct relevance to the

Biosphere work, such as a feasibility study on the establishment of a Biospherrum (Biosphere Visitor Centre), a communication project on the Biosphere work and a project dealing with the restoration of shore meadow grazing in the area. In addition, the large part of over 100 approved Leader projects, have Biosphere characteristics, (a total budget of over 50 million Swedish kronor).



By the old railway bridge at Gysinge. Photograph: Leif Öster.

3.4.3 Financing

Today the municipalities contribute to the Biosphere work through representation and their involvement in NeDa and through economic contributions to Leader. The Swedish Environmental Protection Agency has contributed around 400,000 Swedish kronor per year since the area's feasibility study was approved, i.e. during the area's own candidature phase, and also since the area was recently designated (during 2012), with 450,000 Swedish kronor. How long the Swedish Environmental Protection Agency will continue to support the Biosphere concept and the development of Biosphere work, is unclear.

Furthermore, future funding to anchor and develop the Biosphere area is not clear. It is possible that the operation will develop through different types of project support, such as for example, Leader and other parts of the Rural Development Programme. Designation to a Biosphere Reserve is expected to give the operations for the development of the area and in the spirit of Biosphere, a continuity that Leader cannot offer because of their stricter project based operation. It has not been evident in the evaluation work whether the public sector stakeholders see it as possible to continue to support the area if the project funds are compromised.

3.4.4 Success factors and challenges

A challenge in the initial anchoring work was to explain to concerned landowners and other interested parties that a Biosphere Reserve does not mean more restrictions. The creation of previous Reserves in the area has from many viewpoints led to mistrust of the public sector nature conservation stakeholders (the County Administrative Board and the Swedish Environmental Protection Agency).

In meetings with the general public and interested parties there existed an inbuilt problem in the Biosphere work, that of difficulty to communicate what a Biosphere Reserve means. Within NeDa one can see the difficulties are the result of substandard translations to Swedish of the inner internationally joint programme document that is to be the guideline. The very comprehensive material produced in accordance with application forms, was perceived as a long way from relevant. The earlier material from MAB that was available from the start, was also considered substandard and too focused on preservation and conservation. The material has since then been revised and now makes it clear that the focus is on the development of the district.

To get the media interested in the Biosphere work has proved to be difficult. Within NeDa, media control is considered a problem, they are much more interested in conflicts such as that of the district's substantial problem with mosquitoes and the controversial fight within certain groups, than development projects and successful collaborations.

Even if one has a somewhat different focus and prerequisites, great benefit is still to be had from the experience of the preparation of Kristianstad Wetland Biosphere Reserve and from the Coordinator for Lake Vänern Archipelago and Mount Kinnekulle, as well as the national MAB Coordinator who assisted with practical advice and support for the work. They have gone before and "ploughed the field" which has made it considerably easier for NeDa when it comes to the work with the application itself, and both contact with the Swedish Authorities and the translation of different UNESCO documents.

3.4.5 Summary reflections

The interest organisation NeDa, which is the lead for the Biosphere Reserve, has a long tradition of collaboration with the municipalities that are included in the area, and maintains very good contact with the landowners in the same area. For several years now, this developed collaboration and cooperation with tourist companies, has made its mark on the Biosphere Reserve approach. NeDa's business concept, which within the region appears as "positive profiling, membership benefits, tourism development and contributing to influx of homes and companies" also characterises the work linked to the Biosphere Reserve. The close connection to Leader has also meant a strong project orientated operation. A designation to a Biosphere Reserve can be seen as a manifestation, which is expected to contribute to a longer term safeguarding of the area. The collaboration processes conducted in the local community are mainly dependent on different types of project funding with clear

starts and finishes. A designation to Biosphere Reserve is assumed to contribute a greater continuity than a very project orientated context, such as that to which Leader in particular contributes.



3.5 Östra Vätterbranterna (The Eastern Slopes of Lake Vättern)

Eastern Slopes Of Lake Vättern differs from the other candidatures, as the area has not yet been designated as a Biosphere Reserve by UNESCO. The application to UNESCO was submitted in September 2011 by the Swedish Government, and the decision will be taken at the ICC meeting in July 2012. A positive advance notification has come from the Advisory Committee and a formal decision will be taken in July 2012.

Approximately 40,000 people live within the Biosphere Reserve and the area comprises 104,000 hectares of which the core area comprises about 2,120 hectares (just over 2% of the total area). The area is made up partly of Lake Vättern and Visingsö Island and partly of the small-scale forest and farming landscape east of the lake, along with the urban areas of Huskvarna, Ölmsta and Gränna. The proposed Biosphere Reserve includes a number of protected areas (28 Natura 2000 Areas, 16 Nature Reserves, 23 Habitat Protection Areas and 22 Wildlife Conservation Areas) and a further 14 Nature Reserves are being established. Large parts of the area are also singled out as being of national interest for Wildlife Conservation (39,600 hectares) and Cultural Heritage (6,500 hectares) respectively. The Eastern Slopes of Lake Vättern comprises for the most part, privately owned land divided between 1,000 private landowners. (Östra Vätterbranterna 2011)

3.5.1 The Origin

The Origin of the Biosphere candidature *Östra Vätterbranterna* (*Eastern Slopes of Lake Vättern*) can be traced to a conflict between the non-profit making nature conservationists (represented by Gränna Forest Protection Group with the support of the World Wildlife Fund [WWF] and the Society for Nature Conservation), the authorities (The County Administrative Board in Jönköping County and the Swedish Forest Agency) and private landowners (represented by Södra Forest Owners and The Federation of Swedish Farmers) during the 1990s. The conflict, among other things, concerned the inventory of key forest habitats and the establishment of a Nature Reserve. In order to deal with the conflict, the different groups united behind a common project named just Östra Vätterbranterna (Eastern Slopes of Lake Vättern) in the year 1998. The project was initially financed by Jönköping Municipality and the WWF. From the start there was a forum for dealing with

conflicts of interest, thus the project went through several phases, and with time developed into different collaboration projects between the partners involved. They instigated seminars, went on joint fact-finding trips, organised parish meetings, developed demonstration areas for tree pollarding and produced a vision and knowledge base for the area, primarily with issues related to nature conservation and natural resources. In 2004 a Project Leader was employed part-time by the Swedish Forest Agency and the County Administrative Board. The Project Leader has a background in geography and landscape science and also earlier experience of Biosphere work from Kristianstad Wetland and Lake Vänern Archipelago and Mount Kinnekulle, through previous university studies.

When the project funds were on the point of running out in 2008, the Project Leader raised the idea of the Eastern Slopes of Lake Vättern as a Biosphere Reserve. Other alternatives were also discussed, such as *model forests*. The Biosphere concept was seen by those involved as a way to institutionalise and deepen the cooperation between the partners. In order to find a permanent arena that could take advantage of the progress made, and further develop The Eastern Slopes of Lake Vättern, the group jointly agreed that a Biosphere Reserve best met the needs that the stakeholders had identified. The Biosphere concept's core values were also in good accord with the core values that had developed between the involved partners through the years. In 2008, ten years from the initiation of the project, an initiative was taken for a feasibility study in order to create a Biosphere Reserve and later the same year the Eastern Slopes of Lake Vättern was officially approved as a Biosphere Reserve candidate.

3.5.2 Involved stakeholders and organisations

In 2009 the work with the Biosphere Reserve candidature begins. To a large extent the same people as were previously active in the earlier Eastern Slopes of Lake Vättern project, set up the working group with an executive committee and leaders for the different organisations.

In order to consult and engage with the local community on decisions concerning the Eastern Slopes of Lake Vättern, a reference group is also formed – ÖVB Forum – with representatives from the organisations within the working group and the Local Heritage Societies, companies and entrepreneurs etc. and meetings take place a couple of times a year. The Project Leader of the previous Eastern Slopes of Lake Vättern project is appointed as the Biosphere Coordinator for the area. During the candidature process several of the involved stakeholders funded different services.

The Swedish Forest Agency, WWF, Jönköping Municipality and Södra Forest Owners in collaboration with the LRF all contributed with part-time services. The County Administrative Board in Jönköping County contributed with quarter-time service, which together totalled 2.25 full-time services. The allocation from the Swedish Environmental Protection Agency had for the most part gone to financing the Biosphere Coordinators working time.

The negotiations on boundaries began when the Biosphere candidature got underway. On land the working group took their point of departure from the natural geographical prerequisites in combination with parish boundaries, and in Lake Vättern it was the Jönköping's municipal boundary that marked the border for the prospective Biosphere Reserve. For those parts that were included in the application, but were not covered by the Eastern Slopes of Lake Vättern project's original geographical demarcation, the anchoring was achieved through the local collaborative organisations, Visingsö Island Council on Visingsö Island and the Future Group in Adelöv.

Initially the ambition of the working group was also to include four parishes within Ödeshög municipality. These negotiations stalled however. The question of being part of the prospective Biosphere Reserve came at a stage when there was animated discussion on wind power in the four parishes within Ödeshög, LRF and the district. The wind power issue also caused doubts at a later stage during the application procedure, when there was talk of establishing wind power in nature sensitive areas within the proposed Biosphere Reserve. In this discussion both the wind power advocates and the wind power opponents used the Biosphere Reserve concept and sustainable development to "hammer home" the argument in their favour (to give legitimacy to their argument). The wind power advocates pointed out the desirability of locally produced renewable energy as an important issue with regard to the proposed Biosphere Reserve, while the wind power opponents stressed the unsuitability of large noisy operations disturbing the peace and appearance of the area. The working group for the Biosphere Reserve chose not to take the part of either party.

An important aspect of the Biosphere concept on Eastern Slopes Of Lake Vättern is based on whether the landowners are interested in making their land available. Work with developing demonstration areas for this purpose had earlier proved successful and aroused interest, not only in this district but also nationally and internationally. The relatively large number of private landowners in the proposed Biosphere Reserve contributed by raising a substantial number of issues concerning how the land be used. The interest among landowners to take part in joint ventures and activities, though diverse, is deemed (in the application) as great enough to test different models of sustainable natural resources.

A development plan for the proposed Biosphere Reserve was also worked out through collaboration between representatives of the landowners, the authorities and non-profit making nature conservation. The development plan benefited from several of the supporting documents brought forward from the previous Eastern Slopes Of Lake Vättern project. Thereafter as the work progressed more collaborative partners also became involved e.g. discussions were conducted with Leader Sommenbygd and the work intensified with Jönköping Municipality, which became further involved. In order to increase the knowledge of the participating partners and to get inspiration for the work, a workshop was arranged with the Swedish MAB network and representatives attended Euro MAB meetings in Slovakia, and a fact-finding trip was undertaken to the nearby Lake Vänern Archipelago and

Mount Kinnekulle Biosphere Reserve. Visitors from India, South Africa and Finland were also received. During the candidature process attention was given to the Biosphere work in the local press and on radio at regular intervals. During 2009, Eastern Slopes Of Lake Vättern was nominated to “Årets initiative” (Initiative of the Year) at the annual Jönköping’s Gala.

As well as the zoning, the working group produced additional thematic and geographical classifications for the proposed Biosphere Reserve. To facilitate prioritising and clarify communication within the Reserve, the work was divided in the Eastern Slopes Of Lake Vättern into six theme questions⁵ and six theme landscapes⁶. Similarly in the development plan, it was highlighted in the application that work with different themes was flexible i.e. that new themes may be added and/or removed. The overall desire was that the work would be characterised by local collaboration and that it would be focused on both conservation and development work. The ambition is that in the long term the demonstration project for the current themes, research and educational programmes will be linked to different projects and focuses.

At the end of 2010 the Biosphere application was completed and sent out for wide consultation. A large number of people contributed with commentaries on the application and the referral went to 100 addresses, of which 30 – 40 responses were received. Most of the responses were very positive toward the creating of a Biosphere Reserve. The national referral however emphasised the lack of research involvement. During 2011 the referral was reworked and the application sent to UNESCO. After the application was sent, the stakeholders in Eastern Slopes Of Lake Vättern took part in the Euro MAB meeting in Lake Vänern Archipelago and Mount Kinnekulle and were co-organisers in a research workshop on eco-system services at Jönköping University. The working group has also had on-going dialogue meetings with different wind power stakeholders as well as adopting a vision, mission statement and value system for the future Biosphere Reserve. In the area, work is also started to set up information boards in the demonstration areas, and a new website is launched.

During the candidature process, a feasibility study is also initiated for investigating the possibilities of establishing a Biosphere Centre in the area, where Biosphere Reserve’s three functions⁷ can be housed and be presented within a building. “*The vision is that the facility will show how conservation and development go hand in hand, emerging from local traditions*” (Östra Vätterbranterna, 2011). In the build-

⁵ The current themes are; i) The Eastern Slopes Of Lake Vättern brand ii) Small scale wood processing and provision iii) Tourism iv) Local produce v) Renewable energy vi) Landscape history and ecology.

⁶ The current theme landscapes are; i) Grazing lands ii) Valuable trees in farming countryside iii) Forest and scarp environments iv) Water in the landscape v) Countryside close to towns vi) County and smallholding landscape.

⁷ The three functions are to: 1) contribute to the conservation of biological diversity (genes, species, ecosystem, landscape), 2) promote economic development and social development that is ecologically and socially sustainable, 3) support by facilitating for example, research, education and internship.

ing, exhibitions, indoor markets for local produce, tourism and experiences can be offered together with the Biosphere Office.

The idea is that the building will also function as a meeting place for people in the district and as an enlightened example of the Biosphere Reserve's objectives and way of working. (Östra Vätterbranterna, 2011).



View over Lake Landsjön and Visingsö Island. Photograph: Erik Sollander

3.5.3 Future organisational arrangements and financing

Eastern Slopes Of Lake Vättern has an ambition in the long term to develop into a local/regional popular movement, and for this purpose proposes formation of a non-profit making organisation. It is proposed that the organisation in its turn is made up of a reference group, a working group, an Executive Committee (similar to the project organisations for Biosphere candidature), as well as a Board of Directors. The Board members are chosen from among the organisation's membership and will have the task of awakening the organisation's interest and mirroring the composition of the working group. The working group, with representatives from the organisation's membership, will meet regularly to discuss Biosphere Reserve affairs.

The Executive Committee, which will be linked to a Biosphere Office, will function as a liaison with the included organisations. The Executive Committee's primary function will be to propel the work forward at local and international levels through different projects associated with Eastern Slopes Of Lake Vättern's vision and goal, as well as to the priorities of the proposed Biosphere Reserve. The reference group should function as a sounding board and idea giver to the Biosphere work, and also as ambassadors for Eastern Slopes Of Lake Vättern. The thinking is

that the reference group will function as a forum with the ambition to represent all parts of society. The objective is to recruit up to 5,000 members.

The future financing of the Biosphere Reserve is not seen by the representatives from the working group as an acute problem. A strength of Eastern Slopes Of Lake Vättern is that the process is backed by seven relatively strong organisations, and it is hoped to get the continued financial support of the Swedish Environmental Protection Agency. Jönköping Municipality came relatively late into the work of Biosphere Reserve candidature, but that is not perceived as problematic as strong support from the City Council is felt.

Despite a number of the key stakeholders being remunerated, most of the work in Eastern Slopes Of Lake Vättern is done on a non-profit making basis, with regard to all the commitment that has been shown in the different villages. The suggestion to widen the commitment with more organisations has been raised during the candidature, among others with the County Council (in particular Ryhov County Hospital), the Regional Council, Småland's tourism, business associations and business advisors.

3.5.4 Challenges and success factors

A challenge during the candidature process has been to agree on the boundaries of the different zones and areas. A further challenge was, and still is, explaining the meaning of Biosphere Reserve. The general public's perception of a Biosphere Reserve is abstract. What it is and what it stands for is unknown. Wind Power discussions have from time to time also posed a substantial challenge, and are perceived as difficult to deal with, to which the following quote from the Biosphere Coordinator bears witness.

“Certain stakeholders want us to take a stand and we are forced to defend both the Biosphere concept and the Eastern Slopes of Lake Vättern project.”

An important success factor for the working processes during the candidature phase, has been the cross-sectorial and conflict-resolving working mode, which has also attracted interest, not just locally but also nationally and internationally. In this context it is also worth noting that the initiative to create a Biosphere Reserve has its origins in a local need to keep a successful collaboration project going. From what was earlier a forum for dealing with conflict, we believe that the Biosphere work led to an in-depth dialogue and an even closer cooperation between the stakeholders involved.

The nearly ten year long process with the earlier project Eastern Slopes of Lake Vättern, went from conflict, via successive understandings, to a constructive collaboration with a strong “sense of we” among the central stakeholders (Östra Vätterbranterna, 2011). This sense of we seems to have been maintained during the candidature process and represents the work's main success factor, but challenges arise when several stakeholders are involved in the work. A very large future chal-

lenge for the on-going Biosphere work is how the previous central stakeholders cope with additional stakeholders joining the work.

The application states:

“In the Reserve one wishes, together with the users and inhabitants of the area, to test and demonstrate the models for sustainable use of natural resources” (Östra Vätterbranterna, 2011).

Considering that the area is for the most part privately owned, there is thus a challenge in persuading the private landowners to make their land available. However as it is a prerequisite for the existence of Biosphere work in the long term, the future of this work depends on these private landowners being interested in making their land available.

3.5.5 Summary Reflections

Overall surprisingly, there has emerged little negative opinion contrary to the establishment of the Eastern Slopes of Lake Vättern as a Biosphere Reserve, bearing in mind the wide variety of stakeholders and the large number of private landowners found in the area. A reason that so few critical voices made themselves heard, is that nomination to a Biosphere Reserve does not incorporate any new laws limiting the uses of land. Another reason is the working group’s long experience with conflict and procedural work, concerning conservation and utilisation problems. Over the years a trust has developed between the central stakeholders of the area. Additionally there is a functioning organisation for collaboration that can be utilised and developed further.

The Biosphere work in the Eastern Slopes of Lake Vättern has derived great advantage from the consensus-seeking mode of work with the previous project Eastern Slopes of Lake Vättern, which ran for nearly ten years before the idea to launch Biosphere work came up. The ties between the central stakeholders – the County Administrative Board, Södra Forest Owners, LRF, the municipalities and non-profit making nature conservation – were consequently already established, and in addition, the earlier working mode had many similarities to the working mode that characterised the Biosphere work. It was therefor relatively unproblematic to anchor and create legitimacy for the idea of establishing a Biosphere Reserve. Thanks to the Biosphere work, the collaborative work between the central stakeholders involved has been further strengthened. Jönköping Municipality has also, as the application process progressed, taken on a larger and more important role in future Biosphere work. Despite this however the work has not been entirely unproblematic.

The problems and challenges arise, as previously mentioned, when the working group has as an ambition for inclusion of more districts, and greater challenges arise during the candidature process when wind power operators plan to establish wind power in the proposed Biosphere Reserve. No specified strategy or preparation for how one deals with these problems and challenges appears to exist, rather

it has been developed during the progress of the work, which in our view has taken up a lot of time and effort.

The whole issue of the establishment of wind power also raises the question of what is appropriate to do within a Biosphere Reserve, where the concepts of sustainable development and Biosphere are used by both the advocates and the opponents of wind power to legitimise their respective claims. The large interpretive area regarding what constitutes a Biosphere Reserve and sustainable development, contributes on the one hand to create acceptance and broad commitment for the Biosphere concept, but on the other there appears a risk that the concept of Biosphere Reserves and sustainable development is watered down if not given a more precise meaning.

We believe that the idea of creating a non-profit making association is commendable and interesting, but there remain several questions to be answered before such an organisation can be launched and get underway. It is for example unclear how one views the involved organisations' roles regarding each other and what role the present central stakeholders appear to have in the future organisation. How important is the financier's influence with regard to the individual members? How is a good balance achieved between non-profit making work and remunerated work? These are important and pressing questions, which crave continued open and broad discussions, not only with the present involved stakeholders, but also with the general public.

The learning process amongst the involved central stakeholders has, we believe, been comprehensive. Witness the large number of fact-finding trips, workshops etc. that the central stakeholders have primarily been active in conducting or participating in. A large part of the know-how that lies at the basis of the Biosphere application, is gathered from the knowledge base of the involved stakeholders. In addition to that exchange of knowledge, experts from the authorities involved (principally the Swedish Forest Agency and the County Administrative Board) have also contributed their knowledge. According to what we are told, several of the dialogue meetings which were held in the different districts in the Eastern Slopes of Lake Vättern, have also provided the opportunity for experience and knowledge exchange, both between the members of the working groups and the various local stakeholders in the area.

4 Comparative analysis and attempt to answer questions

In this section the evaluation compares/analyses the five Biosphere reserves in the light of the questions that were central to the evaluation.

Origins and motives

(What are the origins of the work processes concerning Biosphere Reserves?)

The origins of the work from idea to Biosphere nomination vary between the five areas studied. In several of the areas the conflicts and clash of interests between conservation and utilisation have constituted a trigger. Several of those interviewed stated that problems concerning the creation of Reserves and the dichotomy of sustainable development have had a bearing on the decision to go forward with a Biosphere application process. Hope of finding a long term and locally suited solution on how the sustainable development problem in respect of the area is resolved and designed, has contributed to the desire to develop into a Biosphere Reserve. Designation to a Biosphere Reserve is expected to partly contribute to a longer-term protection of the area, while it raises hopes that it will positively contribute to the economic development.

The collaboration processes that were earlier employed within the respective areas have been dependent on differing types of project funding with a clear start and finish. A designation to Biosphere Reserve is also expected to contribute to creating a continuity in the otherwise very project-orientated context within which the groups/organisations that stand behind the application work. The continuity argument has been particularly prominent as a motive in Eastern Slopes of Lake Vättern and Nedre Dalälven, but also in the other Biosphere Reserves, albeit slightly differently. It can be seen as an attempt to institutionalise the area, which today is characterised by creativity and innovation, thanks to project activities. The establishment of a Biosphere Reserve admittedly flags up new levels of cooperation, which can facilitate collaboration between, and across already established administrative boundaries (such as municipal borders) but can Biosphere Reserve really maintain the creative atmosphere that today is largely protected by EU funding?

The distinctive characteristics of the working method

(Which other stakeholders have been involved in the processes? On what basis have potential stakeholders been excluded from the processes? How has the working process been affected by other activities/projects in the area? Have they appeared competitive/inhibited by the work with Biosphere Reserves or conversely,

supportive of the process? How have the relevant local stakeholders been involved and what is their attitude to the work/process?)

In all the implementation processes to achieve Biosphere Reserve status, extensive work has been done to communicate and anchor the idea of the Biosphere concept with local stakeholders within the respective areas. The anchoring work has partly been orientated towards informing the general public, but also more directed at specific stakeholders who are considered to have a special interest in, or be useful to the work. In the formation of the working groups and/or steering groups the initiator of the work chose, to a large extent, to work with a more targeted selection of partners. The representation of the municipalities has played an important role in all the candidature processes, partly through the participation of officials in the working group and municipal politicians in the steering group.

The representatives of the municipalities have to varying degrees been of significance for the development of the content and the activities connected to the respective Biosphere Reserves. However, in several areas municipal politicians have had a very peripheral importance for the focus of the work and they have rarely stood up for the visionary significance of the work. The municipal anchoring and participation has been in our opinion comprehensive in Kristianstad Wetland, Lake Vänern Archipelago and Mount Kinnekulle and in Blekinge Archipelago. In Eastern Slopes of Lake Vättern we believe that the municipal anchoring has grown steadily during the candidature process, and in Nedre Dalälven the municipalities have been primary supporters in the form of financiers.

Above all the selection of collaborative partners has stemmed from where there has been involvement in the issues that were considered relevant to the development of Biosphere work. To a certain degree the collaborative partners have been chosen to give the work a legitimacy both in formal significance, but also in the sense of creating credibility and trust for the work. The municipalities, the County Administrative Boards and the central authorities have all, to a certain degree, stood for creating legitimate expression. Several non-profit making organisations and interest associations such as representatives for non-profit making nature conservation, as well as individual landowners, have also been able to contribute in giving the work legitimacy through showing their long-term commitment in specific issues that could be linked to Biosphere work.

An inclusive stance has been observed in all Biosphere Reserves regarding activities outwith the working and steering groups respectively. The operations that are linked to the stakeholders active within associations, and businesses within the Biosphere Reserves, have to varying degrees been included in Biosphere work. This inclusive way of working which encourages non-profit making voluntary participants, permeates the operations in a number of Biosphere Reserves. This does not however automatically mean that the involved associations have some direct influence over the Biosphere Reserve's development and related activities.

The work within the respective Biosphere Reserves has to varying degrees involved local business. In Lake Vänern Archipelago and Mount Kinnekulle and in Nedre Dalälven the tourism companies with what is known as an “ecological profile”, participated in the Biosphere Reserve’s development work, and several of these business owners have also trained to be Biosphere Ambassadors.

To highlight the importance of local entrepreneurs in the creation of Biosphere Reserve’s activities and focus has been influential in, above all, the Biosphere work in Lake Vänern Archipelago and Mount Kinnekulle and in Nedre Dalälven. In addition, the Biosphere Reserve’s work is dominated mainly by the development of concrete conservation measures and various forms of informative activities. A shift towards developing a business dimension in the Biosphere Reserves can however be observed in all areas.

In summary, the working processes have to a great extent been about building trust and engaging key personnel from among politicians, local associations, landowners, financiers etc. The work has partly been concerned with developing trusting internal relations in the local context in which one works (*bonding social capital*), but also developing trusting external relations with “outsider” stakeholders (*bridging social capital*), who have the ability to give the work legitimacy (cf. Putman, 2000).

For all the Biosphere Reserves, in our view, the urban role has not been considered to any great extent during the candidature process. This can have to do with the urban areas falling within the framework of municipal detailed planning, but also because of the focus of the Biosphere concept on safeguarding biodiversity and local development.

There is also a question of resources. The fact that the Biosphere Reserves still have not managed to include urban areas in the Biosphere work, is not seen to any great extent as a failure for the individual Biosphere Reserves, but rather as an indication/challenge that here there is anchoring work to be done. Projects and studies that highlight and link together town and country relationships, should be of central importance in realising the Biosphere ambition to create model areas for sustainable development.

The role of the Biosphere Coordinators

We have the impression that the Biosphere Coordinators have had a somewhat freer hand in designing the Biosphere work to meet their own prerequisites and ideas. Frameworks and guidelines have not however, as we understand it, been completely clear on the side of the Swedish MAB Committee. The free method of working can be interpreted as a conscious strategy from the Swedish MAB Committee’s point of view, where one strives for the work to have a clear bottom-up approach and that the development is “free”, based on the local prerequisites. This free method of working has however created from time to time, some lack of clarity and uncertainty on the Biosphere Coordinator’s role and mandate, but at the

same time opened the door to somewhat unhindered interpretation of what a Biosphere Reserve will include and for whom, and gives the concerned stakeholders a relatively wide scope to design the Biosphere work to their own specifications.

The Biosphere Coordinator's role as a link between, on one side the political and administrative systems and the non-profit making organisations, and the private sector on the other, are complex to deal with. Biosphere Coordinators have had a sort of brokerage role, where they, in relation to the other stakeholders, have functioned as motivators and intermediaries of the MAB's intentions and value systems. The Biosphere work has to varying extents, also given the Biosphere Coordinators an "admission ticket" to the public domain.

Financing

(How has the work been funded and how is future financing expected to be resolved?)

The different Biosphere Reserves have resolved the funding in different ways. Common to all the Biosphere Reserves is that during the candidature phase they managed to gather resources to fund the operation. Through gathering resources they have also managed to generate the commitment and feeling of common responsibility. All the Biosphere Reserves have during the candidature phase, also received an annual allocation from the Swedish Environmental Protection Agency.

Future financing for the operations is a question that has not yet been fully resolved. The Swedish Environmental Protection Agency has continued to give annual support to the areas after they became designated Biosphere Reserves. However the Swedish Environmental Protection Agency cannot give any guarantee that they will also contribute financially in the future. The issue of future funding is in this case a risk factor, especially for those Biosphere Reserves whose activities are to a large extent dependent on funding from the Swedish Environmental Protection Agency (e.g. Nedre Dalälven River Landscape). There is hope that the status that being a designated Biosphere Reserve holds, will open the door to new funding possibilities within for example the EU's Life Project, and perhaps even in the long term through "royalties" when companies use the Biosphere logo, or through future sales of different "Biosphere certificated products". Issues concerning future financing constitute an essential question in guaranteeing that MAB's intentions are fulfilled in time. In our view there are good reasons to argue that contributions of basic grants should continue from the central authorities (the Swedish Environmental Protection Agency) over a longer period.

Challenges and success factors

(How have problems and challenges been handled? Do problems/conflicts remain? How have potential conflicts been handled? Which success factors have been identified?)

A recurring challenge for virtually all Biosphere Coordinators and those concerned in the working processes, has been explaining and communicating what a Biosphere Reserve is. However there is no accepted operational definition of what a Biosphere Reserve is, that works for everyone. Two fairly commonly occurring attempts to define the Biosphere Reserve, are; “experimental operation for sustainable development” or “model area for sustainable development”.

The difficulty in communicating what a Biosphere Reserve is, has also been experienced as problematic in a situation where the framework for a geographical delimitation is perceived as diffused and awkward to deal with. The perception of the Biosphere concept as difficult to explain rests on several different aspects of the concept. Diffused criteria (UNESCO guidelines) for the geographical and physical framework, the wider concept of sustainable development, and the Biosphere concept to create a balance between sustaining and developing, are examples of these aspects.

The duplicitous perspective of sustainability and development surrounding the Biosphere work also gives the Biosphere Reserve high interest from a communicative perspective however, as many different interpretative possibilities on what a Biosphere Reserve stands for, open up. In our view the duplicitous perspective has stimulated important discussions on utilisation against sustainability, at the same time as it has opened up new opportunities to cooperate across traditional sector boundaries. The wide scope for interpretation on what a Biosphere Reserve and sustainable development are, contribute on one side to creating acceptance and wide commitment for the Biosphere concept, but on the other side there is a long-term risk that concepts such as Biosphere Reserve and sustainable development are watered down, if they are not given a clear contextual framework.

The duplicitous perspective also poses the question as to who should have the interpretative right to define exactly what Biosphere Reserves are. The question on whose interpretation applies is ultimately a question on power and democracy. This aspect is for example tangible in the Eastern Slopes of Lake Vättern and in Lake Vänern Archipelago and Mount Kinnekulle when the question of the establishment of wind power is on the table, as both wind power advocates and wind power opponents use the Biosphere concept to argue their case.

Administrative and organisational arrangements

(How have organisational and administrative arrangements been resolved?)

The five Biosphere Reserves studied have chosen different organisational solutions. In Lake Vänern Archipelago and Mount Kinnekulle and the Eastern Slopes of Lake Vättern non-profit making associations have been created or planned. In Kristianstad Wetlands the Biosphere work is included as part of Kristianstad Municipality, and in Blekinge Archipelago a co-management solution between the County Administrative Board and the municipalities concerned has been chosen. In

Nedre Dalälven the Biosphere work is part of Nedre Dalälv's Development Company. The different organisational arrangements are in our view commendable and interesting, but there remain some questions to be addressed with regard to long-term funding, representation and responsibilities, before the different organisations find their form. How does one accomplish stable funding? How weighty is the financier's influence vis a vis individual members? How is a good balance developed between non-profit making and remunerated work? How is a good balance established between different interests, and what kind of influence and responsibility requirements can one expect from the involved stakeholders? Is the representation legitimate and how weighty is the influence vis a vis the participants? These are important and pressing questions that require further discussion, not just with the currently involved stakeholders but also with the general public.

Affiliation to MAB's values

(How well related are the basic principles of MAB and the key issues which form MAB's core values?).

The working processes in the five Biosphere Reserves have been, as far as we can see, successful under the circumstances that existed, and the learning process has at times been extensive both during and after the candidature phase. Our understanding is that the participant's work method has contributed to managing and overcoming earlier stereotype images that different stakeholders held with regard to each other, where different stakeholders increased their understanding of each other's roles and perspectives with reference to the questions of sustainability and development. Our opinion is, that the work in all areas has thus been relatively successful in combining the basic ideas of MAB and the central factors on sustainability and development that form MAB's values.

Links with research

(How is the role of research in Biosphere Reserves considered)

The role of research has been considered in the Biosphere work in different ways in the five Biosphere Reserves. In Lake Vänern Archipelago and Mount Kinnekulle researchers have participated in working groups during the candidature work and in Nedre Dalälven, albeit in a different way, there has been a research council that met on a couple of occasions. Researchers have in this way participated and contributed to the legitimising of the Biosphere process. In Kristianstad Wetland, research has had significance primarily at a later stage, after the area was designated as a Biosphere Reserve, in order to legitimise what has been achieved. All the areas have in their applications, mapped the research that is conducted in their respective areas and a number have worked to try to establish contact with the local universities and further education colleges.

During our interviews and conversations, among other things, the requirement for research based on the specific needs of the Biosphere Reserve was stressed. Several of those we interviewed and had conversations with stressed that “One does not want to be researched, but be involved in future research questions”. Thus there is need of a research environment and arenas that affiliate the researchers to the stakeholders who live and work in the different Biosphere Reserves. There is also in our view, a need of developed and longitudinal studies, which follow development of events over several future years in the different Biosphere Reserves. Knowledge both of natural and social science in character, is required in order to respond to the needs of the various stakeholders in the respective Biosphere Reserves, but research capacity of a more fundamental nature is also required.

5 Summary reflections and recommendations

Policy documents, as well as research within democracy and nature resource management, argue that the participation of the general public in nature resource management, leads to a wider knowledge base/knowledge exchange and more sustainable decisions on the environment. The way in which different stakeholders communicate the Biosphere concept and partake in the Biosphere work, has consequences for how the Biosphere Reserves develop in the long term.

A central task during the candidature phase, but also after the areas had been officially approved as Biosphere Reserves, was to supply the Biosphere concept with attractive content. Through communicative processes, different stakeholders attributed different meanings to what the concept of a Biosphere Reserve comprises. These meanings can in the long term be normative over what one can or cannot do in a Biosphere Reserve, which in time can develop into new informal regulations and attitudes to the location (cf. Sandström, 2008). Our view is that the identity and norm development in the various Biosphere Reserves is still in its infancy. Kristianstad Wetland has come furthest, and here one can say that the Biosphere work has contributed to the altering of people's perceptions of a "water-soaked landscape in need of draining" to a perception of a "wetland" landscape with unique features worth preserving. This new way of relating to ones physical environment has similarities to the French modernist Dushamp's art vision or paradigm shift, i.e. when the viewer of an object or a landscape makes a complete about face in their views (cf. Brulin and Emriksson, 2005). Common to all Biosphere initiatives is that they contribute to people beginning to see their surroundings through new eyes, which in the long term gives the opportunity to generate new life force and location identity.

Our review shows that the implementation processes to achieve Biosphere Reserve status are marked by different forms of governance and participation. Interactive governance (Hedlund & Montin, 2009:32) conceptualises the social phenomenon that in recent decades made its mark on policy after policy in Sweden, not least within the Swedish Nature Conservation Policy. Interactive governance is characterised by a transition from a more hierarchical form of government, to a more collaboratively directed and network-based form of government, which is distinguished among other things by a wish to involve a diversity of stakeholders. Interactive governance is often seen as a way to anchor decisions made, and facilitate implementation. (Hedlund and Montin, 2009)

The interactive governance in the five Biosphere Reserves investigated differ however, which to a certain extent has to do with the origins of the initiative, but also land ownership, earlier organisational arrangements, financing and natural geographical prerequisites etc. In Kristianstad Wetland the work has to a large extent been a municipal matter, dependent upon a couple of driven enthusiasts, where

interaction with the local community is principally achieved through concrete nature conservation projects of differing kinds. In Blekinge Archipelago the work has largely been driven by committed officials at the County Administrative Board, who through different initiatives, work to anchor the Biosphere concept with the involved municipalities and through different forms of consultation with local organisations and stakeholders. Our view is that the working processes in Eastern Slopes of Lake Vättern and Lake Vänern Archipelago and Mount Kinnekulle are marked by a great interactivity between different local stakeholders and organisations. In Nedre Dalälven the work to be designated Biosphere Reserve status is phased into an already established Leader structure, where anchoring with municipal, regional, private and non-profit making stakeholders is already to a large extent established.

Despite the differences in interactivity, there are also several similarities between the working processes in the five Biosphere candidatures. Our review shows that all working processes during the candidature phase have benefited from earlier or parallel on-going projects and processes. In Kristianstad Wetland, lengthy municipal work to establish Kristianstad Wetland was undertaken long before the idea to create a Biosphere Reserve took shape. Nedre Dalälven Biosphere Reserve has had the advantage of the already on-going Leader work for Nedre Dalälven. In Blekinge Archipelago benefit was gained from the Swedish Environmental Protection Agency's parallel on-going project "Collaborative Plans for Valuable Coastal and Marine Areas" and in the Eastern Slopes of Lake Vättern experience from the earlier collaborative project "Eastern Slopes of Lake Vättern" was of crucial importance for the continuing Biosphere work. Interest in a Biosphere Reserve in Lake Vänern Archipelago and Mount Kinnekulle and surroundings, sprang from the Life project "Restoration and Conservation of Habitats on the Mountain Plateau Kinnekulle". These earlier or parallel on-going projects have in different ways coloured and had impact upon the Biosphere work's implementation processes. In other words one can say that the Biosphere work, in different ways and to different extents, has contributed not only to develop, but also to institutionalise earlier initiatives.

The Biosphere work in all five areas has strong similarities to the Leader and other forms of partnership, where one through different forms of participating processes tries to give responsibility for the development of an area to those who it most closely concerns. This form of interactive governance can on one hand be seen as a form of deliberative democracy and as a supplement to democratic democracy. On the other hand this form of governance can also in "the name of sustainability" be considered as a change in policy, where the state reduces its responsibility – i.e. a way for the state and the representative democracy to avoid taking responsibility for difficult and perhaps unattainable goals. For example the ambition to achieve a balance between sustainability and development.

In a rural context it is not for example unusual that non-profit making powers are encouraged to take over certain tasks when the public sector withdraws. This means that the issue of power, struggle with meaning and interpretation, legitimacy and not least the question of responsibility, become important to manage when the issue is brought down to another social level. This has its advantages and disadvantages. This can mean that the conflicts, which were earlier dealt with at other administrative levels, are engaging local communities in a new way, without there actually being scope for manoeuvre or mandate to deal with them (such as in the case of the establishment of wind power in Lake Vänern Archipelago and Mount Kinnekulle and the Eastern Slopes of Lake Vättern, as well as the mosquito problem in Nerde Dalälven). There can also be a risk that the Biosphere work develops into an area-specific “mini-authority” with responsibility but without powers. But this can also lead to developing new contexts which deepen dialogue, seem conflict-resolving, and where different stakeholders widen their network and where their local identity is clarified in a positive way amongst those involved (cf. Waldenström, 2008). Where the five Biosphere Reserves studied are concerned, we see it as urgent that in the future, Biosphere work allows scope for critical reflection, which is able to support discussion on authority, responsibility, power, legitimacy etc. seen in relation to the future Biosphere work. This is urgent now, when a number of areas have entered a more operational phase of their work.

Against a background of the above reflections and the conclusions that emerged in chapter 4, we summarise briefly below in bullet point form, some of the requirements that we believe are urgent for continued Biosphere work.

- There is a requirement for arenas that explicitly and recurrently reflect on and discuss questions that affect power aspects, responsibility, legitimacy etc. seen in relation to Biosphere Reserve’s future development and in a broader social context.
- There is a requirement for research initiatives and creation of research environments, designed so that they on one hand meet the Biosphere Reserve’s specific needs, but also research efforts of longitudinal character that have the capability to follow developments for several years into the future in the different Biosphere Reserves.
- There is a requirement for projects, studies etc. that highlight in more detail the urban role in Biosphere work and its interaction with the surroundings.
- There is a requirement to continue experience exchange between the different Biosphere Reserves, but also with similar projects within and outwith Swedish borders.
- There is a requirement for continued financial support of Biosphere work from central levels. From a power and collaboration perspective, a full-

cost solution is not however always desirable. The status that designation as a Biosphere Reserve brings, opens new opportunities to pool resources from diverse sources and increase the potential to seek funding for EU Life Projects etc.

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Appendix 1

Evaluation base: Interviews and conversations

Kristianstad Wetland

Sven-Erik Magnusson, Biosphere Coordinator, Kristianstad Wetland
Karin Magtorn, Director, naturrum, Kristianstad Wetland
Hans Cronert, Conservation Coordinator, Kristianstad Wetland
Helene Fritzson, Councillor, Kristianstad Municipality

Blekinge Archipelago

Elisabeth Wallsten, Administrator, County Administrative Board, Blekinge County
(former Biosphere Coordinator)
Ulrika Widgren, Administrator, County Administrative Board, Blekinge County

Lake Vänaren Archipelago and Mount Kinnekulle

Johanna Mac Taggart, Biosphere Coordinator, Lake Vänaren Archipelago and
Mount Kinnekulle
Per Erik Ullberg Ornell, Market Strategist, Lidköping Municipality

Nedre Dalälven River Landscape (NeDa)

Cristina Ericson, Biosphere Coordinator, NeDa
Kalle Hedin, Managing Director, NeDa
Inga Britt Persson, teacher and initiator of Gröna Kunskapshuset and Biosfärrum
Visitor Centre
Bengt Gyldberg, Administration Leader, NeDa

Eastern Slopes of Lake Vättern

Simon Jonegård, Biosphere Coordinator, Eastern Slopes of Lake Vättern
Anders Råsberg, Business Developer, LRF Jönköping

Stockholm Resilience Centre

Olof Olsson, Deputy Director, Stockholm Resilience Centre

The Swedish University of Agricultural Science (SLU)

Magnus Ljung, Researcher in Environmental Communication and Government
Advisor, SLU Skara
Thomas Norrby, Government Advisor in Rural Development, SLU
Lotten Westberg, Researcher at the Department for Urban and Rural Development,
SLU
Arvid Stiernström, Curator, Department for Urban and Rural Development, SLU

Swedish Environmental Protection Agency

Göran Blom, Administrator, Swedish Environmental Protection Agency, as well as
Chairman of the Swedish MAB Committee
Anna-Helena Lindahl, Section Manager Swedish Environmental Protection Agency

World Wildlife Fund

Peter Westman, Conservation Officer, WWF

Appendix 2.

Members of the Nedre Dalälven Interest Association, January 2012

Avesta Industristad AB, Avesta Municipality, Bergvik Skog AB, Bjurfors Hotel & Conference Centrumtryck AB, Dalagård AB, Fortum Generation, Garpenbergs Intressenter, Gävle Municipality, Heby Municipality, Hedemora Municipality, Korsnäs AB, Muddus Hjortron, Nyfiket, LRF, Sala Municipality, Sala Sparbank, Sandvikens Municipality, Sjöviks Folkhögskola, Stora Enso Fors AB, Sveaskog, Swedbank, Sätters Municipality, Söderfors Herrgård AB, Tierps Municipality, Vattenfall AB, Älvkarleby Municipality and Äventyrarna AB and Östa Camping.

Appendix 3 Table of the current Biosphere Reserves

	Ownership	Size (ha) and portion of protected	Central Stakeholders	Organisational form
Kristianstad Wetland (Kristianstads Vattenrike)	Private, municipal and state ownership	Total: 104,375 ha Protected: 7,179 ha	Kristianstad's Municipality	Municipal
Lake Vänern Archipelago and Mount Kinnekulle (Vänerskärgården med Kinnekulle)	Private landowner, with a lesser part state and municipal land	Total: 278,600 ha Protected: 16,281 ha	Mariestad, Götene and Lidköping Municipalities with Local Independent Stakeholders	Non-profit making Association
Nedre Dalälven River Landscape (Älvlandskapet Nedre Dalälven)	Bergvik Skog, state and a small number of private landowners	Total: 308,800 ha Protected: 13,156 ha	Leader, Nedre Dalälven	Non-profit making Association
Blekinge Archipelago (Blekinge Arkipelag)	Private landowner, with a lesser part state and municipal land	Total: 212,797 ha Protected: 20,800 ha	County Administrative Board, Municipalities	Joint Management between the County Administrative Board and the Municipality
Eastern Slopes of Lake Vättern (Östra Vätterbranterna)	Private landowner	Total: 104,000 ha Protected: 2,120 ha	Jönköping Municipality, Swedish Forest Agency, Södra Forest Owners, LRF and Non-profit making Conservation backed by WWF and SNF	Non-profit making Association

The process of creating Biosphere Reserves

REPORT 6563

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An evaluation of experiences from implementation processes in five Swedish Biosphere Reserves

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The authors assume sole responsibility for the contents of this report, which therefore cannot be cited as representing the views of the Swedish EPA.

In 2012 Sweden was granted its fifth Biosphere Reserve. The Swedish Environmental Protection Agency has supported the work with Biosphere Reserves since 2002.

The aim is to support and encourage locally anchored work with long term sustainable development within a limited number of selected areas.

The Biosphere Reserve is a model area for a mode of working that supplements other support and controls available, to achieve environmental quality goals and long-term sustainable development. The Reserves' role, through coordinated planning and collaboration, is first and foremost to combine the conservation of certain valuable core areas with usage, within larger areas. In so much as all five previous candidate Reserves have now been designated as Biosphere Reserves it is important to learn lessons from the implementation processes through which they have gone.

Compiled and analysed in the report, are the experiences and processes in the achieving of Biosphere status in Sweden's five Biosphere Reserves. This evaluation is a part of the Swedish Environmental Protection Agency's long-term objective to disseminate experiences, good practices and functional methods for cooperation and sustainable management of natural resources. The report does not necessarily express the Swedish Environmental Protection Agency's position. The author is responsible for the content and references the report.

