



EuroMAB 2011

Sharing Sustainable Futures

”SHARING SUSTAINABLE FUTURES”

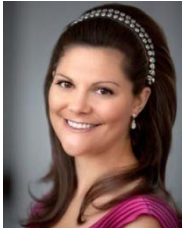
- Report from EuroMAB 2011



BIOSPHERE RESERVE LAKE VÄNERN ARCHIPELAGO AND MOUNT KINNEKULLE
SWEDEN



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Sharing Sustainable Futures – Report from EuroMAB 2011

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The report is possible to download at www.euromab2011.se

Preface

In July 2011, 186 delegates from 31 countries took part in the EuroMAB 2011 Conference in Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, Sweden. The conference brought together the EuroMAB network - biosphere reserves and MAB committees from Europe and North America.

The theme of the conference was *Sharing Sustainable Futures*. Plenary sessions, workshops, and the BiosFair, with exhibitions and presentations, gave the participants many opportunities to meet and share their views and knowledge on how biosphere reserves can contribute to a sustainable development.

Development of the EuroMAB network was a major task for the conference. Terms of reference for the network were adopted and a workshop for biosphere reserve coordinators focused on developing the identity of EuroMAB network.

The conference report is a compilation of presentations and workshop reports. The major results from the workshops are presented in the synthesis together with a summary of the presentations at the BiosFAIR. Extra material such as powerpoint presentations, a film and interviews are accessible via www.euromab2011.se.

The conference was arranged by *Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle* in cooperation with the Swedish National MAB Programme.

Financial support was granted by UNESCO, UNESCO National Commission, National MAB Committee, FORMAS, Swedish Environmental Protection Agency, Stockholm Resilience Centre, Skaraborgs kommunalförbund and Region Västra Götaland in cooperation with Västtrafik, the municipalities of Götene, Lidköping and Mariestad. Mediapartners were Ecoprofile and Skaraborgsbild.

Thank's to the staff at the local Biosphere Office, volunteers and interns, who was great support and enabled practical logistics prior and during the conference week.

We would like to thank all who made the conference such a success.

You are part of the biosphere!

Mariestad, November 2011



Maria Thorell

EuroMAB 2011 Conference Producer



Johanna MacTaggart

EuroMAB Steering Committee

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Opening session

UNESCO

Mme Meriem BOUAMRANE

*Programme specialist, Man and Biosphere Programme, UNESCO
Paris, France*

Madam Kerstin Lundman, Deputy Secretary General Swedish National Commission for UNESCO

Madam Eva Smith, Deputy Director of the Swedish National Environmental Protection Agency

M. Mathieu Fichter, Regional Policy DG from the EU Commission

M. Julius Oslanyi, Chairperson of the Slovak MAB National Committee

M. Goran Blom, Chairperson of the National MAB National Committee

Ms Johanna Mac Taggart, National Coordinator of BR

Distinguished colleagues,

Ladies and Gentlemen,

Dear participants,

Dear friends,

It is a great pleasure to be back in Lake Vänern Archipelago after its designation in 2010 and its inauguration last September.

I want to heartily thank our National hosts, colleagues and dear friends for welcoming us today in this model biosphere reserve. Since our last meeting in EuroMAB 2009 in Slovakia, our National colleagues and friends have spared no efforts to enable us to meet today, for us to share, to learn and work together.

Some of us attended the 23rd session of the MAB International co-ordinating Council held last week in Dresden, Germany as well as the Conference entitled “For Life, for the Future. Biosphere reserves and Climate Change” to celebrate the 40th anniversary of the MAB Programme.

Indeed it is time to celebrate. Let us celebrate and welcome our new colleagues and biosphere reserves that were designated by the MAB Council last week in Germany. First, let us start by our host country: Sweden which has double its number of biosphere reserves and has two new biosphere reserves part of the World Network: Blekinge Archipelago and Nedre Dalälven River Landscape!

Välkommen till EuroMAB !!!! Congratulations to Sweden that has now 4 biosphere reserves participating in the World Network.

Let us also celebrate the addition of 7 other sites for the Europe Region, and congratulate Lithuania, which has inscribed the first biosphere reserve in this country - Žuvintas. An additional biosphere reserve was also inscribed in the Russian Federation, Volga-Akhtuba Floodplain, and a second biosphere reserve was inscribed for Israel, Remot Menashe as well as the 16th biosphere reserve in Canada, with Bras d'Or Lake. A new biosphere reserve in Ukraine, Roztochya, and two new sites in Portugal, Berlengas Archipelago and Santana Madeira.

So warm welcome to all these new sites that are making unique contributions to the EuroMAB and World Networks and we look forward to cooperate and work with you.

Today the EuroMAB Network is made of 270 sites in 34 countries, so it is indeed the largest regional network, representing 30% of the countries of the World Network and 47% of its biosphere reserves. The World Network is composed now of 580 sites in 114 countries. Therefore, the EuroMAB Network has a key contribution and responsibility to implement the Seville Strategy, to reach the targets of the Madrid Action Plan by 2013 and to demonstrate sustainability in a variety of cultural, social, economic and political contexts.

The diversity of EuroMAB is certainly one of its strengths.

Dear colleagues, indeed it is time to celebrate what the EuroMAB Network has achieved, as we celebrate the MAB 40th anniversary, to collectively reflect on what has worked, what has not worked, share what was achieved, results and lessons learnt, to better mobilize its strengths, to discuss priorities and contributions to the MAB Programme, the World Network and the Global community.

The EuroMAB Network has provided strong evidence of the importance of contributions from a wide variety of sites, contexts, methods and disciplines and that there is no uniform approach to the study and understanding of social and ecological systems, no single road to sustainable development. The EuroMAB Network has demonstrated that local groups in different environments and cultures have developed an incredible variety of ways to manage resources sustainably, using their considerable knowledge, creativity and resources. Indeed, we need multiple and flexible approaches if long term sustainability is to be achieved.

The MAB Programme and biosphere reserves are about interactions, and diversity may provide for the capabilities that we need to remain adaptive and robust face to crisis, sudden changes and long term changes, including climate change. EuroMAB has demonstrated that values and principles such as trust, reciprocity and collective action do exist in certain conditions and that when people trust each other, they find solutions, as well as the energy to create and build positive actions.

Your work involves many colleagues, partners and institutions: a network of committed biosphere coordinators, researchers, professionals and citizens with whom we will have the chance to interact and discuss this week.

Last week, in Germany, the MAB Council has decided that within the celebration of the MAB 40th anniversary, next 3rd November will be the International Biosphere Reserve Day. Our week together is the perfect opportunity to discuss the contributions of the EuroMAB Network to such an international day and I look forward to hearing your suggestions and proposals for activities.

Even though yes it is time to celebrate, we need to pursue, maybe even more now, our efforts.

Last May, in Stockholm, a call for a new social contract for global sustainability has been made, during the 3rd Nobel Laureate Symposium on Global sustainability- a global sustainability agenda for humanity. One of the collective working paper presented was entitled “Reconnecting to the Biosphere”.

The Symposium reminded us that we live in a highly interconnected world, and that we human beings, are part of the biosphere.

As biosphere reserves are established on the fundamental principle that people are part of the ecosystems, and that the ecological and societal systems are mutually dependent, I am confident that we can join our efforts, resources and networks to emphasize the diversity of societal paths of development. The EuroMAB Network has the responsibility to contribute to this global sustainability commitment.

Many challenges will be discussed at the highest levels at the forthcoming Earth summit of the United Nations Conference Rio + 20, which will be held next June 2012. UNESCO is very much involved in these preparations.

One of our common challenges is to strengthen resilience of socio-ecological systems, use biosphere reserves as opportunities for connecting people to biodiversity, connecting sustainable development to the biosphere. We need to involve both citizens and governments to secure institutional and economic support to deal with these complex interactions. And we have an opportunity to do this together, this week.

Thank you for being here today, thank you for making the EuroMAB Network such a special Network of engaged, committed and passionate people and let us start working together now!

Swedish National Commission for UNESCO

Mme Kerstin LUNDMAN
Deputy Secretary General
Swedish National Commission for UNESCO
Stockholm, Sweden

Thank you for inviting me! It is so nice to be here, in beautiful surroundings and with all this interesting information available and such exciting participants at arms' length! I am very happy to be here and to represent the National National Commission for UNESCO – and we are also very pleased to have the possibility to be one of the sponsors and co-organizers of this important event. I bring you warm greetings from our President, Mrs Davidson and our Secretary General, Mr Djurberg and I congratulate the organizers for all they have done, also in relation to their success in bringing in the best weather possible!

Many people have very strong ideas on what kind of animal UNESCO is and why it exists. Sometimes it reminds me of the old story about seven people describing what an elephant is where one describes its skin and the other its trunk! Since I am no biosphere expert let us look at what UNESCO's tasks are: they range from literacy, cultural heritage, world heritage, water sciences to books and libraries, press freedom and the freedom of speech – and then you add some biosphere reserves to that! Quite a mixture!

I will, however, argue that there is a clear link between all the diverse responsibilities of UNESCO by going back to its constitution: UNESCO is not a development aid agency nor is it an institution set up for preservation of the natural environment! UNESCO is set up to further cooperation between its member states in all its fields of responsibility. And why is this cooperation of importance? The idea is that cooperation in education, science, culture and communication will bring countries closer together and therefore be an important tool to create peace. No more or less than that! Peace.....

One of the important working methods of UNESCO is that it can function as a stage on which various constituencies and countries, organisations and policy makers can meet to focus on a specific topic to create new cooperation and formulate answers to the challenges of tomorrow.

I have seen this over and over in my, quite long, experience with the National National Commission for UNESCO: just by UNESCO bringing people together on current and relevant topics UNESCO can make all the difference! It can spark debates and decisions which might have been possible without UNESCO, but when it is UNESCO who formulates a common issue and serves as this mechanism which bring

together the best experts and the widest circle of actors – to debate matters of global urgency, **this is when the organization really can make things happen!**

In this I see a great function for UNESCO as well as for the National Commissions in all Member States. I would like to encourage you all to contact your National Commission for UNESCO (if you are not already in contact with them) in order to find out how **you** can contribute to building peace in the minds of people – in a very definite way also biosphere reserves are about building a more peaceful world – a sustainable world.

A pedagogical problem for UNESCO is that the seemingly disparate fields of responsibility of the organisation in reality are linked to closely together: without education, no science, without freedom of speech and the freedom to search for knowledge no science and no literacy and without books and water no science or literacy and none of this can thrive and help make the world a better place without peace!

However, the jolly mixture of various aspects of development which constitutes UNESCO is not without its problems. The organisation can sometimes seem to lack focus and its limited resources makes many parts of the programme too small to make a real difference. Therefore the programmes which directly involve the Member States and their experts are programmes are more likely to succeed. Such is the MAB Programme which in clever ways brings together experts, spreads knowledge and information and involves the local population and thus helps Member States decide on action and also to bear their own costs for joining a programme which aims at preservation and sustainability.

As for working methods UNESCO hit a gold mine when its Member States decided to work with 'lists' as one of its tools. By inviting a country to propose an object to be included on a list UNESCO can have profound influence on Member State's legislation and priorities. UNESCO can make Member States alter their ways and allocate resources in order to compete for a place on the list. And all they get once they are there is the prestige of being there...

To me this is wonderful. It shows that so many local and national actors are longing for a setting in which they can take part in the creating of solutions to global problems.

As many of you already know UNESCO is the lead agency for the Decade on Education for Sustainable Development, which was launched in 2005 and ends in 2014 and the Millennium Development Goal Education for All runs for 2015. Education for All seems closest to achieving its objectives by 2015. Children are increasingly put into schools and this will have a profound effect on their future development. However, to be relevant and able to give the next generation a viable future, 'Education for All' must incorporate ESD.

I can assure you that the Swedish National Commission for UNESCO takes all the chances it gets to emphasise the need to integrate the work of the Decade for ESD into Education for All. The two processes propel the same commitment to quality education, improved health and sustainability. More precisely, we aim to integrate ESD not just into the teaching and all stages of schooling from pre-school and up, but into the very planning of education systems world-wide.

Here I see the role of the biosphere reserves as a show cases for what sustainability is and can be and where difficult concepts and ideas can be given tangible form and large numbers of stake holders can join efforts and show what sustainability can mean. In this way the MAB Programme and the biosphere reserves can be an important pedagogical tool and a very clever method for cooperation in preparation of a more sustainable future.

I wish you all the best and hope that the EuroMAB 2011 Conference will be a great success!

Thank you for your attention!

Swedish National Environmental Agency

Mme Eva SMITH
Deputy General Director
National Environmental Protection Agency
Stockholm, Sweden

Dear conference guests,

My presentation will give you some background to the national strategies for environment protection and nature conservation, and how the concept of biosphere reserves fits into these strategies. I will start with a short presentation of the National Environment Protection Agency.

The National Environmental Protection Agency is a national public agency for environment protection and nature conservation in Sweden. To our knowledge this is the oldest environment agency in the world, established in 1967. We have an overview of the state of the environment and progress in environmental policy. We also have the task of coordinating, monitoring and evaluating efforts, involving many agencies, to meet Sweden's environmental objectives.

Our vision is *a good living environment for humans and all other living things, now and for future generations'*. The Agency works on behalf of the National government. Our remit comprises:

- ❖ compiling knowledge and documentation to develop our own and others' environmental efforts
- ❖ helping to develop environmental policy by providing the Government with a sound basis for decisions and by giving an impetus to EU and international efforts
- ❖ joining in environmental policy implementation by acting in such a way as to ensure compliance with the National Environmental Code and achievement of the national environmental objectives.

The principle of sustainable development as introduced by the Brundtland Commission in 1987 has since then had an increasing impact on both national and international environmental protection.

At the 1992 UN Conference on Environment and Development in Rio de Janeiro, the concept of sustainable development won recognition as a central point of departure for the future development of society. With the Amsterdam treaty of 1997, the principle is written into the EC treaty as one of the goals of the European Union.

The Convention on Biological Diversity, also dates from the same Earth Summit in Rio de Janeiro 1992. From the Nagoya meeting last year we have a revised and updated Strategic plan for Biodiversity, including the Aichi targets: 20 targets for 2020.

The integration of environmental considerations into other policy areas has been one of the tools used in the national environmental policy.

The general sectoral responsibilities – the principle that every sector in the society should take responsibility for the environment in their work - have been determined by the National Parliament. The Swedish EPA promotes and supports the work on sectoral integration in a number of ways, as supporting the government authorities on sectoral responsibility and to continuously follow up the special responsibility given to some central authorities. A recent case study indicates that environmental consideration is increasingly integrated in all aspects of sectoral operations.

The National Parliament has also decided that country's environmental work is to set out from 16 national environmental quality objectives, another of the tools in the National environmental policy. A number of agencies are entrusted by the Government with responsibility for these objectives, with the National Environmental Protection Agency to act in a coordinating role.

The national environmental objectives define the necessary characteristics (qualities) of our natural environment and our cultural heritage environment in order to ensure environmentally sustainable development.

For the concept of sustainable development to progress from being a general policy statement to a principle that can form the foundation of concrete demands for action, regulation in the form of legislation and its application is necessary. Legislation has for many years been the central tool in Sweden with which principles of environmental policy have been transformed into practical measures. The National EPA has a central role in the implementation of the legislation.

The negative pressures on the environment and human health resulting from consumption need to be reduced, both inside and outside the country's borders. That is one of the points raised by the Environmental Objectives Council in its latest report "*de Facto 2010*" to the National Government. Economic instruments have been introduced to encourage producers and consumers to act in a more environmentally-friendly way, thereby speeding up the transition towards sustainable development.

At the same time it is important to show how our society gains from benefiting the environment. There are many ways to do this, and biosphere reserves have a potential here.

We believe that a proper management of protected areas can contribute to local and regional sustainable development. For example, management of protected areas can provide employment and income for the users, local contractors or others who perform management activities. Better accessibility and more visitors can in turn constitute a base for visitor industry and ecotourism. Well-situated and easily accessible nature areas provide opportunities for outdoor activities and recreation with positive effects on people's health and well-being.

The National EPA Green economic growth can help both economy and the environment, and also the climate. Greening of consumption and production and environmentally friendly technology can bridge over the gap between environment and growth. Resilient ecosystems can mitigate detrimental effects of global warming.

What I just have tried to sketch is the background to why Sweden has been active in the Unesco Man and the Biosphere programme for many years now. Since last year the National EPA also houses the National MAB committee. We have been financial supporters to the BR candidates since 2002 and also to our national coordinator to further develop the National MAB Programme and to give support to the candidates during their work with the nomination form to Unesco.

The National EPA biosphere reserves can be seen as model areas for sustainable development. Here we can try out and put into practice new knowledge on sustainable development and the important relations between man and nature – to use and preserve at the same time. BR are in line with the modern idea that protection of nature should be for humans, not against, in the sense that it must be

possible for people to live and work and for a society to develop parallel with protection of natural assets as biodiversity and strengthening of ecosystem services.

With biosphere reserves we have an instrument dealing with nature protection and sustainable development in a new fashion, complementary to the traditional legal instruments for nature protection like national parks, nature reserves, Natura2000 sites etc. A BR, as in the National model, is not a legal protection and gives no further restrictions on already legally protected sites. It is rather a local arena for cooperation on environmental and developmental issues.

The biosphere reserve concept has a wide potential to deal with many of the most significant global environmental challenges at the local level, as global warming, loss of biodiversity, depletion of ecosystem services, eutrophication to mention some. BR also have a potential in learning how to implement global or national political decision on a local scale, as the ecosystem approach within the convention on biodiversity, climate adaption and mitigation, the European Landscape Convention, a green regional or rural development, our national environmental quality objectives.

After many years of hard work and dedication by so many people we now see the results as going from one to two BR last year, and now from two to four, and next year hopefully to five National BR. A tremendous development in deed, which is further stressed by the favour and opportunity for BR Lake Vänern Archipelago and Mount Kinnekulle to host the EuroMAB 2011 Conference - Sharing Sustainable Futures.

I find it especially interesting that the EuroMAB conference focus on communication, interactivity, sharing best practice and building partnerships, issues very much in focus for the National EPA.

As an example, I can inform you that some years ago we launched a skills development programme for National nature authorities called '*Dialogue for nature conservation*' to improve the dialogue and local participation. During the first years some 30 courses were held reaching more than 500 officers, which is around two third of the staff working with nature conservation and management of natural resources.

We have a vision that all the good examples and experiences learned from the BR work will spread to other areas, and will be picked up. Sharing Sustainable Futures can make a difference, not only for the Man and the Biosphere programme, but to all of us working with environmental and sustainability issues.

It is pleasant to know that representatives of as many as 30 countries are present at this conference.

I hope you all will enjoy Sweden and also share with us all your knowledge and experiences from your own Biosphere work.

It is my wish that the conference output will take us further steps towards a position from where can say that we 'leave for posterity a society in which the major environmental problems are solved'.

Follow-up of EuroMAB 2009 in Slovakia

Mr Július OSZLÁNYI

Chair of Slovak MAB Committee

Bratislava, Slovakia

SUMMARY In Stara Lesna was held the EuroMAB Conference in 2009 aiming at the most typical issues of the UNESCO Biosphere Reserves. The Madrid Action Plan was the basis for all activities which should result in effective approach to sustainable development concept and to best practices. During the interactive participatory process, which was applied at the conference, new strategic themes for EuroMAB were identified. Among them, the improvement of governance of the EuroMAB network was declared as the most important to develop rules and procedures for EuroMAB governance, including membership, reporting and acceptance of recommendations. To improve the participation of representatives of South Eastern European countries and of Caucasus regions was identified as one of the most important tasks.

Swedish National MAB Programme

Mr Göran BLOM

Chair of the National MAB-Committee

Stockholm, Sweden

Dear Delegates and Conference Guests,

On behalf of the National Man and the Biosphere Committee, I welcome you all to Sweden, Lundsbrunn and the EuroMAB 2011 Conference – Sharing sustainable futures.

To get this opportunity, to host the EuroMAB meeting, as we did two years ago in Slovakia, was really great – like getting the Olympics. With a small but significant difference that this conference is about collaboration and sharing rather than athlete competition. Anyway, for us in the National MAB Programme it could not be bigger.

The timing is perfect. The National Man and the Biosphere programme is going from a slow starter to really have momentum now. In a few years the programme has developed from one to four BR. I will take this opportunity to congratulate and welcome our two new National members of the Biosphere family - Nedre Dalälven River Landscape and Blekinge Archipelago – who were approved by the MAB International Coordinating Council in Dresden last week. The advisory committee “commended the high quality of the nomination file and process which should be considered as a model and shared with the World Network of BR.” That is a nice leaving certificate from the biosphere candidate school. I can also inform you that we are expecting a fifth member next year.

Are there any more representatives from new biosphere reserves present here today? Congratulations and welcome to the growing family!

The National MAB Programme fulfil several functions and encourages interdisciplinary research, demonstration of the good examples locally, and education related to sustainable culture and nature resource management. The MAB Programme is therefore not only contributing to a better understanding of the environment, but also to a greater collaboration between science, local knowledge, and regional and local management. A guiding light is cooperation between actors at different society levels and that the initiative to establish a biosphere reserve should come from local or regional level.

To meet with new demands the National MAB committee has been reorganized this last year, and now consist of representatives of:

- The National Research Council Formas, Stockholm Resilience Centre,
- The National Association of Local Authorities and Regions (in Sweden municipalities has the responsibility for planning of land use),
- The National Agency for Economic and Regional Growth,
- our national BR coordinator and
- The National EPA, having the chair.

In this way we have representation in the MAB committee covering the three main functions of biosphere reserve work: Conservation, Development and Logistic support.

The National MAB Programme has three priorities on the agenda for 2011 and 2012.

- To make the programme more visible and better known,
- To strengthen our international engagement, and
- To strengthen the roll of research in the National MAB Programme.

The EuroMAB meeting will certainly help us meet our objectives for this year.

I would like to mention the financial supporters who have made this conference possible:

- Unesco Secretariat and The National National Commission for UNESCO
- National Research Council Formas and Stockholm Resilience Centre
- National EPA and the Association of Skaraborg County municipalities
- The public transport company Västtrafik and Region Västra Götaland

I would also like to thank the organizers of this EuroMAB Conference, the Biosphere Office of Vänerskärgråden med Kinnekulle.

To be here now is great. Together, at this conference, we can give a substantial contribution to the EuroMAB network as well as the World Network of biosphere rreserves. So let's contribute and let's share for sustainability, and once again welcome!

Welcome to BR Lake Vänern Archipelago and Mount Kinnekulle

Ms Johanna MACTAGGART
Coordinator of Swedish National MAB Programme
Coordinator of BR Lake Vänern Archipelago and Mount Kinnekulle
Mariestad, Sweden

We are here this week to work with EuroMAB identity, to learn from each other's experiences and best practices, to share sustainable futures. Hopefully by the end of this week, we have gained many new ideas of how to increase sustainability in our biosphere reserves or perhaps learned a new way to contribute with our science to increase resilience of society. It is with joy and great pride that Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle welcomes more than 160 delegates from 30 countries to participate in EuroMAB 2011.

So, let me tell you a little about the Biosphere Reserve you are currently in:

The Biosphere Reserve joins three municipalities in their efforts for sustainability. Geographically, it encompasses a largely agricultural landscape with forestry and fisheries as complementary income sources. Industries, schools city services are here, just like in any other part of Sweden. But this area has exceptionally high biological values and high biodiversity in the cultural landscape. You will experience this during the conference.

The preparations of the Biosphere Reserve started in 2005 and it has involved many people. A strong grass root perspective and participatory processes has joined central organizations, NGOs, enterprises and other in this areas future development. All is coordinated from a fairly small biosphere office with four staff members. We are now conducting projects for around € 2,4 million during the next two years.

We are developing the first ecotourism destination in Sweden. This means that we are not only establishing the necessary infrastructure for hiking, canoeing and biking but we are also working with marketing, branding, networking and development of new attractions for ecotourism. We have a training course for guides and regular network meetings for entrepreneurs.

Part if the Biosphere Reserve is also a Fisheries Area according to the DG Maritime Affairs and Fisheries. This enables us to promote the development of projects with focus on product refinement, logistics, marketing and branding of the fish in Lake Vänern.

The most recent project we are currently developing is the Biosphere Innovation System, a pilot project, part of a larger cooperation with BR Sierra Gorda, Mexico, and BR Yayu in Ethiopia. The Biosphere Innovation System is a support system for social entrepreneurs with the aim to stimulate more such initiatives within the Biosphere Reserve, based on the values of the Biosphere Reserve. The Biosphere Innovation system includes scientific knowledge, seed funding, activities and an investor fund. We are hoping the Biosphere Innovation System is successfully launched in the beginning of 2012.

Furthermore we have since a few years back Biosphere ambassadors, i.e. voluntaries who speak the vision of the Biosphere Reserve. We were just today granted a Gruntwig grant for awareness raising in landscapes. This will enable exchanges between stakeholders in our Biosphere reserve, such as the Biosphere ambassadors, with people in Belgium, Ireland, Iceland, Germany and Austria.

You will see examples of above projects during workshops and during the BiosFAIR. I hope you all find something of interest.

Finally I hope you will find this conference interesting and meaningful. I am sure we will have a terrific week. A special warm welcome to the two new Biosphere Reserves in Sweden: Blekinge Archipelago and Nedre Dalälven River Landscape. Welcome to the MAB family! And to all of you: welcome fellow MABoons! Let's rock!

Biosphere reserves through the global lens

Planetary Boundaries

Professor Carl FOLKE
Scientific Director
Stockholm Resilience Centre
Stockholm, Sweden

Local biosphere reserves in a Global Context

Carl Folke, Stockholm Resilience Centre, Stockholm University and Beijer Institute, Royal Swedish Academy of Sciences

Humanity has entered the Anthropocene – a biosphere shaped by people (Steffen et al. 2011, Rockström et al. 2009). We are living in a globally intertwined social-ecological system, where local actions aggregate to global change and where the local and regional is operating in a global context, with events happening in one place cascading into other places and regions. In this new era there are no ecosystems without people shaping them and there are no people that do not depend on ecosystem services generated in landscapes and seascapes (Folke et al. 2011). A large part of the human population living in urban areas is illiterate about their dependence on a healthy and functioning biosphere, that economic progress and societal development rests on the capacity of ecosystems to sustain it (Folke et al. 1997, Deutsch et al. 2007). People may be very adaptive, collaborate and solve challenges but such adaptations may lead to social-ecological traps where sustainability is challenged. This is exemplified by the guildded trap of lobster fisheries in Maine, USA, where loss of diversity has created a vulnerable social-ecological system (Steneck et al. 2011). Diversity provides insurance for dealing with change (Elmqvist et al. 2003). Loss of biodiversity may lead to dramatic tipping points and regime shifts (Scheffer et al. 2001, Folke et al. 2004). Social-ecological resilience is required to be able to deal with change and continue to develop (Folke 2006, Folke et al. 2010). The MAB-system provides pocket of social-ecological resilience for dealing with global change, reconnecting to the biosphere and help navigate social-ecological systems towards sustainability (Schultz et al. 2011, Hahn et al. 2006, Olsson et al. 2004). Biosphere stewardship becomes an urgent challenge for humanity (Chapin et al. 2010, Westley et al. 2011).

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Stewardship in Practice: Lessons Learned from biosphere reserves

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Good afternoon everyone! Thanks for giving me this opportunity to share with you the results of a long and exciting research journey in the world network of biosphere reserves. Many of you have participated and contributed your knowledge, experience, and time, and I can never thank you enough, but I hope that you find our findings as interesting as I do.

I came in contact with the BR concept when the area I was studying for my PhD thesis, Kristianstads Vattenrike, in southern Sweden, became designated. We had just finished our case study there, and when presenting the findings, we always got the question “So what does this mean for other places?”. Now, the World Network of biosphere reserves opened up an amazing opportunity to do comparisons. Also, I soon found out that there would be a world congress in 2008, in Madrid, where most of the coordinators would participate. So we developed a survey to capture as much info from you as possible, and we were kindly allowed in by UNESCO to the congress to distribute it. Today, I am here to give you the results of our research.

This presentation will begin with the story of Kristianstads Vattenrike Biosphere Reserve, which I think is inspiring to everyone that works with conservation and sustainable development in practice. After that, I will present the results from the global survey, and I will then end with a summary of lessons learned during our research in biosphere reserves.

Challenges

As you have learned from Carl Folke's presentation, humanity faces large challenges, and biosphere reserves are one of the responses that we have to deal with them. In short, we have three problems: Firstly, ecosystem services decrease, while people's needs increase. This means that our current management of ecosystem services is not good enough. Secondly, biodiversity decreases, while disturbances and rapid changes increase. This means that we cannot rely on the self-repairing capacity of the biosphere. Thirdly, humans have become the strongest driver of ecosystem change, but ecosystems are complex and so our knowledge about how ecosystems function will always be limited. It seems that our capacity to manage ecosystems sustainably is inadequate.

So, how can we become stewards of the planet, and manage ecosystems so that they continue to generate services also in the face of change? One way of finding out is to study places that seem to succeed in this endeavor.

The story of Kristianstads Vattenrike

Our search for places that seem successful brought us to Kristianstads Vattenrike (KV), which is a 1044 km² large area of wet and dry grasslands, agricultural land, deciduous forests, and river systems in Southern Sweden. Here, a negative trend of biodiversity was reversed in the 1990's. Biodiversity conservation now contributes to societal development, and interests that in other places are conflicting seem to work together here. Furthermore, the area is a productive, semi-urban, cultural landscape. So, how did this happen?

In the 1960's and 1970's, the flooded meadows, which provide a crucial habitat to flora and fauna, and give ecosystem services such as flood buffer, nutrient retention, recreation, and cattle fodder, were beginning to deteriorate. The large amounts of water was considered a problem by many, including the municipal health committee, which wrote that "We need to dredge this waterlogged, unhealthy swamp!". A garbage dump was established on the wetlands, and the grasslands were becoming overgrown by bushes as a result of ceased cattle grazing. At the same time, several conservation projects were initiated, mainly aimed at protecting the area from

exploitation, but none of the projects succeeded in halting the loss of habitat, species, and associated ecosystem services.

In the mid 1980's, a new network began to form, as a key individual in the area who was keen to improve the situation made contact with other key individuals, and started to build a common understanding and knowledge base of the situation. The flooded meadows depended on grazing and haymaking, and the reason why these practices were being abandoned was the diminishing profits for local farmers. If the flooded meadows were to be restored and maintained, they would have to find alternative ways of motivating their management. Together, these people, who had different interests in restoring the wetlands, and special knowledge about different aspects, found a common vision: To preserve and develop the ecological values and cultural heritage of the area, while at the same time making careful and sustainable use of these values, turning the wetland into a Vattenrike that would put Kristianstad on the map.

The key individual that had taken the initiative to meet in the first place then began reaching out to potential backers, and presented the idea of creating an Ecomuseum, in a way that tempted various interests, including research, conservation, eco-tourism and cultural heritage. He managed to build large and broad support for the idea locally, but it was not until a window of opportunity opened that he was able to get political support to realize the idea. The window of opportunity involved an increased focus on environmental issues in the general debate, and the pressing need for a new profile for the municipality. As a result, the Ecomuseum was launched in 1989, with the mandate to initiate and coordinate nature conservation, environmental protection and production, ecotourism and recreation, education, and cultural heritage management.

The Ecomuseum was funded by the municipality and the county board administration, and functioned as a bridging organization that could initiate, sustain and protect collaborative processes around management of ecosystems for a diversity of services. Drawing on their network of local, regional, national and international actors, they were able to mobilize knowledge, funding and activities to solve problems and identify win-win situations in the management of local ecosystems. Local stewards, such as farmers, bird-watchers, and fishing associations, were particularly important, as they contributed with on-site management, monitoring, local ecological knowledge, public support and specialized networks. The Ecomuseum have been very good at identifying and engaging these local stewards. Inspired by their work, we developed a tool for managers who want to identify and engage key actors in their own region: a social-ecological inventory. This tool is available as a scientific article at http://journals.cambridge.org/abstract_S0376892907003876 and as a workbook for managers at http://www.resalliance.org/index.php/resilience_assessment.

Our studies in Kristianstads Vattenrike showed that this was a practical example of so called adaptive co-management. In this approach, management interventions are designed as experiments and there is a strong focus on learning-by-doing. Management is flexible and adaptive to ecological changes, and is builds on knowledge that is continuously updated. Building on collaborations with actors on several levels, adaptive co-management is tailoring responses to the problem at hand, so that measures are taken at the right scale. We learned from Kristianstads Vattenrike that adaptive co-management benefits from a bridging organization that can initiate, sustain, and protect these collaborative learning processes. It seems that biosphere reserve offices have an important role to play in this regard. Also, we learned that adaptive co-management builds on personal relations between key individuals rather than formal links between various organizations. Such voluntary, informal collaboration promotes learning and flexibility but is vulnerable, and we believe that the biosphere reserve designation can be one important tool for strengthening this type of informal collaboration. We also found that learning can change preferences and enhance motivation for ecosystem management, that trust-building forestalls conflicts, and that strategic collaboration is an effective complement to broad participation and democratic processes.

Comparisons in the World Network of biosphere reserves

In 2005, Kristianstads Vattenrike became a biosphere reserve, and to us, this meant that we could compare our findings in a larger set of cases. The fact that biosphere reserves are “learning sites” that are to “integrate conservation and development”, work with “adaptive management”, and participation caught our interest, as well as the fact that a world congress that would bring together representatives from all biosphere reserves was planned for 2008. To us, it seemed like the WNBR consisted of more than 500 adaptive co-management experiments, that had been running for up to 30 years, with thorough documentation of processes and outcomes. But how do you compile such a wealth of information and experiences into a comprehensive analysis? Of course, we could not make 500 case studies, but had to opt for something more quick and dirty. We decided to construct a survey instrument to capture as much information as possible, and with the help of friends and colleagues we were able to translate it into English, French, Spanish and Chinese.

Now, if you had the chance to ask all of your fellow BR coordinators one thing, what would it be? Please take a minute to write your question on a piece of paper, and then in the end we will see if you have the answer to your question. If not, we might be able to ask it in the next round of research!

Here are the survey themes that we decided on: Firstly, we wanted to assess the relationship between adaptive co-management (learning, collaboration, integration)

and effectiveness. In other words, is adaptive co-management really effective? We asked questions about priorities among objectives, the self-assessed effectiveness in reaching objectives, participation of various groups, and face-to-face activities. Secondly, we wanted to assess needs, challenges and opportunities related to BR management, to find out how the BR concept is translated into practice.

Survey responses

In a nutshell, the survey gave us 148 responses from 55 countries, and 46 of these were identified as potential adaptive co-management sites. 79 sites were potential learning sites, with a focus on education, research, and/or facilitating dialogue between different groups. To us, these figures were rather disappointing at first, both in terms of response rates, and in terms of the biosphere reserves ability to live up to the ideals. It is understandable that biosphere reserve coordinators put their priorities in other places than filling in surveys, but the fact that we were not even able to find a contact person for over a 100 of the biosphere reserves is quite alarming. Also, the fact that there are many biosphere reserves in the network that have not implemented the Seville Strategy is certainly not news to you, but it is a problem that needs to be dealt with to set expectations right of what a biosphere reserve really is. This said, we were excited to still find a number that was large enough to make a rigorous analysis, and the broad spectrum of governance arrangements and priorities made our studies richer. We found two strong clusters of objectives; one cluster of biosphere reserves focusing on conservation for development (with high priorities of development, education, and facilitating dialogue), and one cluster focusing on conventional conservation (with high priorities of conservation, research and monitoring).

Participation and effectiveness

So, what about the effects of participation and adaptive co-management? Well, it does seem that local inhabitants are key in biosphere reserve management. Involving them increases their support for BR goals and processes, and their involvement increases the likelihood of successful integration of conservation and development. Local participation also increases effectiveness in achieving development goals, but there is no significant effect on conservation effectiveness. Participation of scientists on the other hand has only one significant effect, and that is related to enhanced effectiveness of conventional conservation goals. Finally, participation of politicians is related to successful integration of conservation and development. The major challenges associated with participation are that it is time consuming, and that there is often a lack of interest among stakeholders.

When we analyzed the effects of adaptive co-management, we found that the BRs that display a higher degree of ACM are able to combine a high effectiveness in fostering development with a high conservation effectiveness. This is contrary to the argument put forward by some biological conservationists that co-management would compromise conservation goals. However, there was no significant effect of ACM on the conservation effectiveness per se.

Needs and benefits

The survey responses showed that most biosphere reserve coordinators need more funding, staff and support from politicians and local inhabitants. However, most biosphere reserves have sufficient ecological monitoring capacity and sufficient ecological knowledge, local as well as scientific.

Most biosphere coordinators agreed that the BR designation facilitates dialogue, helps integrate conservation and development, generates a shared vision, increases environmental awareness, and provides the opportunity to exchange experience with other BRs. Some also experienced that the designation leads to more political and local support, and attracts resources to the region. However, in general, the designation does not increase financial support to conservation.

Biosphere reserves as learning sites

As a follow-up to the survey, we also made interviews with coordinators selected sites among the 79 BRs that were identified as potential learning sites. The coordinators and managers interviewed were based in the US, Canada, Brazil, Venezuela, South Africa, Czech Republic, Austria and Germany. We asked them to describe how they interpreted the concept of being a learning site locally, how they worked to support research and monitoring, how they worked with environmental education, and how they worked to help actors meet face to face. These interviews revealed an impressive range of learning opportunities provided in biosphere reserves. Biosphere reserves enable mutual and collective learning, as they provide an arena where different actors meet around a common issue. Furthermore, biosphere reserves hold and update a knowledge base of their regions, as they support and document monitoring, adaptive management, experimentation and research activities. Finally, biosphere reserves can frame information and education to target groups, such as local stewards, policy-makers, students, consumers and citizens, and disadvantaged groups.

Conclusions

In summary, we found that biosphere reserves hold a large potential in

- Providing a space where people and nature can reconnect
- Providing learning platforms for sustainable development (diversity of approaches)
- Providing a systemic view of people and nature
- Functioning as bridging organizations, connecting different levels of decision-making and different sectors

However, many biosphere reserves need more support to fulfill their objectives. We also found that there is a lack of data to enable systematic comparisons, which makes it difficult to learn from experiences in biosphere reserves. Perhaps, there is a tension between being a learning site and a site of excellence. The "site of excellence" mark could mean that failures are not accepted, whereas a successful learning site should use failures as learning opportunities.

For the adaptive co-management theory, the work in biosphere reserves has been incredibly useful. It supports the hypothesis that adaptive co-management is a useful approach for stewardship of social-ecological systems. Bridging organizations such as biosphere reserves are crucial for adaptive co-management to happen, as they connect vertically as well as horizontally, generate knowledge and stimulate learning, and facilitate and protect adaptive action. It is important to note that these processes require personal skills for navigating legal, political and financial systems, incorporating knowledge from different sources, listening, trust-building, identifying and communicating win-win situations to various groups. But being a bridging organization is also challenging. How do you turn a successful project, driven by engaged key individuals into a formalized process, and how do you stay adaptive, innovative and legitimate over time? These might be the topic for future studies in biosphere reserves.

Next steps

Now, please have a look at the question you wrote down in the beginning of my talk. Did you get it answered? If not, I would be very interested to see it. Please e-mail it to me at lisen.schultz@stockholmresilience.su.se if you want to share it. Or bring it to the workshop we are holding tomorrow. For us, this is not the end of our interaction with the MAB Programme. Over the next few years, we will conduct a follow-up survey and comparative case studies in biosphere reserves, and there is also interest from a new global research programme to focus on biosphere reserves – the Programme for Ecosystem Change and Society (hosted by UNESCO and ICSU and based at the Stockholm Resilience Centre).

If you want to learn more, I would recommend two workbooks that are targeted to practitioners. The Resilience Assessment workbook takes you through a process that helps you assess and manage the resilience of your biosphere reserve. This workbook was developed by the Resilience Alliance, and partly builds on our research in Kristianstads Vattenrike. The Social-Ecological Inventory Workbook helps you identify key actors in your region and engage them. We developed this workbook together with Canadian biosphere reserve researchers and practitioners. Both books can be downloaded for free at

http://www.resalliance.org/index.php/resilience_assessment

If you want the scientific publications I am happy to send you pdfs. Thanks for your time, and good luck in the future!

The presentation built on the following publications:

Schultz, L., A. Duit. and C. Folke. 2011. Participation, adaptive co-management and management performance in the World Network of biosphere reserves. *World Development* 39(4):662–671

Schultz, L., and Lundholm, C. 2010. Learning for resilience? Exploring learning opportunities in biosphere reserves. *Environmental Education Research* 16(5):645–663

Stoll-Kleemann S, de la Vega-Leinert A.C, Schultz. L. 2010. The role of community participation in the effectiveness of UNESCO biosphere reserve management: evidence and reflections from two parallel global surveys. *Environmental Conservation* 37:227–238

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EU Cohesion Policy – Investing in Nature and Biodiversity Protection

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Summary

The presentation provided an overview of the European Union's Cohesion Policy 2007-13, its main objectives, i.e. to strengthen social, economic and territorial cohesion in the EU, and features such as the integrated approach to local and regional development as well as 'place-based policies' building on the characteristics and specific needs and potential of each territory.

In this framework the presentation was then focused on the socio-economic rationale of the investments of Cohesion Policy into nature, biodiversity and ecosystems: there's now extensive scientific background and evidence on the fundamental role, the enabling position, of our biosphere and its ecosystems to support local and regional socio-economic development. Significant funding is already available to EU Member States through the European Regional Development Fund and the Cohesion Fund to support projects and programmes related to sustainable development, in particular ecosystems and its services such as water. The presentation was closed with a number of project examples which underlined the potential of Cohesion Policy to help regions and local communities to invest in innovative undertakings for sustainability such as biosphere reserves.

MAB Programme development

EuroMAB - Finding our Identity

Laurie Bennett and Jeff Melnyk
Futerra Sustainability Communications

Introduction

How does the EuroMAB network define itself? Why do we exist and how do we work? How do we explain this to our stakeholders? This is the first step in developing a communication strategy for the EuroMAB network, a priority defined during EuroMAB 2009.

Futerra facilitated a two hour brainstorm with all the delegates to define EuroMAB's identity. Participants identified the key messages that communicate what you stand for and what you do in a clear, concise and compelling way.

The objective was to find the building blocks of the identity of the EuroMAB, going beyond the results from EuroMAB 2009 on values and strengths. The output was a WHY; a statement that expresses EuroMAB identity, and a HOW; a set of actionable values. Specific messages to target audiences were also identified.

Methodology

Having seen examples of how a clear understanding of the purpose of a brand can drive the success of organizations from consumer goods, companies to NGOs, participants were facilitated through a 5 step process to identify EuroMAB's identity – the combination of their intention and values.

Results

WHY - What is the purpose of EuroMAB?

- Connecting people and nature for a sustainable future
- Bringing people together for a more sustainable life

HOW - Action value statements

Acting on research: using science as a foundation for real change

Bridging gaps: engaging and inspiring communities across borders and cultures

Facilitating innovation: developing new ideas, tools and methodologies

Learning continuously: interdisciplinary education and sharing knowledge
Finding balance: balancing people's needs and nature

Branding Biodiversity

Laurie Bennett and Jeff Melnyk
Futerra Sustainability Communications

Introduction

How will you engage your stakeholders in the work you do, and in conservation in general? How will you turn raised awareness about conservation into action?

Futerra ran an interactive workshop on their latest communications guide Branding Biodiversity. The session equipped participants with tips and tactics they need to develop communications that will change minds and behaviours of your stakeholders – from politicians, to businesses to the public.

The objective was to explore how EuroMAB is communicated to its partners and potential stakeholders. The output was an understanding of effective communications tactics and messages aimed at target audiences.

Methodology

Futerra presented the thinking and tactics behind effective communication of biodiversity and sustainability. These were based on Branding Biodiversity, Futerra's latest publication on the new nature message. Following the presentation, participants formed groups to develop clear communications messages for each of EuroMAB's key audience groups. Together with the identity, these will help to further develop EuroMAB's wider communications strategy.

Results - Target Messages

Community:

- Life with nature is wonderful – Let's take care
- The future grows from our heritage

Research and academia:

- Research for change
- We can support research (infrastructure, local expertise)
- We offer possibility to study ecosystem services and mobilise research for change

- We are interested in research and applying results
- We can disseminate research through our large network

Press and media

- Less words - more deeds
- Nature my sweet home

NGOs

- Help!

Businesses

- Invest in our mutual future
- Reach markets others cannot
- We'll help you save money you never dreamed off

Local politicians

- Don't waste money – be wise, act sustainably, gain votes!
- You need votes – people need jobs and well being. Act smart – be sustainable
- What if nature voted for you?

Terms of Reference for the EuroMAB network

The EuroMAB Network is made up of all Member States of Europe and North America which participate in the Man and the Biosphere (MAB) programme and in the World Network of Biosphere Reserves (WNBR) of UNESCO (United Nations Educational, Scientific and Cultural Organization). The Europe and North America region is presented here using the United Nations' own definition. Bringing together almost half of the WNBR sites, as well as the MAB national committees of 52 countries, scientists and experts, the EuroMAB Network is a platform for exchange between the Member States who reflect and act in order to allow sustainable development to become a real option and a choice made by society for present and future generations.

During EuroMAB 2011, Terms of Reference for the EuroMAB Network was adopted. The document defines the vision and mission as well as the structure and membership of the Network and the roles of its composing parts.

The Euromab Network Vision

To become a network of Member States focused on cooperation, sharing of knowledge and practical experience of sustainable development, biodiversity and cultural diversity conservation, and logistic support, being supported by operational biosphere reserves.

The Euromab Network Mission

The EuroMAB Network, on a voluntary and cooperative basis, is a platform for the sharing of knowledge, know-how and experience of sustainable development and a collective tool for the support of sustainable development practices among the various players of the Member States, which enrich them.

Terms of reference is presented in full in Appendix 1.

Workshops synthesis

Biosphere Management

Management of Ecosystem Services in BRs

The aim of this workshop was to i) introduce the concept of ecosystem services to participants, ii) learn from each others' experiences with working with ecosystem services iii) collect participants' ideas for the continued work on ecosystem services in the EuroMAB network.

The following recommendations were put forward by the workshop:

- **Update nomination form and periodic review:** Update to include questions about ecosystem services
- **Provide capacity-building** for biosphere reserve managers and tools for assessment, management and communication of ecosystem services
- **Update legal frameworks:** Support the harmonization of the ecosystem service idea with national legislation and international agreements (mainstreaming of ecosystem services)
- **Management and monitoring of biosphere reserves:** include ecosystem services.
- **Assess the ecosystem services** generated by the EuroMAB network of biosphere reserves
- **Assess trends in ecosystem services** generated by water objects in Europe (rivers, lakes etc)
- **Non-monetary valorization:** EuroMAB should emphasize that valuing ecosystem services is not the same as pricing them. Support managers with tools to assess other values than monetary values
- Support biosphere reserve managers with **tools to assess trade-offs** between different values
- **Local application:** Support biosphere reserve managers in opening up the concept of ecosystem services to local inhabitants
- The learning process about ecosystem services should continue as a discussion topic in a **MAB web forum**.
- **Spring 2012:** A training workshop on ecosystem services for biosphere reserve managers and coordinators will be organized and hosted by UNESCO and the Stockholm Resilience Centre.

Strategic Methods in Community Engagement

Strategic methods in community engagement were presented, related to regional sustainable development, specifically within the context of regions in Europe and North America that are applying for the UNESCO biosphere reserve designation. Five process characteristics have been suggested to help reduce the likelihood of creating barriers to hinder people from meeting their own needs in a process ([The Social Dimension of Sustainable Development: Guidance and Application](#) by André Benaim, Amber Collins, and Luke Raftis):

An engagement process where these characteristics are present reduces the chance of creating barriers. Max-Neef describes nine basic human needs: identity, freedom, protection, idleness, understanding, subsistence, affection, creativity and participation. A list of nine methods that can be adapted for a specific region was presented.

The workshop resulted in an additional list of 25 methods.

What makes methods of community engagement strategic when working with Sustainable Development?

The methods must move a community in the direction of sustainable development. A common and rigorous definition of sustainability is required. In the absence of such a definition methods may not prove to be strategic. With a solid definition of sustainability in place, methods which respect individuals and the community's needs are most strategic. Looking at whether the methods contribute to the five characteristics of Openness, Inclusiveness, Transparency, Involvement and Cooperation, is a way to assess how well the methods meet those needs.

Four general recommendations to support the biosphere reserve management

- Facilitate the exchange of best practices and experiences through a web forum
- Create a help-desk for biosphere reserve managers where they can get support on specific problems
- Increase sharing between EU members and non-EU members
- Have more thematic networks for biosphere reserve managers (in addition to the regional networks)

Online support for biosphere reserve management

During the conference two workbooks and one handbook were presented:

- **The Resilience Assessment workbook** takes you through a process that helps you assess and manage the resilience of your biosphere reserve. Downloaded for free: www.resalliance.org/index.php/resilience_assessment
- **The Social-Ecological Inventory Workbook** helps you identify key actors in your region and engage them. Downloaded for free: www.resalliance.org/index.php/resilience_assessment.
- **Methods for Strategic Community Engagement** helps you find strategic methods to engage your community to work with sustainable development. web.me.com/pierrejohnson/strategiccommunityengagement

Partnership Building

NordMAB Network Planning Cooperation

- **Platform for cooperation** The workshop concluded that NordMAB is mainly a platform for finding partners for cooperation within the Nordic and Baltic countries. Since EuroMAB 2011, the NordMAB network consists of Scandinavian countries, Finland, Baltic States, Northwest Russia and Canada.
- **Issues for cooperation:** Tourism, environmental awareness and water issues in connection with Baltic Action Plan.
- **Suggested specific area for cooperation:** the Green Belt of Fennoscandia.
- A **web platform** for NordMAB was planned. **Canada** offered kindly to be responsible for the platform and possibly also a facebook-site, since it can be connected with the planning of EuroMAB 2013.
- **Solutions 2013:** Conference for Sustainable Development in Umeå (SWE). A NordMAB session is planned.
- **October 2012:** Next NordMAB meeting in connection with the 20th anniversary of North Karelia Biosphere Reserve, Finland.
- **2013: Canada** offered to host a NordMAB meeting during EuroMAB 2013.

Biosphere Centres

Networking: There was an interest to create a network of biosphere centres/ visitor centres in biosphere reserves. Biosphere Reserve Candidate Eastern Slopes of Lake Vättern (SWE) will try to set up a network during 2012.

Small-scale Networking on Common Issues

Five international cooperation projects were drafted in the workshop Small-scale networking on common issues. Possible coordinators were identified. The

workshop prepared rough drafts for the realization of chosen issues in the next two years. The drafts are on disposal to be carried out, adopted or developed by all interested biosphere reserves and organizations involved. A general invitation to participation of other interested biosphere reserves and partners was suggested. The five projects are:

1. Learn and share experience from biosphere reserves that have evaluated ecosystems services
2. Participation of business in biosphere reserves and MAB Programme
3. Create a book with guidelines: design standards for nature monitoring including citizen monitoring for increasing stewardship
4. Development of a book/kit of guidelines for enhancing education for sustainable development (ESD) in biosphere reserves for various target groups
5. What is tradition: How do we ensure authenticity of the cultural landscape with zoning and dynamics?

Social Entrepreneurship – Biosphere Entrepreneurship

The purpose of the workshop was to introduce the concept, make visualize the link between the biosphere reserve values and social entrepreneurship, and to present a new form of entrepreneurship for sustainable development “Biosphere entrepreneurship”. Biosphere entrepreneurship supports human well-being and ecological resilience by connecting social entrepreneurship with the unique resources and opportunities that exist in biosphere reserves around the globe. The workshop was a first step towards a knowledge and learning platform about Social entrepreneurship in biosphere reserves.

Conclusions The workshop concluded that *Biosphere entrepreneurship* is an interesting resource for growth and development of a biosphere reserve. Ecosystem services and resilience are directly linked to this type of entrepreneurship. The socio-cultural component is a key for developing biosphere entrepreneurship.

- **2012-2014** Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle will promote and continue to develop *Biosphere entrepreneurship*. A new type of incubator, *HUB- Big Lake*, will be developed.

Biosphere Innovation System

Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle (SE) will start a 2-year project to develop the Biosphere Innovation System. Input from EuroMAB workshops will be taken into account.

Thematic workshops

Biodiversity in Planning and Land-Use

Several methods of sustainable planning were presented.

1. Core planning strategy embracing the biosphere reserve concept. Uses the key tool “biodiversity offsetting”. The tool calculate net loss of biodiversity into a credit value arising from development, then transformed into a fee to establish or enhance a more important habitat elsewhere in the biosphere reserve to strategically rebuild connectivity. North Devon Biosphere Reserve, UK.
2. Ecological function analysis, a landscape model – a method to analyze the amount of habitat required at landscape scale to avoid species extinctions, Biosphere Lake Vänern Archipelago and Mount Kinnekulle, Sweden
3. Mapping of Social-Ecological Values, Implications for ecosystem services, and urban transition planning, Stockholm Sweden
4. Modeling distribution and habitat preferences of vulnerable species, Italy

Renewable Energy and Biodiversity –BR as Conflict Preventing Arenas

The workshop presented conclusions and recommendations for conflict management regarding renewable energy, focused on land-based windpower and biomass extration. The recommendations and conclusions were based on the following statements and discussion during the workshop:

- A big pressure is imposed on each project for sustainable development.
- Conflicts are a natural part of complexity and change.
- Social learning, developed relations and communication are necessary for successful conflict management.
- Procedural issues and trust building activities must be put at the forefront.

Statements and recommendations for conflict management for renewable energy focused on land-based windpower and biomass expansion

Trend: The pressure on natural resources is increasing in many biosphere reserves due to production on renewable energy, for instance through bio-energy and wind-power development.

Increased importance: The function of biosphere reserves as independent platforms for conflict management and capability to create win-win situations is therefore increasingly important

Top-down AND bottom-up: Governance can be carried out with or without governments, but successful conflict management often consists of both bottom-up and top-down processes.

Conflicts arise: To meet the needs of renewable energy production, governments will take direct actions which must be combined with local resistance of change.

Power: Wind power developers have a strong political mandate and economical muscles leading to a feeling of an increased top-down process and a balance-shift on local level.

Speed up conflict management Experiences from biosphere reserves are important to spread. Since big socio-ecological changes must be responded to quickly, the challenge is to speed up conflict management without forcing the social processes.

Local joint vision: Mutual learning and creating a common vision will decrease the feeling of pressure from the outside.

Balancing: Many biosphere reserves have the potential to build capacity to become a counterpart to other strong actors acting in the renewable energy expansion.

Forests for People

A set of statements was produced that outline how the EuroMAB network can address forest issues until EuroMAB 2013. The basis for the discussion was three emerging challenges identified in the Madrid Action Plan: *climate change*, *provision of ecosystem services* and *urbanization as principle drivers for ecosystem-wide pressures*.

- Forest management methods can be developed by using the 3 challenges as a basis
- Sharing experiences on “unconventional forest management” within EuroMAB and other landscape management initiatives is a major value.

- The Forest Network between biosphere reserves in France and the thematic network of Mountains and Tropical Forests already existing in WNBR could be used for sharing experiences.
- A “community-of-interest” will be initiated.
- A forest workshop is proposed for EuroMAB 2013.

Suggested themes to start the discussions:

- Green infrastructure and biodiversity conservation
- Social adapted forest management and health
- Small scale forestry specially adapted for biosphere reserve products and stakeholders
- Locally adapted management to meet climate change

Sustainable Tourism

The workshop included a number of presentations that introduced the participants to the topic and gave examples of how to work with sustainable tourism. These were the strategies and example presented:

Strategy

The MAB Programme and/or individual biosphere reserves can already join existing activities of various UN agencies participating in the Partnership for Global Sustainable Tourism Criteria - GSTC- (www.sustainabletourismcriteria.org). There is no need to "reinvent" the existing guidelines, these being sufficiently broadly worded to be adaptable by every biosphere in the network

Contribution by Canadian biosphere reserves

Proposal of a possible contribution of Canadian biosphere reserves to sustainable tourism by: agreement upon Common Charter and definition of sustainable tourism, adopting GSTC Accreditation Criteria, creating Training Modules for Tourism Businesses incl. “Best Practices” Manual, joining Tourism Industry Association of Canada and Global Sustainable Tourism Council, networking with UN Agencies and biosphere reserves involved in sustainable tourism and developing Carbon Offset Program focused on investment in biosphere reserves.

Examples of good practice

Finland: "Koli Cultura Centre for Nature and Culture – 2015" is a project of international sustainable development model, working on and influencing all aspects of sustainability. The project is being created on the open multi-stakeholder Koli Sustainable Development Platform. Koli Cultura will be a biosphere reserve centre.

Canada: Biosphere Reserve Lac-St-Pierre has created a certification program "Destin-Action Lac-St. - Pierre". The program is based on the combination of sustainable development and biosphere reserve/MAB concepts. Eligible participants must sign Chart of Sustainability. They have to reside within the Biosphere Reserve, be an asset to the Biosphere Reserve and cooperate with other biosphere reserve businesses. The certification program was done by adding own requirements to already existing sectoral criteria, which approach has been proven as easy to adapt and highly cost effective, since most of the control is done by sectoral authorities

Slovenia: The Karst Biosphere Reserve will establish "The House of Excellence" to educate, share experience and promote sustainable development on local, national and international levels.

Czech Republic: Lower Morava Biosphere Reserve has mediated discussions involving important land owners and representatives of municipalities on both the Czech and Austrian side, as well as with companies, foresters, state institutions and non-governmental organizations. The achievement was a set of rules, recommendations and nine project plans for tourism in the Soutok Area. The projects are gradually implemented as the funding sources occur and the Biosphere Reserve helps in search of available funds. The tourism strategy was made possible as a part of INTERREG III.

Sweden: Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle coordinates a project to develop the Biosphere Reserve into a destination for ecotourism based on travel with public transport, biking, walking, horse-riding and canoeing. The project includes business development for tourism entrepreneurs and development of infrastructure for the sustainable traveling. Important stakeholders, organizations and authorities take part in the project. The project was able to start due to a national pilot project aiming to applying the notion that if biodiversity is used in a sustainable manner, it will be preserved (the Convention on Biodiversity).

The workshop included a discussion on how biosphere reserves can add value to the work on sustainable tourism and how the EuroMAB network can be used:

- It is necessary to **adopt (unifying) guidelines** for this segment of the market. Already existing rules could be adopted without any major alterations.
- **The MAB Programme has to be an active player** cooperating with other UN/ UNESCO agencies.
- **An update of MAB Task Force on the Development of Quality Economies** in biosphere reserves utilizing new experience.
- Canadian biosphere reserves will likely form a group to agree upon the suggested list of initiatives as contained in the final summary of his presentation **Sustainable tourism - the international context and the role of biosphere reserves** This group will then appoint 2 or 3 of its members to act as a small informal network of European and Canadian biosphere reserves.
- **Network on sustainable tourism established** biosphere reserves with already functioning certification procedures and proven sustainable tourism guidelines will share the experience with other biosphere reserves. The network could lead in the development of a simple manual for sustainable tourism products and services. The informal network will report on progress at the EuroMAB 2013 Conference.

Public Procurement as a Tool for Sustainability

A set of presentations introduced the participants to public procurement with the aim to show its potentials as a tool for sustainable development. The workshop gathered international organizations, such as EU Commission, ICLEI and UNEP.

The results are:

- A **network** was formed and UNEP provides a platform www.unep.fr/scp/procurement/googlegroup.htm. The aim of the network is to promote sustainable procurement as a tool for sustainability in biosphere reserves, and to propose a flexible standard or frame work for sustainable purchasing in biosphere reserves that will be presented at EuroMAB 2013. The network includes both the organizations that had presentations at the workshop and a number of BR interested in the topic.
- **ICLEI offers to host a Biosphere Procurement Network** within the scope of their network and welcomes any local public organization to join their organization for further exchange and help in the different areas of sustainability that ICLEI members have vast experiences in.

- **EuroMAB 2013:** Sharing of experience and knowledge on public procurement in biosphere reserves, see above tasks for the network.

Education for Sustainable Development

The workshop included several presentations, outdoor demonstration and a final discussion. The results are:

- **Working group on ESD:** A working group on ESD was established. It will work until at least EuroMAB 2013.
- **Identified tasks for working group:**
 1. Review existing ESD related experiences in other networks/organizations such as ASPnet (Associated Schools of UNESCO), MIO-ECSDE, Global Footprint Network, and to identify the specificities and added value of what can/could be done in biosphere reserves.
 2. Elaborate proposals and practical methods on how the incorporation of the “global dimension” in biosphere reserve ESD related activities, and collect methodological references and techniques to be applied in biosphere reserves.
 3. Arrange a *training workshop* during 2012 where the methodological basis of ESD in biosphere reserves would be explained and all the proposed techniques would be demonstrated by their promoters.
 4. **EuroMAB 2013** 1) An assessment workshop during EuroMAB 2013 where lessons learned and feedbacks would be collected. 2) Present a toolkit for educators in biosphere reserves elaborated on the handbook under preparation by MIO-ECSDE and the UNESCO Venice Office.
 5. **2014 UN DESD in Japan** Present a report on ESD related activities in biosphere reserves in the view of the closing of the UN-DESD in Japan in 2014.

Cooperation between Protected Areas Management and Stakeholders

Biosphere reserves are usually inhabited areas with rich natural and cultural values. The biosphere reserves should promote co-operation between protected areas and surrounding societies within the biosphere reserves in order to increase discussion among different stakeholders. The cooperation would fulfill one of the basic MAB Programme goals - to integrate economic development that is socio-culturally and environmentally sustainable.

The workshop concluded:

- In every biosphere reserve or protected area nobody operates alone but in a web of different interests and numerous stakeholders.
- Most likely there is always a need to increase communication and cooperation between stakeholders around and within a biosphere reserve or protected area. The main reason for this is simply **that prevailing interests are not known.**
- Sometimes unwillingness to communicate, lack of time, lack of local participation or failed participation process explains limited understanding of prevailing interests.
- Inadequate knowledge of local traditions and culture may partly explain the lack of communication and cooperation.

Methods to overcome insufficient amount of communication and cooperation between stakeholders:

1. more work with media,
2. collaboration and co-operation during processes,
3. meetings and discussions around the same table,
4. clarification of roles and responsibilities,
5. promotion and encouragement (municipalities) of open platforms for exchange of experiences,
6. money may operate as incentive to increase interest.

Workshop reports are presented in full in Appendix 3.

Summary of BiosFAIR presentations

What is the MAB Programme? (Alakbarov, U.)

MAB is the roadmap for transition to sustainable future, to an ecological civilization. A sustainability index has been developed to measure how sustainable a society is, the so-called Ecocivilization Index. This new ecological indicator for ecocivilization assessment is explained in the abstract of the presentation. The first Ecocivilization Index has been calculated for Azerbaijan. From the point of view of the Azerbaijan National MAB Committee any activity in the direction towards an Ecological Civilization can be considered as a MAB function.

What is Sustainable Development (SD) and how can BRs contribute? (Diry, C.)

Biosphere Reserve Wienerwald in Austria recommends doing concrete projects. By involving stakeholders they learn what is SD and how biosphere reserves can contribute by doing something practical together. The biosphere reserve can be in charge of the project or have a more peripheral role.

Scientific Networks of Cooperative interest for MAB - LTER (Drotz, M.)

The LTER network and its sites can be a cooperation partner for the MAB Programme and biosphere reserves. An LTER site is e.g. set up for Lake Vänern, which partly is a biosphere reserve.

A Systematic Selection of Suitable Sites for biosphere reserves (Drumea, D.)

The MAB Programme in Moldova has conducted a comparative analysis to select a set up suitable sites where to develop biosphere reserves. It includes consultation meetings at local level to assess local interest.

Transformation of a pre-Rio/ Seville/ MAP biosphere reserve (Kullapere, A.)

Learn from Estonia and how Biosphere Reserve West Estonian Archipelago is being transformed into a modern biosphere reserve. The presentation focuses on changes of biosphere reserve management and organization.

The Implementation of the BR concept in Ukraine (Elbakidze, M.)

The comparative study analysis i) the legitimization of the biosphere reserve concept as a SD concept and ii) the impact of the biosphere reserve concept on the ground. Useful recommendations are given based on the analysis.

Developing the First BR in Armenia and how to fund (Sagathelyan, A.)

The first biosphere reserve in Armenia has been selected as a result of a project supported by UNESCO Moscow Office - the south of Synik marz (province) in the very south of Armenia. The area has been identified as an area with a high development potential and an area that would largely benefit from the establishment of a biosphere reserve, with good opportunities to investigate concept of nature conservation and sustainable management of natural resources with strategies for socio-economic development. The presentation gives insight how to finance the development of a biosphere reserve with international funding.

Presentation of a Potential BR - Bashkirskiy Ural, Russia (Neronov, V.M. and A.N. Kutliakhmetov)

The Republic of Bashkortostan, in Russian Federation, is preparing Biosphere Reserve Bashkirskiy Ural for further strengthening the protection of natural and cultural heritage. The values, zoning, organization and tasks of the Biosphere Reserve were presented. Special measures are undertaken for protection of the gene pool of the Burzyansky wild-hive bee and the unique Bashkir folk craft – wild-hive beekeeping (bortnichestvo) has been restored.

LIFE-project Kinnekulle: sustainable development in a Natura 2000 site (Thordarson, M.)

One of the main driving forces for the establishment of Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle has been an EU Life project: the “Kinnekulle Plateau Mountain – Restoration and Conservation” project. The project was initiated and managed by a regional governmental organization in collaboration with landowners, local municipalities and other stakeholders. The process started in the early 2000 and the project recently finished. The basic idea of the project was a win-win concept: nature conservation got back irreplaceable nature conservation values in grasslands and wooded pasture and the landowners got new opportunities for production on previously overgrown pastures.

International Partnership between BRs – how to make it work (Pokorny, D.)

The presentation about the international (even intercontinental) partnership between Rhön Biosphere Reserve in Germany and Kruger Canyons Biosphere Region in South Africa gives you hand-on guidance how to make an international partnership work in practice. More information see presentation and <http://biosphaerenreservat-rhoen.de/en/38-south-africa>.

Biosfärum – A Visitor Centre for a BR (Hillström, L.)

A physical centre called Biosfärum is planned for Biosphere Reserve Nedre Dalälven River Landscape. It is a development of visitor centres to national parks and other areas of high natural interest, labeled *Naturum* in Swedish vocabulary.

Biosphere Ambassadors - Expanding Communication in A BR (Hedman, F.)

Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle runs a program called Biosphere Ambassadors. It is a tool to expand information and communication between biosphere reserve management and stakeholders in the Biosphere Reserve. The Biosphere Ambassadors are individuals living and/ or active in the Biosphere Reserve.

Protected Forests in BRs in Belarus – Values, Functions and Main Use (Iukovich, V.)

In a classical and structured way the values, functions and main use of protected forests in Belarus is described. Many of the usages can be labeled ecosystem services like the ancient forest trade of apiculture and wild-honey farming.

Main Activities of the Russian MAB Committee 2009-2011 (Neronov, V.M.)

The main results since EuroMAB 2009 were presented. A bilingual directory of the biosphere reserves of Russia has been published as well as a booklet on the Biosphere Reserve of Volga river basin, where also a new Biosphere Reserve Volga Akhtuba Floodplain has been inaugurated. Several seminars and meetings have been held, and their reports are available online. Two memorandums of cooperation have been signed with Ukraine and Belarus. Focus is on Dniepr and Volga river basins. A forthcoming Biosphere Reserve in Bashkirskiyi in Ural was shortly presented. An

appeal has been sent to UNESCO to support pilot projects to strengthen transboundary biosphere reserves with countries adjacent to the Kaliningrad region of Russian Federation; to enhance an understanding role of biosphere reserves in «ecosystem services»; to compile the Atlas of biosphere reserves of the UNESCO Moscow office's cluster countries and neighboring Baltic States similar to the Atlas produced within East-Asian biosphere reserve Network.

Outdoor demonstration of the “Nature Bus” (Hellsten, C.)

In the BR Candidate Eastern Slopes of Lake Vättern, Jönköping municipality owns and runs a bus with staff and seats for a normally sized school class (13-19 years old) fully equipped with material needed for outdoor education. The profile of the education is mainly biology and environment. The bus was demonstrated at the conference.

BiosFAIR presentations are presented in full in Appendix 5.

Concluding words

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Paris, France*

Now it is time to conclude and say good bye. During our EuroMAB meeting, the term of reference of the network were adopted and 8 working groups were established with identified country leaders for each country.

- 1) Communication: Canada (leader)
- 2) Education: Azerbaijan (leader)
- 3) Sustainable tourism: Slovenia and Canada (leaders)
- 4) Ecosystem approach: Czech (leader)
- 5) Forest: Sweden (leader)
- 6) NordMAB: Finland (leader)
- 7) Urban sites: Armenia (leader)
- 8) Branding: UK (leader)

Each working group's leader has prepared term of references and a calendar that is now available on the web site at www.euromab2011.se

EuroMAB 2011 was a very stimulating and inspiring meeting, which highlighted once more the core values of our Network: engagement, cooperation and trust.

The challenge is to maintain this stimulating and energizing cooperative spirit and to carry on collective work during the coming months, to share and disseminate the results of the meeting in each biosphere reserve, at local and national levels and keep in touch through the EuroMAB web platform. It is hoped that the working groups will be able to generate some support for working together and organize some face to face meetings. The EuroMAB Steering Committee will assist the members of the Network in implementing and evaluating the Madrid Action Plan and the Seville Strategy. It will also be important to join forces and initiatives so that countries and the EuroMAB Network be present and visible at the Rio + 20 Conference to be held in June 2012. It is an important moment for the EuroMAB Network to disseminate and share its findings and innovative approaches for sustainable development.

Thanks once more to the dynamic Swedish team for their excellent and inspiring work: special thanks to Johanna MacTaggart, Maria Thorell and Göran Blom. Warm thanks to all the biosphere reserve coordinators and MAB focal points, MAB National

committees, partners and dear participants who made this week unique, so joyful and efficient and un grand merci to Philippe Boucher and Sandrine Mercier who realized in a record time the amazing video of our EuroMAB Network that we can bring back home. And my final thanks go to our dear colleagues and friends from Canada for hosting the next EuroMAB meeting in Charlevoix Biosphere Reserve in 2013: we look forward to visiting you, meeting your colleagues and working with you.

Until we meet again, let us keep in touch and reinforce our collective action and work for sharing sustainable futures.

Appendices

The following appendices are available as separate files at www.euromab2011.se:

1. Terms of reference
2. Conference programme
3. Workshop reports
4. Programme of the BiosFAIR
5. Presentations during the BiosFAIR
6. List of participants



EuroMAB 2011 – Sharing sustainable futures

Creating sustainable development is a challenge that involves all sectors in society. Biosphere reserves work with these sectors on a daily basis. With limited resources but a strong international support, how can biosphere reserves add value?

The EuroMAB biannual conferences gathered biosphere reserve coordinators, scientists and practitioners specialized in sustainability issues. In 2011, EuroMAB was arranged by the Swedish MAB Programme in cooperation with BR Lake Vänern Archipelago and Mount Kinnekulle and UNESCO.

186 delegates from 31 countries shared and worked on the theme Sharing Sustainable Futures. This report gives you the opportunity to take part in EuroMAB 2011.

Voices of conference participants

“Thank you for a wonderful EuroMAB Conference. I have met very nice people, great experts with dedication to nature for benefit of all.”

“I came home with some wonderful memories and hope for future cooperation and look forward to future cooperation, particularly regarding sustainable tourism.”

“It was a wonderful experience: so many different people from European countries sharing the idea of biospheres as useful instrument and ways of living for a sustainable future. Thank you very much for everything!”

APPENDIX I – Terms of Reference



SHARING SUSTAINABLE FUTURES
Report from EuroMAB 2011, Sweden

Terms of Reference for the EuroMAB Network

To share – To decide – To act

-Version for the web-

August 2011



Organisation
des Nations Unies
pour l'éducation,
la science et la culture

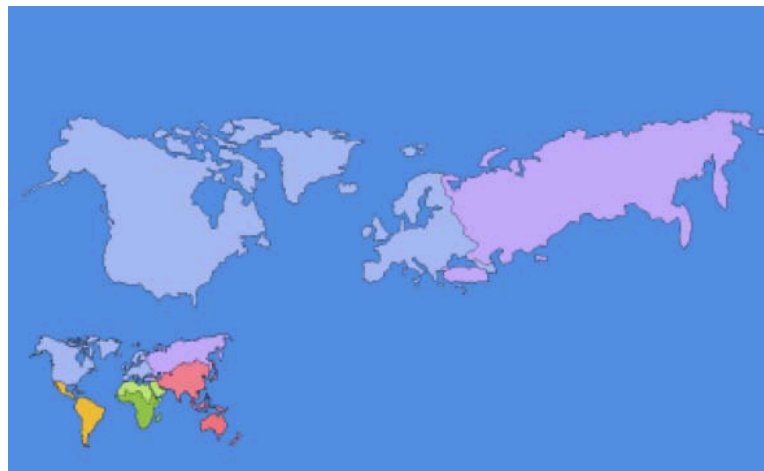


Programme
sur l'Homme
et la biosphère

INTRODUCTION - NETWORKING FOR EXCELLENCY

The EuroMAB Network is made up of all Member States of Europe and North America (see Member States in Annex 1) which participate in the Man and the Biosphere (MAB) programme and in the World Network of Biosphere Reserves (WNBR) of UNESCO (United Nations Educational, Scientific and Cultural Organization). The Europe and North America region is presented here using the United Nations' own definition. Bringing together almost half of the WNBR sites, as well as the MAB national committees of 52 countries, scientists and experts, the EuroMAB Network is a platform for exchange between the Member States who reflect and act in order to allow sustainable development to become a real option and a choice made by society for present and future generations.

One key aspect of the MAB programme is that biosphere reserves (BRs) are regions of economic, social and environmental challenges, made up of men and women who have come forward as actors responsible for the development of their region, who act in favour of sustainable development and who receive UNESCO's designation as recognition of their actions and a permanent source of reflection, innovation and openness. This recognition is taken as an honour, which inspires merit, pride and commitment. The World Network is a powerful group of responsible and committed people, who collectively explore possible paths towards contextualized sustainable development, propose possibilities for cooperation and constitute a living and dynamic library of knowledge, practices and experience to be shared.



EuroMAB, UNESCO

VISION MISSION AND AXES

THE EUROMAB NETWORK VISION (TO BE ADAPTED BY THE COMMUNICATION WORKING GROUP)

To become a network of Member States focused on cooperation, sharing of knowledge and practical experience of sustainable development, biodiversity and cultural diversity conservation, and logistic support, being supported by operational biosphere reserves.

THE EUROMAB NETWORK MISSION (TO BE ADAPTED BY THE COMMUNICATION WORKING GROUP)

The EuroMAB Network, on a voluntary and cooperative basis, is a platform for the sharing of knowledge, know-how and experience of sustainable development and a collective tool for the support of sustainable development practices among the various players of the Member States, which enrich them.

THE EUROMAB NETWORK STRATEGIC AXES (EUROMAB 2009, REPORT, DOING TOGETHER-LEARNING TOGETHER)

- A : Communication: a key area to raise awareness on BRs, develop a communication strategy
- B : Develop opportunities for BRs to serve as case studies for applying policies and influencing policy change
- C : Learning/education: promote twinning of BRs and schools (all levels), focus on stories/issues not questions, citizen science as education, mutual learning from countries that have BR legislation
- D : Integration of BR concept into sectors (in regional & national development plans)
- E : Climate change as an overarching strategic theme, carbon sinks and global change at the local level
- F : Development (sustainable) at regional scale
- G : Database development to provide access to a wide range of information
- H : Establish thematic groups/networks

STRUCTURE, MANDATES AND COMPOSITION

EuroMAB Network: *to share*

Mandates:

*Representativeness of the specificities of the Network
Sharing of experiences and knowledge
Networking and partnerships*

Membership::

*Member States
(biosphere reserves,
UNESCO National Commissions
MAB National Committees)*

Partners:

*Associated Universities
Researchers
Businesses, media, ONGs
Schools (ASPNet)
Sciences centres*



EuroMAB Assembly: *to decide*

Mandates:

*Participate in EuroMAB meetings
Define the strategic axes
Prioritize actions
Adopt action plans
Validate the host country of the conference
Adopt the terms of reference of the Network*

Official Composition (Member States)

*Member State
One delegate with voting rights per Member State of EuroMAB*



EuroMAB Steering Committee: *to act*

Mandates:

*Participate in organization of EuroMAB meetings
Strategic programme development between EuroMAB meetings and preparation for Assembly
Promote and raise awareness of the implementation of the Network's strategic axes
Ensure the follow-up of recommendations and coordination with the MAB Secretariat in Paris
Seek financing on the basis of projects
Technical support for Member States
Define the Network terms of reference
Prepare the documents to be adopted by the Assembly
Represent and promote the Network*

Official Composition (a maximum of five delegates)

*Representatives of the three Member States that hosted, are hosting, and will host EuroMAB meetings
Two representatives of the two other Member States chosen by consensus by the EuroMAB Assembly*

MEMBERSHIP

- The members of the EuroMAB Network are the Member States of the Europe and North America region, represented by the MAB National Committees, UNESCO's National Commissions and the biosphere reserves.
- All sorts of individuals and organizations can also become partners (businesses, media, **NGOs**, universities, etc)

VOTING

- Member States make up the Assembly which meets at least every two years
- Just one vote per Member State present in EuroMAB meetings is attributed (the Member States present form the Assembly). Each Member State designates the delegate to represent it in the voting process
- Votes can be on strategic axes, priorities, budgets, host countries for EuroMAB meetings, and other issues

EUROMAB MEETINGS

- EuroMAB meetings propose open gatherings to the whole Network and invited partners. It is organized by the host member state, with the technical and logistic support of the steering committee and UNESCO Secretariat.
- Meetings are held every two years, preferably in a biosphere reserve of the Network
- A meeting of the Assembly is held at each Network meeting
- The Steering Committee has the technical backing of the Secretariat of the EuroMAB Network, based in the UNESCO MAB in Paris

WORKING GROUPS ON SPECIFIC MATTERS

- The Assembly can decide to set up working groups made of two or more Member States, experts, partners, etc, on a voluntary basis
- These working groups help the Steering Committee with the implementation of activities and strategic axes
- Eight working groups have been created in Sweden:

1) Communication /Canada (leader)

2) Education/ Azerbaijan (leader)

Members: Slovenia, Belorussia, Moldova

3) Sustainable tourism: Slovenia and Canada (leaders)

Member: Turkey

4) Ecosystem approach: Czech (leader)

5) Forest : Sweden (leader)

Members: Turkey, Russian Federation

6) NordMAB: Finland (leader)

Members: Russian Federation, Latvia, Sweden, Canada, Norway,

7) Urban sites: Armenia (leader)

8) Branding: UK (leader to be confirmed)

ANNEXE 1 . STATE MEMBERS

The EuroMAB state members can be found on :

<http://www.unesco.org/new/en/unesco/worldwide/unesco-regions/europe-and-north-america/>

UNESCO Regions

Africa

Arab States

Asia and the Pacific

Europe and North America

Latin America and the Caribbean

UNESCO in countries

National Commissions

Field offices

Institutes and centres

Europe and North America

The Europe and North America region presented here follows the specific UNESCO definition which does not forcibly reflect geography. It refers to the execution of regional activities of the Organization.

• Albania	• Andorra
• Armenia	• Austria
• Azerbaijan	• Belarus
• Belgium	• Bosnia and Herzegovina
• Bulgaria	• Canada
• Croatia	• Cyprus
• Czech Republic	• Denmark
• Estonia	• Finland
• France	• Georgia
• Germany	• Greece
• Hungary	• Iceland
• Ireland	• Israel
• Italy	• Kazakhstan
• Latvia	• Lithuania
• Luxembourg	• Malta
• Monaco	• Montenegro
• Netherlands	• Norway
• Poland	• Portugal
• Republic of Moldova	• Romania
• Russian Federation	• San Marino
• Serbia	• Slovakia
• Slovenia	• Spain
• Sweden	• Switzerland
• Tajikistan	• The former Yugoslav Republic of Macedonia
• Turkey	• Ukraine
• United Kingdom of Great Britain and Northern Ireland	• United States of America
	• Faroes*

APPENDIX 2 – Programme of EuroMAB 2011



SHARING SUSTAINABLE FUTURES

Report from EuroMAB 2011, Sweden

Programme for the EuroMAB2011 Conference, Lundsbrunn, Sweden

MONDAY July 4th

07.00-09.00 Breakfast

09.00-10.00 Registration

10.00-12.00 **PLENARY SESSION Opening of the EuroMAB2011 Conference**

UNESCO

Programme Specialist Mrs Meriem Bouamrane

Swedish National Commission for UNESCO

Deputy Secretary General Mrs Kerstin Lundman

Swedish Environmental Protection Agency

Deputy Director General Mrs Eva Smith

10.50-11.10 EU Cohesion Policy investing in nature and biodiversity protection

Mr Mathieu Fichter, Regional Policy DG, EU Commission

11.10-11.30 Follow-up of EuroMAB 2009 in Slovakia

Chair Mr Julius Oszlanyi, Slovak National MAB Committee

11.30-12.00 The Swedish MAB program and EuroMAB2011

Chair Mr Göran Blom and National Coordinator Ms Johanna MacTaggart

12.00-13.00 Lunch

PLENARY LECTURES

13.00-14.00 Planetary boundaries

Professor and Scientific Director Carl Folke, Stockholm Resilience Centre

14.00-15.00 Biosphere reserves as bridge-building function

Researcher Lisen Schultz, Stockholm Resilience Centre

15.00-15.30 Coffee break

15.30-17.30 **PARALLEL SESSIONS**

- Workshop on MAB-program development - the EuroMAB identity
- Workshop – EU Cohesion Policy Funds and Biodiversity

19.00 Welcome Dinner Lundsbrunn Conference Centre



United Nations
Educational, Scientific and
Cultural Organization



Man and
the Biosphere
Programme

EuroMAB 2011- Sharing Sustainable Futures

4th-8th July 2011

in BR Lake Vänern Archipelago and Mount Kinnekulle



EuroMAB 2011
Sharing Sustainable Futures

TUESDAY July 5th

07.00-09.15 Breakfast

09.15-09.30 **PLENARY SESSION:** Opening of the day

WORKSHOP

MAB-program development

9.30-11.00

Branding Biodiversity

11.15-13.00 **PARALLEL WORKSHOPS**

- Management of Biosphere Reserves - experience and knowledge exchange between coordinators, managers and researchers
- Strategic methods for community engagement

13.00-14.00 Lunch

14.00-16.00 **PARALLEL WORKSHOPS Partnership building**

- NordMAB session - planning cooperation
- Social entrepreneurship in biosphere reserves (14-17)
- Biosphere Centre as a key factor for commercially sustainable tourism and locally produced products and services
- Small-scale networking on common issues
- Communication surgery

19.00 Dinner Lundsbrunn Conference Centre

20:30 Cinema "Sweet Meadow of Youth" at Brunnsalongen, Lundsbrunn Conference Centre

- Introduction by Film director Anette Lykke Lundberg



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EuroMAB 2011- Sharing Sustainable Futures

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EuroMAB 2011
Sharing Sustainable Futures

WEDNESDAY July 6th

07.00-09.30 Breakfast

09.30-10.00 **PLENARY SESSION:** Opening of the day

10.00-17.00 **PARALLEL THEMATIC WORKSHOPS**

Lunch and coffee break included. Detailed program will be distributed to you at the arrival to the conference.

- (A) Sustainable tourism development in BRs
- (B) Biodiversity in spatial planning and land-use
- (C) Education for sustainable development
- (D) Procurement/ purchasing in biosphere reserves
- (E) Biosphere Innovations Systems (BIS) (10-12), BIS workshop will join WS on procurement afterwards
- (F) Renewable Energy and Biodiversity – biosphere reserves as conflict preventing arenas (10-12)
- (G) Forests for People – Networking during the International Year of Forests (13-17)
- (H) Cooperation between Coastal Protected Areas and Surrounding Societies
- (I) Sustainable food production

Transportation to dinner venue Blomberg at Kinnekulle.

19.00 Dinner hosted by Götene, Lidköping and Mariestad municipalities at Blomberg, Kinnekulle



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Man and
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Programme

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EuroMAB 2011
Sharing Sustainable Futures

THURSDAY July 7th

07.00-09.30 Breakfast

09.30-10.00 **PLENARY SESSION:** Opening of the day

10.00-17.00 **The BiosFAIR – a fair to share sustainable futures**

12.00 – 14.00 Lunch

A selection (complete program available separately):

PRESENTATIONS

- Biosphere Ambassadors – a useful resource in marketing a biosphere reserve
- Biosphere reserves for conservation and development? A case study in Ukraine
- The LTER research network and biosphere reserves
- The West Estonian Archipelago Biosphere Reserve - overview of 20-year activities

EXHIBITIONS

- Ecotourist destination Lake Vanern Archipelago and Mount Kinnekulle
- Biosphere Reserve Kristianstad Vattenrike
- Westelius Arkitekter/ Westelius Architects, BR Lake Vanern Archipelago and Mount Kinnekulle

OUTDOOR DEMONSTRATIONS

- Naturbussen/ The Nature Bus: Outdoor education for sustainable development

19:00 Ethnic evening

A buffé of food and drinks from countries and biosphere reserves represented at the Conference. Music, games etc.



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Man and
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EuroMAB 2011
Sharing Sustainable Futures

FRIDAY July 8th

06.30-09.30 Breakfast

PLENARY SESSION

09.30-10.00: Opening of the day

10.00-11.00 EuroMAB identity

11.00-11.30 Presentation and adoption of EuroMAB identity

11.30-12.30 Closing of the EuroMAB2011 Conference

- Summary
- Back to the future
- EuroMAB2013

12.30-14.30 Lunch

Departures

Conference website

www.euromab2011.se

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EuroMAB 2011

Sharing Sustainable Futures

APPENDIX 3 – Workshop Reports



SHARING SUSTAINABLE FUTURES

Report from EuroMAB 2011, Sweden



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Biosphere Management

MANAGEMENT OF ECOSYSTEM SERVICES IN BIOSPHERE RESERVES

Introduction

According to the Madrid Action Plan, biosphere reserves have the aim of "securing ecosystem services for human well-being". The effort to design and develop place-specific mixes of ecosystem services, for the wellbeing of people, could be seen as the essence of biosphere reserves as sustainable development sites. So what are ecosystem services? And how can we secure and develop them?

The definition used in the Millennium Ecosystem Assessment focused on ecosystem services as the benefits that people get from nature. These can be divided into provisioning, regulating, cultural, and supporting services. Some services are obvious and have a market price, (mostly provisional ones) whereas others are less known and often taken for granted (mostly supporting ones). Some have a very direct influence on human wellbeing, whereas others have a weaker or indirect link.

The term can be controversial, in the sense that it reflects nature as a commodity and disregards the intrinsic values of nature. As such, it has to be used wisely. Nevertheless, the concept provides an important bridge between ecologists and economists, and it can be a pedagogic tool for highlighting our dependence on the biosphere.

A key insight since the Millennium Assessment is that ecosystem services are not generated by ecosystems alone, but by social-ecological systems. People are part of, and shape these systems. Also, people perceive and use ecosystem services differently and have different access to ecosystem services. Therefore, an ecosystem service assessment can hardly be done by scientists alone, but needs to include the users and managers of these services. The questions asked during such an assessment include:

- What are the benefits that people gain from this ecosystem?
- How are these benefits produced? Where and by what processes?
- Who benefits from these services?
- Who supports them?
- How do the ecosystem services interact? Are there bundles of ecosystem services?
- What are the current trends?
- What are the drivers behind these trends?

Economic valuations of ecosystem services can be useful in some cases, but it should be noted that such valuations are costly, difficult to do, and sometimes defeats its purpose. There are other ways of illustrating nature's values than pricing ecosystem services. The key is to connect to humans' wellbeing, and to other societal goals.

Aim

The aim of this workshop was to i) introduce the concept of ecosystem services to participants, ii) learn from each others' experiences with working with ecosystem services iii) collect participants' ideas for the continued work on ecosystem services in the EuroMAB network.

Rationale

Ecosystem services are the benefits that people get from nature, such as clean water, flood protection, fresh air, recycling of nutrients, pollination of crops, and recreational spaces. Working with ecosystem services in biosphere reserves is a practical way of integrating conservation and development, and sustaining ecosystem services is also one of the missions stated in the Madrid Action Plan. In a time when most ecosystem services are under severe pressure, biosphere reserves play an important role in safeguarding them for all of us. But how is this done in practice? How do we identify, monitor, communicate, and manage ecosystem services in biosphere reserves? What are the lessons learned, and what are the needs?

Method

The workshop included

1. A presentation by Lisen Schultz (15 minutes)
2. Two rounds of discussions in groups of 4-6 people (20 minutes each). We used a café setting, with a large paper on the table, and many coloured pens. Participants were encouraged to let everyone speak, and to document all ideas on the paper. After the first round of discussion, participants were asked to move around to new tables, to enhance exchange between participants. They were then given the topic for the second discussion, which also lasted 20 minutes.
3. A summary discussion (15 minutes) where all groups shared one idea, and where it was concluded that the discussion would continue through a web forum, and at a training workshop in the spring.

Participants

There were 60-70 participants in this workshop, see participants list.

Content

The workshop included a presentation of the concept and practice of ecosystem services, based on research in biosphere reserves and elsewhere. Participants then worked in smaller groups, first to share their experiences (best practices as well as challenges), and then to generate ideas for continued action.

Conclusions and commitments

Group discussions were documented by participants on large sheets of paper. The content of this documentation will be analyzed and reported back during the fall, by participating researchers from Stockholm Resilience Centre. The ideas shared in plenary included:

- Update the nomination form and the periodic review to include questions about ecosystem services
- Provide capacity-building for biosphere reserve managers on tools for assessment, management and communication of ecosystem services, such as training workshops
- Support the harmonization of the ecosystem service idea with national legislation and international agreements (mainstreaming of ecosystem services)
- Include ecosystem services in management and monitoring of biosphere reserves
- Assess the ecosystem services generated by the EuroMAB network of biosphere reserves
- Assess trends in ecosystem services generated by water objects in Europe (rivers, lakes etc)
- EuroMAB should emphasize that valuing ecosystem services is not the same as pricing them, and support managers with tools to assess other values than monetary values, and to assess trade-offs between different values
- Support biosphere reserve managers in opening up the concept of ecosystem services to local inhabitants
- Facilitate the exchange of best practices and experiences through a web forum
- Have more thematic networks for biosphere reserve managers (in addition to the regional networks)
- Create a help-desk for BR managers where they can get support on specific problems
- Increase sharing between EU members and non-EU members

It was also concluded that the learning process should continue as a discussion topic in the MAB web forum, and in a follow-up training workshop in spring 2012, hosted by UNESCO and the Stockholm Resilience Centre. The contents of the workshop will be developed by UNESCO and SRC on the basis of the discussions held in Lundsbrunn.

The workshop involved 60-70 participants. It was organized, facilitated and documented by Lisen Schultz and Olof Olsson from the Stockholm Resilience Centre and Meriem Bouamrane from UNESCO.

Moderator and rapporteur: Lisen Schultz, Stockholm Resilience Centre, Stockholm, Sweden

Contact persons: Lisen Schultz, lisen.schultz@stockholmresilience.su.se,

Meriem Bouamrane, m.bouamrane@unesco.org

STRATEGIC METHODS FOR COMMUNITY ENGAGEMENT

Presentation

Melinda Jolley and Pierre Johnsson presented their recent research which aimed to find strategic methods in community engagement related to regional sustainable development, specifically within the context of regions in Europe and North America that are applying for the UNESCO biosphere reserve designation.

The Framework for Strategic Sustainable Development was presented as a planning framework that can fill gaps in the current biosphere reserve planning process. A tool for assessing community engagement based on *the five Process Characteristics of transparency, cooperation, openness, inclusiveness, and involvement* was created and used to explore community engagement practices in six UNESCO biosphere reserve regions in Sweden and Canada.

The assessment of methods used in those six regions yielded a list of nine methods which stood out in contributing to community engagement. As part of the research Strategic Methods in Community Engagement for UNESCO biosphere reserves, an evaluation tool was developed and a set of interview questions to systematically assess the type and quality of community engagement.

What is the recipe for better community engagement?

Five process characteristics have been suggested to help reduce the likelihood of creating barriers to hinder people from meeting their own needs in a process (The Social

Dimension of Sustainable Development: Guidance and Application by André Benaim, Amber Collins, and Luke Raftis):

- 1) Transparency is “an ideal of communication and accountability in organizations and communities where motivations, driving factors, and impacts of all decisions and actions are made publicly available”.
- 2) Openness is when “a community or organization has the willingness to rethink and review its own values and processes”,
- 3) Inclusiveness is “ensuring the needs of stakeholders are acknowledged and respected even if they do not actively contribute to the process”.
- 4) Involvement is “an ideal of communication and accountability in organizations and communities where motivations, driving factors, and impacts of all decisions and actions are made publicly available”.
- 5) Cooperation is to “have each party contribute what they can in order to best serve their needs in a mutually beneficial way”.

An engagement process with these characteristics present reduces the chance of creating barriers to people meeting their needs. Max-Neef describes nine basic human needs as: identity, freedom, protection, idleness, understanding, subsistence, affection, creativity and participation (Max-Neef 1991).

Consider these process characteristics to help guide your community engagement efforts. They can be useful to ensure you’re creating conditions for people to engage in a positive, constructive and meaningful way.

What methods should be considered with respect to achieving better community engagement?

We suggest the *following nine strong methods* which represent best practices in achieving high levels of transparency, openness, cooperation, inclusiveness and involvement within a region.

- 1) Representative Organization - Including the use of a flat organizational model, user-centered planning and co-management of resources.

- 2) Communications Strategy - Including having communications experts on the team, creating a strategic communications plan including media relations, community relations and stakeholder relations.
- 3) Facilitated/Hosted Dialogue - The creation of safe and inviting spaces to encourage learning and dialogue.
- 4) Invitation to Co-create - Inviting participants to co-create the vision or action plan in a meaningful way.
- 5) Neutral Spaces - Creation or use of space where all stakeholders feel comfortable and open to contributing.
- 6) Bridge Building and Networking - This includes doing an inventory of all related organizations and then creating a web of synergistic partnerships.
- 7) Co-learning Reciprocity Approach - Working together to build your partner organizations, while they help you build yours.
- 8) Trust Building - Working on a personal level to have people open up to a larger common cause.
- 9) Working with the Positive - Spend resources working with positive elements of a region to create further positive energy that will enable more stakeholders to be involved in the future.

As you work with your region, we recommend tailoring the selection and application of methods, as each region will have unique needs. Some approaches may prove to be a better fit in certain contexts.

To use the analogy of a recipe, our shortlist of nine methods is a list of excellent ingredients that should be considered, but the list itself is not a complete recipe for any region. From the research we conducted, these were the most effective nine ingredients that community engagement chef's had in their pantries that were related to higher levels of transparency, openness, cooperation, involvement and inclusiveness. Other good and more common ingredients are also important and over 50 of these have been identified through the research.

Much of the content from the research is also available at:

http://web.me.com/pierrejohnson/strategiccommunityengagement/EuroMAB_2011.html

World Café Dialogue Session

What methods have worked?

After the presentation by Jolley and Johnsson, a structured discussion took place around process characteristics, enabling participants to share their successes to move biosphere reserves towards sustainability, through a World Café dialogue session.

Methods in community engagement were discussed by the participants. After two rounds of World Cafe style conversations, each group was asked to select their top three methods in community engagement. The resulting list follows here. Please note that (2) means the method was shared by two different groups and the bolded ones note methods that had also been identified earlier in the related thesis "Strategic Methods in Community Engagement for UNESCO biosphere reserves".

- 1) **Organize regularly scheduled public festivities**
- 2) **Identify different target groups (including youth) and choose relevant methods of involvement**
- 3) **Have processes to encourage co-creation / co-creation about an issue**
- 4) **Choose an issue of strong community interest for strong engagement**
- 5) Creating your own mosaic of your biosphere reserve
- 6) **Sharing information in local free newspaper**
- 7) One on one meetings
- 8) Informal communication in neutral places
- 9) Partnership building and creating a joint vision = creates action (2)
- 10) Constant renewal of the vision
- 11) Create a network of special interest networks
- 12) Focus on special interests of local groups
- 13) Understand each other
- 14) Common knowledge mapping (PRA / ARDI)
- 15) Trust building (2)

- 16) Respect (2)
- 17) Equity
- 18) Empowerment
- 19) Bottom up (2)
- 20) Step by step - start with small achievable projects
- 21) Addresses problem by involving all stakeholders and resolving with open discussion
- 22) Start from the top: get the institutions involved that are willing to cooperate
- 23) Coordinate skills and highlight them to encourage participation
- 24) Use social proof with local personalities i.e. champions, testimonies or elders providing examples
- 25) Go to the people - where and when they usually meet, avoid the usual suspects

What makes methods of community engagement strategic?

In order to be strategic, methods must move a community in the direction of sustainable development. A common and rigorous definition of sustainability is required. In the absence of such a definition methods may not prove to be strategic. With a solid definition of sustainability in place, methods which respect individuals and the community's needs are most strategic. A way to judge how well methods may need those needs is to look at whether the methods contribute to the five characteristics of Openness, Inclusiveness, Transparency, Involvement and Cooperation.

- Melinda Jolley, Sustainability and Communications Strategist, MSc In Strategic Leadership Towards Sustainability
- Pierre Johnson: Sustainability Strategist and Educator, MSc In Strategic Leadership Towards Sustainability

Any future questions or comments can be shared with Melinda Jolley (melindajolley@hotmail.com) or Pierre Johnson (pierrejohnson@mac.com).

From EuroMAB2011, 36 delegates were involved in the workshop. Reporting and presentations were done by Melinda Jolley and Pierre Johnsson.

Moderators and rapporteurs: Melinda Jolley and Pierre Johnsson

Partnership building

NORDMAB SESSION

The NordMAB session at EuroMAB 2011 was organized to plan future Nordic cooperation and biosphere reserve visibility.

The MAB Programme includes regional and thematic networks established for exchange of experiences and cooperation between the biosphere reserves. One of these semi-official networks is the NordMaB. Co-operation under the name of NordMAB was started between Nordic and the Baltic Sea Region countries in the beginning of 2000; also Northwest Russian BRs bordering the Nordic and Baltic countries were invited.

The activities between Nordic BRs have been sporadic. Some projects have been arranged and regions have built their own contacts within NordMAB-network. During 2005-2007 some BRs along the Baltic Coast were sharing experiences in a Interreg -project called Coastal Sustainability as a challenge. In February 2011 there was a meeting arranged in the Archipelago Sea Area, in Turku, Finland, in connection with a Nordic Sustainable development conference "Solutions".

During the coming decade many new biosphere reserves will be established in the Nordic countries and Baltic Sea Region and opportunities for NordMAB network seem to be increase fast.

The agenda for NordMAB session during EuroMAB 2011 was based on the recommendations from earlier meetings. The main focus was to discuss the structure, profile and tools for communication for the network and update the recommendations from NordMAB in Latvia 2004. The participants were asked to give suggestions for the agenda in the conference internet site before the meeting.

Topics presented for the agenda:

- How to present the network? What are the strengths of the BRs in NordMAB? The profile of the network?
- Where and when should the network be visible?
- Revision of recommendations from NordMAB 2004
- Digital portal for communication and sharing experiences

Summary of the discussions and commitments

The session was opened by Timo J. Hokkanen starting with an introduction of the participants. They were both BR managers and other kind of representatives for the BRs. There was a wide diversity of backgrounds e.g. researchers, administration and BR personnel.

Katja Bonnevier gave a short view back for the NordMAB network.

- *NordMAB cooperation discussed at several other MAB meetings*
- *Meeting in Helsinki 2003*
- *Meeting in Stockholm March 2004. – Application for Nordic Council of Ministers*
- *Conference in Latvia October 2004 – evaluation of Nordic BR:s and cooperation*
- *Coastal Sustainability as a challenge – Interreg project 2005-2007*
- *Meeting in Turku at the Nordic Conference for Sustainable Development - February 2011*

The moderator presented for discussion the basic structure for the network that was decided about in Latvia. The session decided that there should not be any strict borders for the network, since it is an informal network. The informal network is created for cooperation between BRs in Nordic countries. The name had been decided to be NordMAB in Latvia 2004 and was still seen being a proper one. The participants saw several reasons to cooperate with other Nordic countries, like sharing similar important environmental and developmental issues and for some of the countries also same financial instruments, like funds in connection with the Nordic Council of Ministers. The network was seen as important for new-comers that need some good examples of how to become a BR. The interest to have a Steering Group was dividing the people, but in the end it was decided that informal working groups would be a better option.

Focus points of NordMAB from Latvia 2004 were presented, because the meeting in Turku 2011 had decided to update them.

Focus points:

- Administration and organization
- National legislation
- Zonation
- Local acceptance and effect on economical development
- Convention for biodiversity,

- Nordic cooperation.

The participants were asked to vote for 3 of the existing focus points or on some new additional ones. The participants were maybe not enough familiar with the previous work and neither the background for the perspectives of the NordMAB, so there was some confusion about the relevance of creating a NordMAB profile with common issues of interest.

Many of the participants see NordMAB as a platform for finding partners for cooperation than working together as a network. The focus points were seen as not up-to-date and because of the confusion there was not any interest to vote for them. The session did not get to the point where the profile could be discussed or any thematics for cooperation. The participants wanted more time to think about possibilities and interest for cooperation. Still tourism was suggested as an important issue for cooperation in the Nordic countries. And later some more issues like environmental awareness and water issues in connection with Baltic Action Plan were mentioned. Some further information and possible interest to cooperate within the Green Belt of Fennoscandia was mentioned by Lapland BR.

Future meetings and the web-platform for NordMAB was planned and Christian Bouchard/Canada offered kindly to be responsible for the platform and possibly also a facebook site, since it can be connected with the planning of EuroMAB 2013. Timo Hokkanen/Finland offered to be responsible for next meeting in 2012 in connection with the 20th anniversary of North Karelia BR and Canada for a NordMAB meeting in connection with EuroMAB 2013. For planning the meetings there should always be committees. And the web-platform open for comments seems not to be an adequate method.

There was also suggested a continuation of participation in the Nordic conference for Sustainable Development in 2012 in Umeå/Sweden. The participants of the conference in Turku/Finland 2011 were very pleased with the involvement of the MAB Programme in the conference. It gave the Programme and the Nordic biosphere reserves visibility outside own networks and inter-change of ideas with other programmes and organizations. For being involved in the conference in Umeå 2013 someone should be in contact with the organizers from the early stages of the planning, and that should preferably be the closest BR in Sweden or the national committee of Sweden.

Conclusions

This was a good possibility for a small network to meet as an integrated programme of a bigger conference, both now at EuroMAB 2011 and earlier at the Nordic Conference for sustainable development. This is a question about economy and time, but also a question about visibility and interactions outside the network. At the session there were 19 participants (+2 organizers) from 6 countries. Two of the countries have not participated

before and have not been included in the mailing lists for NordMAB. Almost everyone was interested to be in contact and involved in the NordMAB network in the future.

During the session many issues considering the basic structure and the purpose of the network was discussed. The session didn't achieve the planned main goals (deciding the main topics to start working with), but produced some concrete ideas about the future communication. It turned out to be very difficult to continue the work from where we left it last time. There were only a few participants that have been involved in any activities of NordMAB earlier, and that made it difficult to advance with any plans from previous meetings. Discussions about the basic frameworks were time consuming and the 2 hours available for the workshop was not enough for a meeting. For future similar occasions is recommended that the workshop is focused on some concrete thematic issue important for the Nordic cooperation and the participants are introduced to the network beforehand. The framework of the network should be clear for all and all participating biosphere reserves should have a contact person who can introduce others possible participants to the previous work.

A positive conclusion is though that there is interest and willingness to continue the development of the NordMAB network and cooperation between regions with a Nordic environmental and cultural perspective. Nordic is now in this occasion as much as possible extended to include except for the Nordic countries, also other regions in the Northwest Russia and Canada. This gives the network more options for resources to work with, but also more, e.g., logistic challenges.

Moderators: Timo Hokkanen, North Karelia Biosphere Reserve, Finland

Rapporteur and contact person: Katja Bonnevier. The Archipelago Sea Area BR

BIOSPHERE INNOVATION SYSTEM (BIS) – WHAT'S BEHIND THE SYSTEM?

The workshop was about how a biosphere reserve adds a unifying role and through learning processes link different actors in a strategic way. Biosphere reserves are areas that show good examples of how land use and conservation can go hand in hand. These areas are pilot areas where new approaches and new knowledge is tested in order to achieve a sustainable society. We call it the *Biosphere Innovation System (BIS)*.

The integration of the three dimensions of sustainability, i.e. the ecologic, social, and economic, is the biosphere value and a unique asset. The biosphere brand therefore includes a guarantee for products and services. There is also a minimization of risks when investing in

biosphere reserves since the model serves both as a tool and as an approach, aiming for a resilient societal development. The World Network for biosphere reserves enables dispersion of knowledge and products. The BIS is an investment for new business and entrepreneurship.

The core idea is to create a Biosphere Innovation System (BIS) with a scalable dimension and world impact. It includes a number of key supporting structures like financial systems, scientific competence, concrete functions and tools, and ecosystem venture incubators and the Biosphere Entrepreneurs. All combined will enhance resilience of ecosystem services. The core idea is supposed to lead to capacity building within biosphere reserves and is globally applicable.

Social entrepreneurs are to be found throughout society: in business, in local communities, in government and, in particular, creating social enterprises - businesses which trade to achieve social aims. Sencot (Social Entrepreneurs Scotland) believes that social entrepreneurs and their enterprises have the potential to transform society for the better.

With the Biosphere Innovation System we have taken one step further in exploring models in supporting a sustainable development in society. With the Biosphere Innovation System we have created a potential framework built on a consciousness that is responsible with the Earth in all its aspects.

Working methods

The workshop began with a presentation of speakers and participants. Then the moderator asked a question to the participants - "What is an innovation system" The purpose of this act was to get unsolicited comments from the participants' own understanding of the concept biosphere entrepreneurship. The moderator turned back at the end of the workshop to link the initial spontaneous comments with the theory section and group discussions.

The following comments were highlighted:

- New ways to handle people
- A structure to support entrepreneurs
- To take ideas into action

The second part of the workshop dealt with the pilot study on Biosphere Innovation System. In the report an innovation system is defined as a local system in which actors are helping each other using knowledge as a critical resource for development of sustainable businesses, namely the biosphere entrepreneurs. Building of BIS, The Biosphere Innovation System, is a conscious process where actors are knitted together step by step providing the knowledge infrastructure.

The workshop ended with group discussions around the following questions:

1. What are the **common values** in the biosphere reserves?
2. Which are the **supporting structures** in the biosphere reserves?

The groups came up with the following conclusions:

Values:

A place where people like to live – Promotes human wellbeing

Life quality

Solidarity between man and nature

Biodiversity value

Responsibility and stewardship

Taking care of next generation

Trust and reciprocity

Cooperation towards a common goal

Art-music

Structure:

Awareness rising among people in the biosphere

Social and Ecological Monitoring

Partnership with universities at local and international level

A learning environment

Branding system

Conclusion

It became clear during the workshop that innovation system is a complex concept with many questions and answers. A common comment from the participants was that in order to build an innovation system, like BIS, will require creative entrepreneurs and various support systems.

One important issue in building the BIS is the social capital. To make the BIS successful you have to start a process where people are coming together creating and sharing something (reciprocity building).

Social Capital Forum presented social capital as follows:

Social capital is expressed through trust created in relations among people.

To feel trust to other people can in many ways be seen as a requirement to be able to work towards a common development in a local environment. Trust among citizens make conditions better for conflict-solving and improves the effectiveness of functions in society.

Social capital exists among people and evolves over time.

Social capital is distinguished in that it takes relatively long time to build, but at the same time can be demolished in far greater speed. As a consequence, it is important to care for the resource, which means recognizing human beings and their conditions in the local milieu when investing in the “capital”.

Social capital is a resource existing in social structures and created by human action.

In many cases co-operation among citizens is a prerequisite for mutual aims in society to come true. However, one must not forget that co-operation also must be coordinated. First then, the local force can effectively be canalized into society.

Another important issue in building an innovation system in a biosphere reserve context is the meaning of resilience. Resilience is the capacity of social-ecological systems to cope with change and continue to evolve. Loss of resilience can cause loss of valuable ecosystem services, and can also lead to rapid negative changes in different situations for people, ecosystems, knowledge, or whole cultures. Working for increased resilience means new ways to turn crises into innovative catalysts for sustainable development.

With the Biosphere Innovation System we take one step further in exploring models in supporting a sustainable development in society. With the Biosphere Innovation System we have created a potential framework built on a consciousness that is responsible with the Earth in all its aspects. The biosphere reserve with its many inherent qualities, in which learning processes, can be showcased. Biosphere entrepreneurs, on the other hand, add value to the system by focusing on societal and environmental values in addition to economical directly in their business model. The innovation system itself should be seen as a supportive structure in which important actors in society such as universities, financial institutions, municipalities, civic society and consumers are involved.

To create Biosphere Innovation System (BIS) with a scalable dimension and with world impact, BIS includes a number of key supporting structures like financial systems, scientific competence, concrete functions and tools, and ecosystem venture incubators. All combined will enhance resilience of ecosystem services.

As the organizer interpreted the workshop, the participants who took part supported the idea of inserting the opinions into developing the model.

BR Lake Vänern Archipelago and Mount Kinnekulle will start a 2-year project to develop the system in the biosphere reserve. Several of the participants had the wish to get more information about the BIS and in what way the BIS will be established.

Read more

Biosphere Reserve Entrepreneurship – A pilot study on social entrepreneurship in the Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, Sweden. (2011) by Fredrik Björk (Programme Coordinator, Leadership for Sustainability, Environmental Studies at Malmö University), Bert- Ola Bergstrand (Social Capital Forum) och Stefan Molnar (Social Development and Analysis,

Presentations during the workshop were made by

Colin Campbell: Development Manager SENSOT (Social Entrepreneurs Scotland), and Director Assist Social Capital and Bert- Ola Bergstrand, Social Capital Forum

Moderator: Per-Eric Ullberg-Ornell, BR Lake Vänern Archipelago and Mount Kinnekulle, Sweden

Rapporteurs and contact persons: Per-Eric Ullberg Ornell and Bert-Ola Bergstrand, ola.bergstrand@handels.gu.se

BIOSPHERE CENTRES

The main focus of the workshop was to share experiences of building biosphere centres or similar, trying to formulate a strategy how a biosphere centre becomes an engine for sustainable enterprises within and around a biosphere reserve. The workshop was held as a hearing.

During the workshop, the question was raised how a biosphere centre can become the engine for more profitable ecotourism, locally produced products, locally based entrepreneurs in nature conservation and other sustainable enterprises.

Presentation of the concept Biosphere Centre (BC)

BR Candidate Eastern Slopes of Lake Vättern presented their project "Biosphere centre in the Eastern slopes of Lake Vättern". The BR Candidate is joint effort by a group of organisations representing national and local government, landowner associations and NGOs (Jönköping municipality, the County Administrative Board of Jönköpings län, The Federation of National Farmers, Södra – an economic association for Forest Owners in southern Sweden, Gränna Skogsgrupp (local NGO, member of the National Society for Nature Conservation), WWF - Worldwide Fund for Nature, National Forest Agency. Apart from these there are other stakeholders such as local tourism enterprises, small-scale countryside manufactures and other NGOs as local folklore society, various sport associations and the National Outdoor Association that may have an interest in a biosphere centre.

The first aim of the centre is to build bridges between stakeholders in the area and with other biosphere reserves around the world. The second aim is to create a biosphere centre that gives the visitor a great experience worthwhile travelling to being the optimal guide to the biosphere reserve and all its nature values and stakeholders. Therefore the BR picture a centre with a market hall for locally produced food and maybe products from other biosphere reserves and an exhibition on the biosphere reserve. The market hall and the exhibition will be built on interaction and win-win between the centre and stakeholders in the area. The principle of the centre is to tempt the visitors to go and visit the food producers or join some of the tourism entrepreneurs that can give the visitor a fantastic experience.

Hearing

During the workshop the following questions were posed to the participants:

Why have you chosen this workshop?

What is your connection to biosphere centre?

Does your biosphere reserve have a biosphere centre?

How is your centre organised and what functions does it have?

What is your positive and negative experience with your biosphere centre?

1. Gary Clarke/ Canada: We are going to build a BC.
2. Germany: We have a BC.
3. Tea Barbakadze/ Georgia: BC to promote tourism and green architecture

4. Urkhan Alakbarov/ Azerbadjan: We have a centre that was established before the BR for schools, bird watchers and it is owned by the municipality.
5. Anna Mustonen/ Finland: A BC can be a network, a website. It does not necessarily need to be a building.
6. Armen Saghatelian / Armenia: We would like to study your example.
7. Nihat Zal/ Turkey: We have a BC in a biosphere reserve.
8. Belarus: We would like to have a BC and would like to know more.
9. France: We have visitor centres with exhibition, ecological education and a restaurant.
10. Czech Republic: We have visitor centres in all six BRs. In the BRs there are also sightseeing paths.
11. Russia: Our BRs are closed for people. We have a visitors centre outside with a nature museum and a learning centre. We would like to know how a BC could work.
12. Jörel Holmberg/ Sweden: In BR Lake Vänern Archipelago and Mount Kinnekulle a visitor centre is going to be built but financing is the problem.

What functions can a BC have?

1. Exhibitions
2. Office
3. Market hall
4. Meeting point
5. Restaurant / café
6. Education
7. A place for students to stay
8. The “engine” in the BR
9. Meeting place for cultural meetings

Is there a need for international cooperation between BC:s? How?

1. Yes, send a list!
2. Thematic groups: biking, hiking, fishing, local food, market, bird watching, living on farms.
3. Cooperation in between similar BCs.
4. Survey and see what BCs there are and what they do. Maybe someone from a university can make such a survey?
5. Sharing ideas and good examples

Is it controversial to charge people for visiting nature?

Håkan Strotz/ Sweden: By labelling eco tourism a value can be put on biodiversity. A national label for ecotourism has been developed called Nature's Best by the Ecotourism Association in Sweden www.naturesbestsweden.com. An example where value on biodiversity saved a species is the gorillas in Rwanda that were saved by the value tourism rendered the area where the gorillas live.

Turkey: Visitors have to pay for visiting the BRs.

Sweden: That is not the case in Sweden. Here it is free to visit nature and BRs.

Canada: We sell hunting and fishing. Internet shops are selling local products.

Czech Republic: Unesco and BRs are good logos/ brands.

Italy: Slow food concept supports traditional and local products. The BC is where the certification should be made for the products

Is there a need for international cooperation between different biosphere centres, and if so, how should that cooperation manifest?

Why have you chosen this w s?

What is your connection to BC?

Does your BR have a BC? How is your centre organized and what functions does it have?

What is your positive and negative experience with your BC?

Conclusions

All the participants took a big interest in the subject. Some thought were expressed about the function of a biosphere centre beyond office and/or exhibition hall. There was an interest for a network of biosphere centres/ visitor centres in BRs. BR Candidate Eastern Slopes of Lake Vättern will try to set up a network during 2012 on biosphere centres or similar. Anyone interested in the concept of biosphere centre may contact Håkan Strotz, hakan@urnatur.se.

Moderator: Håkan Strotz, Forester and entrepreneur (www.urnatur.se) in BR Candidate Eastern Slopes of Lake Vättern

Rapporteur: Cristina Ericson, Co-ordinator BR Nedre Dalälven River Landscape

SMALL-SCALE NETWORKING ON COMMON ISSUES

The agenda of the workshop

1. Introduction
2. "Partnership in the Karst Biosphere Reserve": Presentation of good practices by Vanja DEBEVEC
3. Individual brainstorming of priority tasks on priority fields of work on BR level that could be improved by networking with other BR's on the international level
4. Group decision-making and forming of one proposal of a common task per field of work
5. Narrowing the proposals by individual choosing of the most present proposed task from any field of work
6. Preparing rough drafts of strategies for the realisation of chosen tasks in the next two years
7. Conclusions

Introduction

The idea of this workshop was to start connecting BRs in order to enable them to share experiences, help each other with everyday tasks, gain more knowledge and to build basis for individual actions in the BRs network level at international and local level as well.

We started the workshop with a concrete presentation of good practices done by Vanja Debevec from the Karst BR in order to divert the participants' thoughts on their "local level", continued with brainstorming to collect task proposals on which to connect among BRs and narrowing the choices as much as possible.

The workshop results are a list of ideas of potential common problematical issues and BRs' tasks and five drafts of strategies for realization of some of them in the next two years on disposal to be carried out, adopted or developed by all interested BRs and organizations involved in their activities.

"Partnership in the Karst Biosphere Reserve": Presentation of good practices by Vanja DEBEVEC

Proper functioning of BR is based on participation of different stakeholders. Their various field of interests and levels of involvement provides a great challenge for managers of BRs. The benefit of participatory process for local people in BRs is based upon quality of coordination and planning. Managers key role is in communication and realisation of common goals set to follow the vision of BR. By sharing our experiences we can learn to produce more efficient tools for our work and also propose cooperation among BR which will enable us to overcome obstacles including them in planning as new challenges.

The basis of partnership in the Karst BR consists of management board of BR, schools, local community and municipalities. In order to assure visibility and credibility of actions in BR it is necessary to involve also other stakeholders that might be part of business or higher education system and research institutions also from the other parts of Europe. In order to involve local communities and experts in participatory monitoring several steps have been taken. In frames of the project Biodiversity between nature and culture, special web page was created that enables individuals to take part in observation of biological characteristic of plants and their use and role in environment as well. With help of EU financial support cultural monument is being reconstructed in core zone. The building will become House of excellence of the Park Škocjan Caves, serving as reference point for BR activities.

Individual brainstorming of priority tasks on priority fields of work on BR level that could be improved by networking with other BR's on the international level

The participants were given a selection of work fields such as education, monitoring and protection of nature, monitoring and protection of cultural heritage, monitoring and

protection of cultural landscape, sustainable economic development, sustainable social development and climate change.

Each of the participants then had 5 min to decide which given fields of work are priority on their BR or in their work and use the stickers to write down at most four priority tasks and what about them could be improved by networking with other BR's on the international level in order to gain useful output for all.

The individual propositions were as listed below:

Field of work	Individual task proposals
EDUCATION	<ul style="list-style-type: none"> - education of local administration - preparing a guidebook for facilitating training of trainers on ESD carried in BR (already an ongoing activity) - school twinning - personal contact of coordinators and then coordinator → teacher
MONITORING AND PROTECTION OF NATURE	<ul style="list-style-type: none"> - attraction of EU practices – best practices - citizen monitoring - incentive policies – building new agro-ecology practices and relationships
MONITORING AND PROTECTION OF CULTURAL HERITAGE	<ul style="list-style-type: none"> - WHS monitoring and management
MONITORING AND PROTECTION OF CULTURAL LANDSCAPE	<ul style="list-style-type: none"> - small scale agricultural techniques in mosaic landscape - land use mapping - working on how to get the traditional land use system economically running - map of land use – ES values - ensure authenticity of the cultural landscape (authenticity – dynamics, what is authenticity, how to deal with it, zoning rethinking) - promoting sustainable land use, share best practice and examples - land use as biodiversity enhancement tool (sharing experience)
SUSTAINABLE ECONOMIC DEVELOPMENT	<ul style="list-style-type: none"> - preparing a guide for touristic activities in BRs - sustainable agriculture and food production - marketing of BR /MAB - learn (share experience) from BRs that have carried out evaluation of ecological services - sector development - broadly adapted unconventional forestry – small scale

SUSTAINABLE SOCIAL DEVELOPMENT	<ul style="list-style-type: none"> - re-visioning the future – social experience, transition of society - development of methods for joint data management for decisions - twinning/visits → enhance acceptance of different cultures
CLIMATE CHANGE	<ul style="list-style-type: none"> - bio energy - examine the potentiality of (our) BRs to help in adaptation e.g. flood protection

(*) Transcription of stickers

Group decision-making and forming of one proposal of a common task per field of work

The participants were asked to work in groups of four and had 25 min to present individual proposals to each other in the group and define one common task proposal for each field of work or at least the most frequent ones. They were encouraged to combine important individual proposals into one common task.

All the groups provided us with proposals for almost every work field. One group provided us of more than one task proposal in some work fields and none in the field of climate change.

The group proposals were as listed below:

Field of work	Group task proposals
EDUCATION	<ul style="list-style-type: none"> - development of guidance for education for sustainable development in BRs for different target groups - facilitation of contacts among partners in EuroMAB - school twinning – personal coach of the coordinator of the BRs or person in charge of education issues and teachers
MONITORING AND PROTECTION OF NATURE	<ul style="list-style-type: none"> - facilitation of application of best monitoring and nature protection practices (sharing experiences and capacity building) - designate standards for monitoring including citizen monitoring for increasing stewardship
MONITORING AND PROTECTION OF CULTURAL HERITAGE	<ul style="list-style-type: none"> - development of local planning for monitoring and protection of cultural heritage utilising experience of other BRs - combining WH convention and MAB Programme and use both concepts in landscape management and planning
MONITORING AND PROTECTION OF	<ul style="list-style-type: none"> - promoting the techniques for mosaic landscape - promoting sustainable land use - sharing experience on land use and biodiversity enhancement tool and

CULTURAL LANDSCAPE	sustainable management - defining what tradition is and how do we ensure authenticity of the cultural landscape with zoning and dynamics
SUSTAINABLE ECONOMIC DEVELOPMENT	- learning/sharing experience from BRs that have carried out evaluation of ecological/ecosystem services - marketing MAB and BR with sustainable agriculture and food production - partnership of businesses in BR and MAB Programme
SUSTAINABLE SOCIAL DEVELOPMENT	- exchanging news on methods for engaging stakeholders efficiently - twinning and visits to share and accept different cultures
CLIMATE CHANGE	- usage of BR as places for testing efficient bio energy development and for enhancing adaptation to CC, example: food production

(*) Transcription of group tables

Narrowing the proposals by individual choosing of the most present proposed task from any field of work

Individuals were then given 5 min to choose one proposed task from any field of work which is the most present in their BR or in their work.

This was done in order to narrow the proposals on the most topical for the workshop participants and detecting possible individuals with similar ongoing tasks who would be interested in working together.

The individually selected proposals were as listed below:

Field of work	Most present group task proposals on individual level
EDUCATION	- (1) development of guidance for education for sustainable development in BRs for different target groups - (1) school twinning – personal coach of the coordinator of the BRs or person in charge of education issues and teachers
MONITORING AND PROTECTION OF NATURE	- (1) facilitation of application of best monitoring and nature protection practices (sharing experiences and capacity building) - (1) designate standards for monitoring including citizen monitoring for increasing stewardship (book with guidelines)
MONITORING AND PROTECTION OF CULTURAL HERITAGE	/

MONITORING AND PROTECTION OF CULTURAL LANDSCAPE	- (1) defining what tradition is and how do we ensure authenticity of the cultural landscape with zoning and dynamics
SUSTAINABLE ECONOMIC DEVELOPMENT	- (1) learning/sharing experience from BRs that have carried out evaluation of ecological/ecosystem services - (2) partnership of businesses in BR and MAB Programme
SUSTAINABLE SOCIAL DEVELOPMENT	/
CLIMATE CHANGE	/

(*) Numbers in brackets are referring to the number of persons that have chosen certain topic

Only one group proposal gained special attention from more than one participant and it was the proposal dealing with sustainable economic development, i. e. **PARTNERSHIP OF BUSINESSES IN BR AND MAB PROGRAMME**.

Preparing rough drafts of strategies for the realisation of chosen tasks in the next two years

Due to a small number of participants and only two hours of time, it was impossible to achieve a stronger emphasis on only one or two common tasks during the workshop. This is why we decided to let the participants work on what they have recognized as the most present/urgent task for them and did not order all of them to work on the realization of the proposal about “partnership of businesses in BR and MAB Programme” as it was initially planned. Never the less three of them decided to work on this common proposal, while the others worked individually on the realization of different tasks.

The group and individuals were given 25 min to prepare a rough draft of a strategy for the realisation of the chosen task in the next two years with a special emphasis on the definition of concrete final results (e.g. a book, web page, seminar, etc.) as well as who should participate and how the task should be carried out. They were also encouraged to name a coordinator of individual projects among them, but in some cases they found it impossible as they are already too busy with their current work.

The proposed five strategies for the chosen tasks were as follows:

1. Learn and share experience from BRs that have carried out evaluation of ecological/ecosystem services

Author of the draft and potential coordinator: Dumitru Drumea

(*) Transcription of strategy paper draft

a. Who should be involved:

- researchers
- different levels of authorities
- NGOs
- administration of BR
- UNESCO
- MAB

b. How the task should be carried out:

- consultations
- data evaluation and use in decision making
- identification of main services which could be produced by certain BR
- economic analysis
- procedure for preparation of final result:
 1. involvement of academic
 2. presentation of preliminary results to potential stakeholders
 3. including ES in planning of social, economic development in the area where BR is located

c. Time frame:

- data collection (6 months)
- consultant meetings (2 months)
- evaluation of data collection and consultants (2 months)
- preparing of issue paper on ES (3 months)
- presentation of results to decision makers (3 months)
- introducing of results in planning documents (3 months)
- preparing of planning documents and its adoption of local authorities (5 months)

d. Results:

- Improved management capacities of authorities to manage ES in order to promote social and economic development in the region and improve the state of environment.

2. Participation of business in BR and MAB Programme

Authors of the draft: Petr Cupa, Christian Diry, Stellan Gustavsson

Potential coordinator: Petr Cupa

(*) Transcription of strategy paper draft

a. Who should be involved:

- EuroMAB
- National Committees
- individual BRs
- Quality management task force continuation

b. How the task should be carried out:

- MAB Programme headquarters should send out a clear message that cooperating with business is highly desirable
- BR could offer sound business models for making income with enhancing of biodiversity that are disseminated throughout the network incl. information on the dangers of green-washing
- promote marketing in order of linking with already existing quality control schemes on international/regional/national level
- networking of similar sustainable producers

c. Time frame: two years

d. Results:

1. promotion of sustainable production
2. influencing the business panel as important stakeholder at international/national/local level
3. financial sustainability of the MAB Programme and BR
4. mutual marketing of BR producers

3. Book with guidelines: design standards for nature monitoring including citizen monitoring for increasing stewardship

Author of the draft: Raphael Mathevet/Potential coordinator: not yet identified

(*) Transcription of strategy paper draft

a. Who should be involved:

- possible leader from universities included in BR (possible contact in France CEFE/CNRS France)
- BR and other PAs

b. How the task should be carried out:

- *First step:* To confirm the need and its relevance, which can be done by an e-mail survey with the coordinators of BRs and related experts
- *Second step:* Organize a meeting with specialists and motivated managers to discover the possibility of producing such kind of guidelines:
 1. social and ecological monitoring design
 2. citizen monitoring

- *Third step:* Organize workshops to share experience of citizen science experiments with other PAs
- *Forth step:* Write a book/guide on this topic for the interact platform

c. Time frame: two years at least

d. Results: website, pdf file

4. Development of a book/kit of guidelines for enhancing education for SD (ESD) in BRs for various target groups (already in progress)

Author of the draft and coordinator: Michael Scoullas

(*) Transcription of strategy paper draft

a. Who should be involved:

- the Greek national commission of MAB in collaboration with other BRs
- specialised NGOs (MIO-ECSDE)
- supported by UNESCO BRESCE Venice and MAB Secretariat in Paris

b. How the task should be carried out:

- already drafted and tested in Greece by BR coordinators etc.
- comments embeddied
- new text tested in the field
- new set of comments considered
- finalisation of draft and translation etc.
- to be finalised by the end of 2011 then disseminated to entire EuroMAB for further application
- to be linked with an interactive web page

c. Time frame:

- it took 3 and a half years
- now the final phase is in progress: book print and pdf in different languages

d. Results:

- book/toolkit implementation
- enhance the ability of BR personal and other designated areas, instructors/educators visiting the area with special target groups to use BR for promotion of SD

5. What is tradition: how do we ensure authenticity of the cultural landscape with zoning and dynamics?

Author of the draft and coordinator: Goran Gugić

(*) Transcription of strategy paper draft

a. Who should be involved:

- identify BRs for which this question is essential
- focus on BR/WH cultural landscapes in a first step

b. How the task should be carried out:

- identify forces (water, erosion, fire) which cause changes in the landscape, classify them and see how many changes happen in the landscape due to natural dynamic
- to discuss how authenticity is reflected in the concept of zoning and management plan

c. Time frame: two years

d. Results:

- workshop
- communication among interested partners
- proceedings in pdf file

Conclusions

The participants have defined their needs and possibilities in working in network. They have discussed the topics of further cooperation and possibilities of communication via e-mail, internet or exchange visits and workshops on the local level. For five out of seven topics selected according to priorities, an action plan was determined with tasks that can be performed in two years time. Suggested joint work was related to education, cultural landscape management, nature monitoring, participation of business in BRs, ecosystem services. Proposed results as published books, guidelines in pdf form, web sites and workshops were described as low cost actions, presenting also integration of already existing knowledge from different sources.

For some tasks, proper tutor of following up has been suggested, though a general invitation to participation of other interested BRs and partners is still to be carried out.

By adopting special plan of actions or participation in working groups, BRs can do a part of regularly work together as shared experience or demonstration. In this way we encourage our local communities to share ideas and promote the results or to learn from experience that other BR might have. Well designed tasks can be promoted with high efficiency for individual BR also in the terms of international cooperation.

Our good will and personal commitment will be a solid base for further joint work, which will result in promotion of MAB Programme and presentation of the process that is oriented toward benefits of nature and society.

Moderator: Darja KRANJC, Karst Biosphere Reserve, Slovenia

Rapporteurs: Darja Kranjc & Vanja Debevec, Karst Biosphere Reserve, Slovenia

Thematic Workshops

BIODIVERSITY IN SPATIAL PLANNING AND LAND-USE

In growing awareness of the consequences of an accelerating loss of species on earth due to mislead human activity, the Convention of Biological Diversity was enacted in 1993. One major objective of the convention was to clarify the links between biodiversity, sustainable resource use and ecosystem services to the public. 17 years later without significant progress in the struggle to halt the species decline - but with biodiversity issues finally at the top end of the agenda of commitments of the international community - the International Year of Biodiversity (2010) was succeeded by the Decade of Biodiversity (2011-2020). Strong measures are to be taken to reduce the direct pressures on biodiversity and promote sustainable use, to safeguard ecosystems, species and genetic diversity, and to enhance the benefits to all from ecosystem services. Implementation should be accomplished through participatory planning, knowledge management and capacity building (Aichi Biodiversity Targets, Nagoya Protocol 2010).

The aim of this workshop is to bring together representatives with different perspectives on planning procedures and requirements. These would range from public officials to corporate staff and NGO members, executive servants from national, regional and local authorities, scientists focusing on landscape to detail level matters in Natural and Social Sciences plus the Humanities, and anyone interested in biodiversity in planning.

Biosphere reserves are expected to serve as templates for best practices, and may serve as efficient spearheads in the effort to enforce the strategic goals of the Nagoya Protocol. What can be done in terms of biosphere reserve activities related to regional planning, to mitigate species decline, and what is already under way? How can experiences from such efforts be exported and become integrated with existing social, economic and ecological planning?

One base line of the presentations and the forthcoming discussion will be the possibility to use biosphere reserves in the process of implementation of the concept Green Infrastructure (EU Commission 2009; National government and the National Environmental Protection Agency 2010). Practical demonstrations of biodiversity in planning will be part of the workshop, and ideally the group might finally produce a compilation of such initiatives and reflect on the objective of delivering a coherent opinion of interest in biodiversity in planning.

Organization of workshop

This workshop was originally organized into three sections: firstly a series of presentations, secondly a roundtrip to places of particular interest in terms of ongoing or presumed

conflicts, or successful sustainable solutions in Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, and a third part intended to consist of a summary session using each participants own reflections in relation to a series of issues raised during the introductory talk (handed out). Unfortunately, due to shortage of time at the end of the day the final section had eventually to be omitted.

During presentations seven traditional talks (15 min.) were given in a seminar room. Each presenting participant used his/her own ppt. Deliberately no time was given for questions at this stage. The following excursion (by bus) brought the group to three sites, each briefly introduced by a local guide, with time given for questions and remarks from all workshop participants. A lunch break was included during the excursion.

Discussions

The discussions held during the excursion mostly related to the examples demonstrated, assumingly against each individual's background and experience.

During the first stop an area of great national significance for the survival of red-listed species (e. g. the beetle *Osmoderma eremita*) was demonstrated. A stand of very old oaks in a field managed by sheep-grazing would ideally be extended beyond its present limit to support big enough a population of insects to secure the existence of the species nation-wide, but by what means? Pastures are no longer economically sustainable and old trees no longer exist in otherwise presumptive fields nearby or elsewhere, but obviously certain species occupying them are in need of a long-term management perspective. The protected area might be safe by being proclaimed a nature reserve, and by the good will of its owner, but in the long run populations of both oaks and insects in focus will not sustain. Is it possible to think of turning other areas attractive for e.g. housing development into a similar type of habitat, combining people's homes with the planting and maintenance of oaks that will in the end replace the old trees as they eventually succumb and decay?

The second stop presented a somewhat similar type of problem, but this time emphasizing threatened cultural heritage rather than natural objects. Once a port serving the stone industry of the region, today a small museum, and a place attracting tourists because of its serene atmosphere the area visited has been suggested for housing development – this time even violating existing laws against building near the shoreline. The issue at stake is how to combine these interests: the municipality wants to attract more inhabitants, but at the same time tourists must not be rejected. The immediate economical implications are probably not overwhelming, but the principle is nonetheless the same as in many other cases. Here the port is part of the entire concept "Mount Kinnekulle", often advertised as a place for relaxation and nature's experiences, thus most certainly to some greater effect than just putting off visitors from the exact spot.

The final stop was made in an abandoned limestone quarry turned into a swimming pond and a place – perhaps – for contemplation! In addition most parts of the former quarry was recently declared a Natura 2000 area referring to its significance as an extension of other parts of Mount Kinnekulle with similar climatic and edaphic conditions offering suitable habitats for many endangered and even red-listed species. In many cases like this, after abandonment old quarries and the alike receive a final treatment enabling afforestation or some other economically favorable future use. Other projects have been suggested, e.g. creating a concert arena, sporting ground etc. none of which was approved in competition with just leaving the area untreated.

These examples show previous, existing or presumptive conflicts in the biosphere reserve, where considerable discussion has preceded the present land-use practice. Workshop attendants were invited to reflect upon what was demonstrated, to relate to their own experience, and to share their thoughts with the group.

Conclusions

Apart from not being able to bring workshop attendants back for the final, anticipated discussion after leaving the bus upon returning to the conference venue, I believe the programme was satisfactory, and the participants content.

My personal comment as the moderator of the workshop might perhaps be that having initially tried to give a broad overview of situations where biodiversity is by necessity included in the planning process, during the excursion we were not able to present an equally trans-disciplinary set of examples. Most of the discussion in the field tended to be centered around conservation issues rather than sustainable development in general.

On the other hand this is exactly the difficult part; in practice one must often resort to solve local problems (to choose between conservation OR development OR continuing modern land-use methods) in the hope of doing it by adhering to good sustainable practices.

Most biosphere reserve officials are aware of this conflict and deal with it in their daily work. There are clear examples of biosphere reserves developing the tools towards planning and implementing biodiversity enhancement and resilience, that suggest the holistic approach is developing, particularly by building in social benefits and ecosystem service mapping as well addressing fragmentation of habitats. However the level of complexity is still comparatively low. My ambition in suggesting to focus on Biodiversity *per se* in the planning process was - and remains to be - to increase awareness of the benefit, and maybe even necessity, to include care for ALL species in a community, ecosystem or whatever level of organization is preferred to make it work dynamically and over long periods of time. Ecosystem services depend on its constituent parts, not just some unidentified “green”.

Abstract of presentations during the workshop

Introduction to the workshop

Anders Telenius, GBIF-Sweden, National Museum of Natural History (atelenius@gmail.com)

Increasing public demand for “Green Infrastructure” planning implies knowledge of, and attention to its constituent parts, biodiversity perhaps being the most fundamental. Nonetheless in many situations the deeper meaning of “biodiversity” is obviously overlooked, and this workshop aims at offering an opportunity in the biosphere reserve context to present and discuss different ways to strengthen biodiversity aspects in planning situations. To this end six major headings are suggested for discussion, and in addition to each of these six subheadings are given. The 36 issues raised should be considered relating to examples given during an excursion. The six major questions are:

1. Do we need a common definition of Biodiversity?
2. Do we in fact mean diverse or is “just green” enough?
3. Is diverse more sustainable than uniform?
4. Should landscapes rather be looked upon as fragmented or expressing growing coherence from the opposite view?
5. How do artificial biological communities work from the ecosystem services point of view?
6. Can we successfully handle sustainable ecological engineering?

Planning for Biodiversity in a UK Biosphere Reserve; A case example for EuroMAB

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The UK planning system has provisions for protecting and managing biodiversity through both legal protection and planning policy. The primacy of planning decisions lies with the local authority. The protection or enhancement of biodiversity associated with developments has been inconsistent for a number of reasons, ranging from lack of capacity within local authorities to deal with technical ecological issues, or from biodiversity being low on the authority’s priorities and therefore negotiated out of compensatory agreements. The North Devon Biosphere Reserve has been a crucial component of collaboration between neighbouring planning authorities to produce a single core planning strategy that embraces the Biosphere Reserve values and concepts on issues such as standards in sustainability for new buildings and the maintenance and enhancement of both biodiversity and ecosystem services. A key tool for meeting this challenge is “biodiversity offsetting”. This comprises calculating the net loss of biodiversity arising from a development after on site mitigation and taking a fee to establish or enhance a more important habitat elsewhere in the Biosphere Reserve to strategically rebuild connectivity.

The key components are:

1. Clear framework for rules for onsite mitigation and offsite offsetting.
2. A method of calculating the credit value of biodiversity loss or gain including a framework for constant environmental capital and critical environmental capital assets and how they will be managed.
3. How ecosystem services are incorporated into the framework.
4. The implementation mechanisms of biodiversity improvements to realise and guarantee the credits.
5. An external method of verification and transparency.

Calculation of the credits

1. The credits are based on the size, value and ecosystem functions of the land/water.
2. Critical and Constant environmental assets will be identified and be the highest priority for enhancement and funding. Included in this classification will be ecosystem services that in particular regulate climate change such as carbon sequestration, flood attenuation and river flow buffering.
3. The North Devon Biosphere BAP will be a guiding document for calculating credit values based on no net loss, enhancements needed, level of fragmentation of that type of habitat.
4. The biodiversity credit value will be classified and scored according to the following factors:
 - a. Biodiversity value
 - b. Ecosystem service value
 - c. Ease of replicability (time, technical and financial)
 - d. Likely local authority view of development (e.g degree of support)
 - e. Area
 - f. Fragmentation factor (will the development or restoration contribute to change in fragmentation of the habitat?)
5. A multiplication factor will be applied on the credit system to ensure habitat/ecosystem service gains and account for technical risk in improving/creating habitats.

Whilst there are a number of larger landscape areas that have been identified as potential strategic investment areas for biodiversity will be agreed with local and technical stakeholders.

How much habitat is required at landscape scale to avoid species extinctions? – About functionality analyses in biosphere reserves

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The amount of valuable habitat for nature conservation has decreased tremendously. At landscape scale the amount of many habitat types is now less than 5 % of the historic amount of that habitat. Many species require relatively high amount of habitat in the landscape to maintain their natural dispersal and extinction dynamics. The question is how much habitat is enough to avoid species extinctions. In the project “Brifunk”, we have quantified the amount of natural habitat that is required to maintain a high probability of occurrence of species dependent on those habitats.

We have compiled existing data on species occurrences and existing data on natural habitats in Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle and in the biosphere reserve candidate area Eastern Slopes of Lake Vättern. We have analyzed the relationships between species and habitat data and made predictions of the minimum amount of habitat required in a landscape to find species of conservation concern with 80 % probability. We have evaluated several methods for this purpose, and here we present a method where data are analyzed in “landscapes” consisting of grid cells of various sizes (500 x 500m, 1000 x 1000m, 5000 x 5000m, 10000 x 10000m).

The analyses show that 125 large oaks (>100 cm in diameter) are required in a landscape of 5000 x 5000m to find the lichen *Calicium adspersum* with 80 % probability in that landscape. This species is used as an indicator species for high conservation value of an area. For the red-listed species *Fistulina hepatica* (polypore fungus), *Cliostomum corrugatum* (lichen) and *Grifola frondosa* (polypore fungus) 160-270 large are required to occur with 80 % probability in a landscape of same size. 250 large oaks are required to find 11 species of lichens and fungi of conservation concern.

Based on this example from the Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, we would suggest a conservation target of a minimum of 250 large oaks per 5000 x 5000 m grid cell, to avoid species extinction at landscape scale. This corresponds to the requirements of seven of eight study species, for 80 % probability of occurrence. Similar analyses are possible to carry out for other species of conservation concern, given that their occurrences and habitat requirements are known and easily defined in the landscape. Finally, to avoid species extinctions in future, it is important that such quantitative targets are set and implemented in practical nature conservation.

Mapping of Social-Ecological Values in Stockholm: Implications for Ecosystem Services, and Urban Transition Planning

Jeff Ranara¹⁾, Alexander Ståhle²⁾, Andreas Zetterberg³⁾, Ulla Mörtberg³⁾, Fredrik Liljeros⁴⁾, Harini Nagendra⁵⁾, Anders Telenius⁶⁾, Keith Tidball⁷⁾, Thomas Elmqvist¹⁾

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Theories linking complex systems of people and nature – social-ecological systems – are well-developed in resilience research, but empirical data linking the social and the ecological is not as widely available.

Stockholm has uniquely pioneered surveys of recreational use of open spaces (sociotopes), and of the distribution of ecological habitats (biotopes). We present a framework and method for ranking and spatially linking the elements of these separate social and ecological maps, using a two-factor index to create a unified, understandable social-ecological map matrix identifying areas of low-low, low-high, high-low, and high-high social-ecological rankings.

Social-ecological maps can improve our understanding of ecosystem services – “a heuristic device for making human-ecology interaction more visible in decision making” – and are important for mapping their spatial distribution. We could determine, for example, where and how social corridors could improve accessibility to cultural ecosystem services, and for whom. We could also understand whether areas of high or low ecological ranking tend to be associated with particular kinds and levels of social ranking, and how these areas are spatially clustered. Using perception-based measures of distance, as empirically derived for example from space syntax theory, we could then correlate these findings with other spatial socioeconomic and institutional factors such as income, crime, or property rights.

Such analyses can provide input to policymakers navigating sustainable urban development paths. For example, identifying actions in areas of low social and ecological ranking could,

after comparison with areas of high social and/or ecological ranking, involve transitions along ecological – e.g. restoration – or social – e.g. stakeholder involvement – pathways, or both. Identifying these pathways could involve key stakeholders in a participatory, scenario planning process that envisions possible futures and concrete steps for realizing them. The whole process could serve as an urban development model for most cities in Sweden and in other countries

Modelling distribution and habitat preferences of vulnerable species

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Species distributions are increasingly being modelled in ecology and conservation research. Prediction of species geographic distribution, based on known occurrences, is now possible due to Geographic Information Systems (GIS), availability of large digital datasets and statistical quantification of species–environment relationships. Predictions coming out from species distribution models help to develop management decisions and conservation strategies for threatened insect and vertebrates. Here, I deal with two approaches of the several possible applications in biodiversity conservation. The first study case is about a single species (Lanner falcon, *Falco biarmicus feldeggii*) living in a large area (Sicily, c. 25,500 km²) and more specifically, I address the landscape correlates of the distribution and the implications for the conservation of the largest European population of this vulnerable species. The second study case is about an assemblage of vertebrates included in the Annexes of the Bird (09/147/EEC) and Habitat (92/43/EEC) Directives used to highlight and score the most diverse habitats while compiling the management plan of a Natura 2000 site.

Creating *Biosfärum* – a gateway to the Biosphere Reserve

Lars Hillström, University of Gävle (lh@hig.se) & Inga-Britt Persson, Gröna kunskapshuset, Östa (Ingabritt.Persson@gkh.se)

A biosphere reserve is a trademark that stimulates curiosity and attracts people to learn and to experience the functioning of a landscape.–It may also increase people's knowledge of sustainability and become a way to bring insight concerning the development of the environment in a sustainable way. The idea of a *Biosfärum* is to become a connecting link to the biosphere reserve. A *Biosfärum* could be a place where one can take part in the contents of the biosphere reserve, its different places /habitats. A *Biosfärum* can disseminate information and knowledge about long-term sustainable development and it can also be an arena for scientific and educating information in terms of exhibitions, courses and experiences. A *Biosfärum* could give good examples of conservation and management of the different landscapes in the biosphere reserve. It can also show and demonstrate good

examples - "best practices" - in the community, e.g. unorthodox energy production, the use of biofuels, and local and ecological food production. The *Biosfär* at Biosphere Reserve Nedre Dalälven River Landscape will focus on a) how a biosphere reserve can increase the possibilities for people to stay and live in this area, i.e. to get insight into the stimulation of the socio-economic sustainable development, b) set an arena for visitors to discover and learn about the different values of nature and culture, and c) to inform about sustainable practices in agriculture and forestry and for maintaining the ecosystem services, keeping it in balance in nature; in the long-run a necessity for humans!

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Moderator: Anders Telenius, Nedre Dalälven River Landscape Biosphere Reserve/National Museum of Natural History, Sweden, atelenius@gmail.com

RENEWABLE ENERGY AND BIODIVERSITY – BIOSPHERE RESERVES AS CONFLICT PREVENTING ARENAS

Landscapes are under increased pressure in modern society, for example from urbanisation and other land use, but also in terms of increasing demand for forest products and ecosystem services. This situation can cause serious pressure on already weakened ecosystems and biodiversity, and also on relations in society. This has become a reality in Sweden for land-based wind power development. Biomass extraction may be another energy source that can create similar situation.

New challenges concerning landscapes and forests are appearing faster than current socio-ecological systems can handle, resulting in loss of i.e. biodiversity, social values and resilience. One way of dealing with these pressures is to apply landscape/arena approaches and concepts of multiple use. The former being very important dealing with renewable energy while the latter might be especially important in i.e. semi-urban nature.

Renewable Energy and Biodiversity

Introduction was made by Magnus Ljung and Simon Jonegård.

Magnus Ljung, Swedish University of Agricultural Sciences, had a presentation about biosphere reserves as conflict preventing arenas. He concluded that :

- A big pressure is imposed on each project for sustainable development.
- Conflicts are a natural part of complexity and change.
- Social learning, developed relations and communication are necessary for successful conflict management.
- Procedural issues and trust building activities must be put at the forefront.
- Biosphere-processes might be the ideal scale and platform for social efforts, building a sustainable future.

Simon Jonegård introduced a case: the BR Candidate area in East Vättern Scarp Landscape. He gave background information about the area, its climate, and about the engagement of the organizations taking part of the preparations of the BR. He spoke about techniques of work of different organization and the networking between different MAB (Swedish MAB, NordMAB, EuroMAB).

There is work on sustainable development taking into account landscape values and but the landscape is also used for forestry, tourism and energy production. Co-operation is needed for multi-scale of use and landscape planning.

The third presentation by David Ståhlberg, Swedish Board of Agriculture, introduced what renewable energy use can bring for biodiversity, here windpower. The title was ***Creotopes – New possibilities for linking wind power with biodiversity***. The main points were:

- A lot of scientific studies about wind power prove their good effect on biodiversity: new biotopes may appear several hundred meters from the wind turbines.
- We should not hinder the agricultural production and development.
- On the contrary, we can get more biodiversity in intensively farmed landscapes thanks cultivation refuges, pollen and nectar plants, variations, wetlands, dry areas, transition zones between cultivated and not-cultivated areas.
- Energy companies, farmers, authorities, have to cooperate and use common technical solutions.
- We should have landscape perspective not micro perspective: we have the possibility to create biodiversity, not only preserve it.

Recommendations for conflict management ?

A discussion on recommendations for conflict management took place. The conclusions were :

1. The pressure on natural resources is because of production on renewable energy increasing in many biosphere reserves (BRs), for instance through bio-energy and wind-power development
2. The function of BRs as independent platforms for conflict management and creating win-win situations is therefore increasingly important.
3. Governance can be made by, with or without governments, but successful conflict management often consists of both bottom-up and top-down processes.
4. For meeting needs on energy production, governments will take direct actions which must be combined with local resistance of change.
5. For example wind power builders have a very strong political mandate and economical muscles leading to a feeling of an increased top-down process and a balance-shift on local level.
6. Experiences from BRs (for instance on conflict management) are important to spread. Since big socio-ecology changes must be responded to quickly, the challenge is to up-speed this without forcing the social processes.
7. Mutual learning and creating a shared vision will decrease the feeling of pressure from the outside.
8. Many BRs have the potential to build capacity to become a counterpart to other strong actors acting in the renewable energy expansion.

Forests for People – Networking during the International Year of Forests

The workshop started with presentation on two concepts that have many similarities with biosphere reserves. The first presentation was made by ***Simon Jonegård on the project EcoRegion and its policy recommendations:***

- The EcoRegion is a project that aims at developing the Baltic Sea Region into the world's first EcoRegion, where economical growth goes hand in hand with environmental integrity and social justice (www.baltic-ecoregion.eu).
- In the project, regions and local authorities are encouraged to use Integrated Natural Resource Management (INRM) as an effective model for conflict resolution between different uses on land (renewable energy, climate change, biodiversity conservation, forestry and agriculture).

The policy recommendations are furthermore:

- Development of nature protection programmes and voluntary nature conservation schemes.
- Enhancement of ecosystem service research in order to better integrate the diverse functions of ecosystems (both social and ecological) into different natural resource management policies.

- Development of better monitoring and assessment systems of ecosystem services.
- Make visible and adaptable to other sphere of action the structuring and methods behind this success.
- Enhancement of cross-disciplinary cooperation between networks related to INRM in the BSR.
- Development of urban biosphere reserves and promotion of urban forestry, reinforcement of networks where this interdisciplinary approach is applied.

Erik Ederlöf, the Swedish Forest Agency, argued that there is an urgent need to bridge different landscape initiatives, for a stronger landscape perspective, with cooperation and less competition. He presented a landscape approach called model forest:

- The model forest is based upon a fully inclusive partnership committed to working toward sustainable forest management (SFM);
- It has to include economic, social, and environmental values;
- Its governance structure has to be transparent, accountable, and accessible;
- The programme of work reflects partner and landscape values;
- Commitment to networking (sharing experience) from local to international levels.

Cecil Konijnendijk, University of Copenhagen, gave an overview on forestry in an urbanizing society with forests that have multiple function, where participation is important and ecosystems services are in focus. His main points were:

- Fragmented forests and ownership, different species composition.
- Forestry in an urbanising society requires more than just adaptation because of anthropogenic pressures.
- Present areas of focus:
 - Human health and wellbeing
 - Climate change
 - City competitiveness
- We're moving towards 'unconventional forestry' (different silvicultural methods, more public involvement, higher level of facilities, higher funding needs.)

The workshop participants visited near-by forests and discussed the ecosystem services of the forests, urbanization and climate change:

- Sörbodalen – landscape ecology and ecosystem services
- Brunnsparken – nature psychology and semi urban forests
- Brunnsskogen – introduction to theme discussions

Conclusions

- The emerging challenges addressed in the Madrid Action Plan (MAP) – *climate change, provision of ecosystem services and urbanization as a principle driver for ecosystem-wide pressures* – all have major relevance for management of forests in BRs
- The exercise in field showed that forest/landscape management methods taking off from one of the three main MAP challenges can be combined with each other – this goes especially for ecosystem services and urbanization.
- Regarding forests, experiences on “unconventional forest management” could be of major value to share within the EuroMAB-network and also with other landscape initiatives, such as model forest and world heritage sites.
- A multi-purpose approach to management of forests makes it possible to use a much wider field of methods than is used in conventional forestry, thus gaining a multitude of values.
- Also already existing networks within MAB could be used for sharing experiences; the Forest network between BRs in France and thematic networks of Mountains and Tropical Forests.
- A new formal forests network will not be created, but rather a “community-of-interest”, starting with the creation of an e-mail lists
- Suggested themes to start discussing/sharing includes:
 - Green infrastructure and biodiversity conservation
 - Social adapted forest management and health
 - Small scale forestry specially adapted for BR products and stakeholders
 - Management, locally adapted to meet climate change
- Next EuroMAB meeting in Canada 2013 will be a great opportunity to meet again and continue the networking

Moderators: Simon Jonegård, Magnus Ljung, Cecil Konijnendijk, Stellan Gustavsson

Rapporteur: Simon Jonegård



SUSTAINABLE TOURISM DEVELOPMENT IN BIOSPHERE RESERVES

Biosphere reserves are areas of rich natural and cultural values and as such could enjoy the fastest growth amongst the world's tourism destinations. The BRs should promote sustainable tourism as a new trend and be the natural choice to partner with the industry, ensuring its long term viability. The cooperation could be done through fulfilling one of the basic MAB Programme goals - to promote innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable. The workshop participants tried to answer questions related to the definitions of sustainable tourism, its promotion, standardization, shared their practical experience and through discussion brought up some suggestions on how the BRs can be the contributors to the process of promotion and development of sustainable tourism.

The workshop consisted of three mutually complemented sections: several participant's presentations, field trip with practical examples of sustainable tourism in the Lake Vanern Archipelago and Mount Kinnekulle BR and the concluding discussion of participants formulating suggestions how BRs can add to the development of sustainable tourism.

Presentations

"Sustainable Tourism - a global opportunity needs a global collaboration" by Gary Clarke (Frontenac Arch BR, Canada)

- noted the United Nations Brundtland Commission (1987) definition of sustainability as "meeting the needs of the present, without compromising the ability of future generations to meet their own needs." and its follow-up in the Tourism Industry

Association of Canada statement that “sustainable tourism actively fosters appreciation and stewardship of the natural, cultural and historic resources and special places by local residents, the tourism industry, governments, and visitors. It is tourism which is viable over the long term because it results in a net benefit for the social, economic, natural and cultural environments of the area in which it takes place.”

- mentioned information sources on sustainable tourism with special emphases on the study "Towards a green economy" by UNEP published in February 2011
- presented sustainable tourism as a field of business highly suitable for small and medium size businesses, bringing them benefits in the form of reduced recruiting and attrition costs, increased employee productivity, higher eco-efficiencies (savings in energy, water, materials, waste handling), increased revenue / market share, lower insurance & borrowing costs, potentially leading to a profit increase of +66%
- proposed to BRs to take approach mentioned in the Joel Makover's Green economy strategy as "enabling consumers to reduce their impacts by doing business with your company and enabling customers to fulfill their needs in a way that makes them genuinely part of the solution"
- as barriers to development of ST in small and medium businesses he determined the lack of information, funds and complicated implementation partly due to accreditation and labelling confusion
- pointed out the already existing activities of various UN agencies participating in the Partnership for Global Sustainable Tourism Criteria - GSTC- (www.sustainabletourismcriteria.org) and urged the MAB Programme and/or individual BRs to join in, for there is no need to "reinvent" the existing guidelines, these being sufficiently broadly worded to be adaptable by every biosphere in the network
- concluded with the proposal for possible contribution of Canadian BRs to sustainable tourism by: agreement upon Common Charter and definition of sustainable tourism, adopting GSTC Accreditation Criteria, creating Training Modules for Tourism Businesses incl. "Best Practices" Manual, joining Tourism Industry Association of Canada and Global Sustainable Tourism Council, networking with UN Agencies and BRs involved in sustainable tourism and developing Carbon Offset Programme focused on investment in biosphere reserves

2. "Koli Cultura Centre - comprehensive development of tourism and sustainability in North Karelia BR, Finland" by Timo Hokkanen (North Karelia Biosphere Reserve, Finland)

- introduced the North Karelia Biosphere Reserve as one of the Finland's national landscapes with population of 21 thousand mainly involved in forestry, tourism and

services, with BR's activities aiming at creating regional sustainable development solutions for good economy and environment

- noted that tourism is growing in importance and volume, makes use of all environments and important culture objects, is tightly coupled with energy use and stands high in local and regional support schemes
- "Koli Cultura Centre for Nature and Culture - 2015" is a project of international sustainable development model, working on and influencing all aspects of sustainability. Includes already existing activities, e.g., restoration of nature, development of cultural co-op, promotion of local products, regional planning, education.
- it is a answer to the local challenges: target of approx. 140.000 visitors yearly, poor services compared to other national parks, parking problems, current Koli area development based on unsustainable and unplanned building of scattered small houses, poorly used infrastructure (e.g. roads)
- project is being created on the open multi-stakeholder Koli Sustainable Development Platform, decreasing the pressures on the park, respecting cultural values of the area, appreciating human basic needs (silence, beauty, clean food etc) being built from natural materials with high standards to stay
- Koli Cultura will be a Biosphere Reserve centre.

3. Sustainability Programme "Destin-Action Lac-St. - Pierre"by Christian Hart (Lac-St. - Pierre Biosphere Reserve, Canada)

- certification programme "Destin-Action Lac-St. - Pierre" is focused on hotels, restaurants, agro - tourism, outdoor activity providers, interpretive centers, marina etc.
- its aim is to provide better image for sustainable BR businesses, increase of added value of local products and services, capacity building of BR entrepreneurs, BR distinction a improvement of the local economy
- the programme is based on the combination of sustainable development and BR/MAB concepts
- criteria for the participants are those used for evaluation of sustainable development supplemented with sectoral criteria of every field of business
- eligible participants must sign Chart of Sustainability, have to operate registered business, reside within the BR, hold valid insurance, be an asset to the BR and cooperate with other BR businesses
- compliance with criteria is regularly evaluated, dividing the businesses into the three levels, based on the performance

- BR created the whole certification programme by adding own requirements to already existing sectoral criteria, which approach has been proven as easy to adapt and highly cost effective, since most of the control is done by sectoral authorities

4. Possibilities and opportunities for sustainable tourism in BRs by Vanja Debevec Gerjevic (The Karst Biosphere Reserve, Slovenija)

- introduced BRs of Slovenija and their challenges and opportunities related to sustainable tourism.
- every area is unique and all of them have their opportunities, that can be turned into actions. All of them present natural and cultural values and provide convenient conditions for investment
- the Karst BR hosts around 95.000 visitors per year, demanding intensive visitor management.
- the BR negotiated arrangements with local tourist offices for joint promotion, carried out awareness raising activities amongst local inhabitants and producers
- opportunities can be found also in the local knowledge and people, development of local economy in tourism areas and an ongoing strengthening of local identity, especially important for younger generations. All activities should be consulted with the local people in order to include their own first participation.
- actions include interpretation planning, public awareness, human resource management, education, networking and partnerships. Sustainable tourism creates permanent jobs, focus on local food production and promotion and performs constant survey and evaluation in order not exceed the carrying capacity that is respectful to the rules, place, people and time.
- the BR will establish "The House of Excellence" to educate, share experience and promote sustainable development on local, national and international levels.

5. Development of sustainable tourism at Soutok area - example of participation process in tourism strategy making by Petr Cupa (Lower Morava Biosphere Reserve, Czech Republic)

- briefly introduced the BR, its NGO multi-stakeholder based management and basic characteristics related to tourism
- the unique area of the Soutok (Confluence) is situated along the state borders and due to its close proximity to Austria the whole area was in highly secured „iron curtain control regime“ from 1950's till 1989.

- No free access and almost no economic activities preserved the natural values of the whole floodplain area. Since 1990 the area has been open to visitors, whose numbers grow every year with all the positive and negative impacts involved.
- in 2005 upon request from local stakeholders the BR in co-operation with the South Moravian Regional Development Agency started a project, whose main objective was to prevent possible degradation of the area.
- a set of rules and recommendations for tourism was put together for the area. This was achieved by BR mediated discussions involving important land owners and representatives of municipalities on both the Czech and Austrian side, as well as with companies, foresters, state institutions and non-governmental organizations.
- the discussion led to the mutual inception of nine project plans (Visitor Trails, Visitor Centre, Visitor Programmes, Observation Posts, Open Air Museum, Forest Park in town of Břeclav, Ecological Tourist Transport – eco-train, Tourist Water Transport, CZ - A footbridge).
- projects are gradually implemented as the funding sources occur and the BR helps in search of available funds. The tourism strategy was made possible as a part of INTERREG III. A Initiative

6. Ecotourism destination – Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle

by Ove Ringsby (Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, Sweden)

- the project "Ecotourism destination" is an application of a project processed by the County Administrative Board "Development of ecotourism with sustainable travel". It aims to develop a destination for people who want to visit and experience the landscape, and who wish to travel by train or bus to, from and within the area, and who want to supplement their means of travel with cycling, canoeing, hiking and riding.
- Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle will become the first ecotourism destination in Sweden
- Business development for tourism entrepreneurs with eco-ambitions includes courses in ecotourism entrepreneurship, individual assistance with market analysis, network with other eco-entrepreneurs, quality insurance of products, increased profitability
- participants have to sign a Charter with stipulates the desire to work in a "green" direction and demands for joining the network
- desired effects include start-ups of new companies and businesses, more tourists bringing more employment opportunities, increased tourism use of public transport,

new companies with eco-profile, improved public health, increased access to nature/culture for residents and promotion of the whole area

- This project is carried out by the Biosphere Reserve and runs from 2009 to 2012. The project is funded by EU CAP, the municipalities in BR, County Administration Board of Västra Götaland (CAB), Region Västra Götaland, Västtrafik (public transport company), National Transport Administration, Destination Läckö-Kinne, municipal Lake Vänern Museum of Natural and Cultural history, and non-profit organisations.

Field trip

The workshop participants had a chance to meet local stakeholders involved in sustainable tourism development businesses and discuss their experience with working in the field as well as various challenges and opportunities they are facing.

Qvarnstensgruvan Minnesfjället

- local stakeholder based association running restoration of historical millstone quarry on Lugnås Plateau Mountain
- 163 members help to run educational programmes on local history, geology, nature, guiding services and create the mining history museum in environmentally sustainable way

Naturligtvis

- two women-entrepreneurs manage eco-café and bakery in the old railway station house in Hallekis
- the organic food store is supplemented by shop offering organic and fair-trade clothes and printshop with screen-printing on T-shirts

Kreativ Avstamp

- small operation providing guiding services and packaged courses with local stories, gatherings, food and cultural events

DUVA

- web application development firm promoting best practices
- created BR bicycle trail maps compatible with all web browsers as well as smart phone applications

Discussion

During the whole day an intensive discussion was carried out by the participants. The workshop was also concluded by a brainstorming session, where the group formulated ideas, how BRs can add to the development of sustainable tourism.

- since the definition of sustainable tourism is not clear amongst the BRs, it is necessary to adopt unifying guidelines for this segment of the market. It was noted, that already existing rules could be adopted without any major alterations
- BR should focus on "sustainable experience tourism" - people, food, activities - since beautiful nature can also be found elsewhere
- authenticity and the people are the great aspect and added value of every BR and as such could be marketed while maintaining respect to the local communities
- BR to BR marketing - cooperation of BRs as tourist destinations
- cooperation with other UN/UNESCO agencies on marketing of sustainable tourism and the MAB have to be an active player
- the process of preparation and implementation is as important as labelling and certification themselves. Can be used to make community work together.
- an update of MAB Task Force on the Development of Quality Economies in biosphere reserves utilizing new experience
- a group of Canadian biosphere reserves which could include 6 to 8 members will likely form by October 2011 to agree upon the suggested list of initiatives as contained in the final summary point of Gary Clarke's presentation. This group will then appoint 2 or 3 of its members to act as members of a small informal network of European and Canadian biosphere reserves. The network could lead in the development of a simple manual for BR's wishing to develop sustainable tourism products and services. The manual could contain definitions, accreditation criteria and process, best practices, suggested charter wording, etc. The informal network will report on progress at the 2013 EuroMAB meeting in Quebec"
- creation of small network of workshop participants, where the BRs with already functioning certification procedures and proven sustainable tourism guidelines will share the experience with those BRs wishing to promote sustainable tourism. The group was initialized by the assembly at the end of the meeting and Mr. Christian Hart (Lac-St. - Pierre Biosphere Reserve, Canada) was appointed as the person in charge, who will contact everybody who left the contact e-mail at the workshop.

Rapporteur: Petr Cupa (Lower Morava Biosphere Reserve, Czech Republic)

Moderator: Christian Hart (Lac-St. - Pierre Biosphere Reserve, Canada)

PROCUREMENT— A TOOL FOR SUSTAINABLE DEVELOPMENT

The workshop included presentations from several international key actors (EU, ICLEI and UNEP). The overall aim was to make them and BR coordinators meet and learn more about procurement and opportunities within the EuroMAB network. The preliminary purpose was to form a network that will promote purchasing as a tool for sustainability in biosphere reserves. Perhaps also to start the work to propose a flexible standard or frame work for sustainable purchasing in biosphere reserves that will be presented at Euro-MAB 2013.

Summary of presentations

Biosphere reserves shall act as model areas of sustainable development. Are public organizations in biosphere reserves fit to act as models concerning purchasing? What, how and from whom one purchase is also of importance if the public may consider a biosphere reserve trustworthy as a model area of sustainable development.

Consumption is one of the major driving forces in the global economy. However, consumption does not contribute to sustainable development; it is on the contrary one of the causes of local and global "human-ecological" crises in today's world. Stake holders in biosphere reserves are of course also buyers of goods, services and energy and as such part of the problem. This was also one of the themes in the UNEP speech.

Purchasing has for a long time been a strategic tool for successful industries and other companies leading to minimizing costs and being a tool for internal development. But also driving outsourcing at a global scale and, in too many bad cases, more efficiently exploiting natural resources and humans. Thus a powerful tool, why not use this power of strategic purchasing to do better.

The seminar gave examples on how purchasing on strategic as well as on operational levels, at global, national and at local levels can be a tool for enhancing sustainability. UNEP and ICLEI showed how they work to promote the strategic thinking and policy when it comes to public procurement. National Environmental Protection Agency monitor National green procurement and though the figures are hopeful in how many public organizations that say they do green purchasing, there are still many doubt about how it is in real life, this due to a vast gap in statistics and follow up.

The seminar displayed examples on how stake holders in biosphere reserves may promote sustainable development trough purchasing and reduce impact on biodiversity and ecosystems but also contributing to strengthening social aspects at local level as well as contributing to strengthening social aspects in developing countries, expressed like the core clauses in the ILO convention. Even non-governmental organizations, like a football club as Lidköping football club, can make a difference. One of many examples in their work whit sustainability was when asking a retailer of sport products to supply them with Fair trade labelled footballs which made the retailer change assortment of footballs! ICLEI showed

how the City of Barcelona, Spain, policy on timber ensures that purchased wood products are from sustainable forestry and paper from recycled fibre. Follow up shows that 76% of timber is certified according to FSC and 70% of paper is from recycled fibre.

Cooperation and use of standardised criteria can be crucial for making an impact on markets and making public procurement an efficient tool on national and global scale. This is why the EU Commission and national stake holders like the National Environmental Management Council work with “standardisation” of criteria and other guidance on Sustainable and green public procurement and adapt the criteria and recommendations so they compile with EU purchasing directives. These are also available in English. (Links see below.)

Purchasing between regional and local public organizations as well as between local public organizations like municipalities’ may benefit from cooperation. Cooperation may also be needed to match the size of large suppliers making it more interesting to listen to customer preference and working to reach a supply chain; this has been explored by Lidköping Municipality and by SKL-kommentus (Purchasing organization of National association of municipalities and regions) when purchasing literature for education. Doing this by putting up contract clauses demanding supplier to work with them and the publishers (sub suppliers) on aspects of paper/pulp from e.g. sustainable forestry, green printing and transportation.

Some challenges are to develop supplier networks supporting local social economies and local small and medium sized firms; for less unemployment, making money stay in the local society etcetera. The Scottish example show that it not only is possible but even successful and within the legal frames of EU directives for public procurement. These supplier networks in different branches make it possible for public procurement to minimize the number of suppliers that delivers directly “to the gates” but still the public organization (and the local community) gets the benefits from many small suppliers. Social Entrepreneurs of Scotland has been the promoter and network hub making it possible.

Challenges are to spread green and sustainable procurement and explore transformative solutions and innovations through purchasing and not the least to make supply of materials go cradle to cradle instead of cradle to disposal. In this, the value chain thinking and supplier networks in public purchasing can be developed. It is however to work much more in purchasing on strategic level. Much is left to do in this especially for public organizations. Public organizations in biosphere reserve areas are needed for this!

The workshop led to the following results:

A network was formed by some of the participants after the seminar; discussions in the network have started (This far it is hosted by UNEP, see below). The idea is to develop sustainable procurement for biosphere reserves, with the aim of delivering learning for biosphere reserves and delivering additional outcomes at EuroMAB 2013 in Canada.

ICLEI (see below) offers to host a Biosphere Procurement Network within the scope of their network and welcomes any local public organization to join their organization for further exchange and help in the different areas of sustainability that ICLEI members have vast experiences in. SKL-kommentus showed their interest

UNEP opened a "Sustainable Public Procurement Working Group" through Google Docs. This platform could be used for exchange and feedback on "**Biosphere reserves and sustainable public procurement**". Those interested in joining this group will have to sign-up by submitting their email address (<http://www.unep.fr/scp/procurement/googlegroup.htm>). You will receive a notification email to inform you that you have been added to the group, with the access link and email address.

Moderator and rapporteur: Jens Johansson, jens@msr.se, BR Lake Vänern Archipelago and Mount Kinnekulle, Sweden

EDUCATION FOR SUSTAINABLE DEVELOPMENT

The aim of the workshop was to share what is being done in question of Education for sustainable development, what can be transferred to other schools and countries, and how the work can improve. The workshop was mainly dedicated to questions focusing on the present and future role of biosphere reserves in ESD. The local and global context was stressed and one additional focus was networking. The workshop gathered a total of 18 conference participants and gave rise to a number of issues that should have the highest priority.

To get a common ground to start our discussions from, the day started with presentations of the participants. Moderator Sofia Wennberg made an introduction and presented the rapporteur, Malin Pettersson. This was followed with two short presentations by Catherine Cibien and Sofia Wennberg and one additional presentation by Michael Scoulllos (not included in the programme).

Catherine Cibien, Director of MAB, France, gave an introduction to Education for Sustainable Development (ESD). Mainly reflecting on how biosphere reserves (BR) adds value to education. C. Cibien also demonstrated some local examples from France.

Sofia Wennberg presented some good examples on how primary schools and pre-schools from *BR Lake Vänern Archipelago and Mount Kinnekulle* work with Sustainable Development in their education.

Michael Scoulllos, chair of the Greek MAB National Committee, gave a short presentation on the evolution of ESD.

After lunch the workshop continued with outdoor activities with *Manne Rytman*, *pedagogue and head of Balthazar Science Centre*. These pedagogic activities got the workshop participants relaxed in each other's company. In the end of the out-door activities three workshop groups were created when the participants were given sticks, pinecones or leafs. Group discussions were followed by a presentation in the main group. The following is a summary of the discussions highlighting some recommendations and answers to the questions proposed by the workshop moderator.

Workshop questions were handed out and the groups got 1 ½ hour for discussion. The workshop ended with 1 hour where the discussion and conclusions of each group was presented.

Workshop questions

- When educating for sustainable development: how can a biosphere reserve bring added value to teachers and children to achieve good results?
- Does your national curriculum support education for sustainable development?
- What differences can you detect between the countries you represent?
- How are pupils trained to take part in creating sustainable futures?
- Does the educational system prepare the teachers for the task?
- Can the biosphere reserve concept itself be something to educate teachers and pupils about?
- We are interested /not interested in starting a network working until the next EuroMAB 2013. How would this network work in practice?

These questions were of interest but not prioritized during the discussions:

Does your national curriculum support education for sustainable development? What differences can you detect between the countries you represent?

How are pupils trained to take part in creating sustainable futures?

Does the educational system prepare the teachers for the task?

Can the biosphere reserve concept itself be something to educate teachers and pupils about?

Discussion

Question 1: *How can a biosphere reserves bring added value to teachers and children to achieve good results in ESD?*

All participants agree on the fact that ESD activities need to go out of the usual “green corner” and address more social, economic and cultural issues. These issues should ideally be addressed in most biosphere reserves.

Added values in ESD activities in BRs are represented by:

1. a more clear and more effective (visible) connection to the global dimension of SD, using in particular the global dimension of the WNBR and twinning opportunities (see the Austrian-French initiative and related web page animated by the Wienerwald Biosphere Reserve), but also ecosystem relationships (water cycle), the food chain or the ecological footprint concepts to illustrate and apprehend better this “global connection”;
2. the possibility to adopt more integrated / combined approach in dealing with environmental, social, economic and cultural issues;
3. the model dimension of the biosphere reserve: successful experiences developed IN biosphere reserves should serve as a source of inspiration for others, IN and OUTSIDE the biosphere reserves, and in particular serve as a basis for training of trainers activities;
4. the possibility that this should be strengthened to develop a fruitful cooperation among schools and the biosphere reserve coordination/management team (see also questions 3-6).

Questions 2-5 were dedicated to the role of schools and educational systems in ESD, and participants observed that when schools located in a biosphere reserve develop good ESD related activities, they should be considered as integral part of the logistic support function of the BR for educational activities.

1. Networking- The importance of using already existing networks, instead of starting new where mentioned. *Twinning* was presented by Christian Diry (www.schooltwinning.wikispaces.com/information). It is a useful portal where teachers and pupils can get gathered from different biosphere reserves. This portal is still under process. Arguments for the use of Twinning: A) A practise that leads to new experience for students and teachers. B) It adds social values and inspiration for others. C) Disconnection between schools is prohibited. D) Twinning also gives a possibility to impact on bigger systems.
2. Pupils must take part of real life through play and practice- learning by doing, were pedagogues enthusiasm and engagement is needed.
3. Everybody has to understand the complexity in question of sustainable development.
4. ESD as an issue must have a crosscutting perspective and a bottom up approach.
5. In France they have teachers employed for one year at the biosphere reserves since a couple of years and they work closely to the schools linked to the different biosphere reserves.

Question 6: *Are we interested in starting a network working until the next EuroMAB Meeting in 2013? How would this network work in practice?*

All participants expressed great interest in developing cooperative efforts on ESD related issues within EuroMAB network. Based on the sharing of experiences, such working group within the network could undertake the following tasks:

- review existing ESD related experiences in other networks/organizations such as ASPnet (Associated Schools of UNESCO), MIO-ECSDE, Global Footprint Network, so to better identify the specificities (identity) and added value of what can/could be done in biosphere reserves;
- elaborate proposals and practical methods on how to incorporate better the “global dimension” in our ESD related activities, and more generally collect methodological references and techniques to be applied in biosphere reserves so to deliver, by the end of 2013, a toolkit for educator in biosphere reserves (such toolkit should elaborate on the handbook under preparation by MIO-ECSDE and the UNESCO Venice Office);
- test and refine such toolkit within our network of biosphere reserves; such testing would be launched by a training workshop (in 2012) where methodological basis of ESD in biosphere reserves would be explained and all the proposed techniques would be demonstrated by their promoters, and concluded by an assessment workshop during EuroMAB2013 where lessons learned and feedbacks would be collected.

Conclusions and recommendations

If the workshop participants are interested this can be start of a network working until the next EuroMAB 2013.

1. Since educators in biosphere reserves expressed their willingness and interest to participate in a network working until the next EuroMAB Meeting in 2013. *Some support should be provided by the MAB Secretariat for workshops, assessment and editorial activities.*
2. *Prepare a report* on ESD related activities in biosphere reserves in the view of the closing of the UN-DESD in Japan in 2014.
3. A “*Day of Biosphere Reserve*” was proposed.

Rapporteur: Malin Pettersson, malinulrika@hotmail.se, +46 702 123518

Moderator: Sofia Wennberg, Vänermuséet, Sofia.Wennberg@lidkoping.se, +46 730 237530

SOCIAL ENTREPRENEURSHIP IN BIOSPHERE RESERVES

Introduction

The workshop focused on a new generation of entrepreneurship. An entrepreneurship where the business idea is derived directly from the need of solving a social or ecological problem. An entrepreneurship which lets the social and ecological dimension of the economy become an integral part of a successful and competitive business climate; locally, nationally and internationally.

The workshop was a first step towards creating knowledge and learning platform on the subject of social entrepreneurship in biosphere reserves. UNESCO's designation of Lake Vänern Archipelago and Mount Kinnekulle as a Biosphere Reserve has meant that global attention has been directed towards a geographic area that has tremendous potential for growth and development at the local level.

Being a model area for sustainable development, a biosphere reserve is a natural place for stimulating new types of sustainable businesses. The study conducted in the Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle constitutes a first step in the right direction when it comes to exploring the potential of a new form of entrepreneurship. A form of entrepreneurship that can help secure crucial ecosystem services and increase public well-being at the same time as it brings financial returns to the wider society.

Biosphere entrepreneurship is an approach to supporting human well-being and ecological resilience by connecting social entrepreneurship with the unique resources and opportunities that exist in biosphere reserves around the globe.

The workshop began with a presentation of speakers and participants. Then the moderator asked a question to the participant - "What is social entrepreneurship for you?" The purpose was to get the participants own pictures of the concept biosphere entrepreneurship and to adjust the level of the workshop.

The following comments were highlighted:

1. Seeking opportunities for making things better
2. Way to make biosphere bringing value to community
3. People that take context into action
4. Making the world sustainable

The second part of the workshop consisted of a theory section and a section for group discussion around a concrete question. The theory section began with an analysis around the

concept of social entrepreneurship and a unique definition on *biosphere entrepreneurship*.

The key characteristics of biosphere entrepreneurship are:

- The core values of the venture aims at improving human well-being at the same time that natural ecosystems are safeguarded
- Utilising unique biosphere reserve resources, such as ecosystem services
- The venture has a high degree of independence from the state
- The venture is intended to be permanent
- The venture has a sustainable supply of resources and the sale of goods and/or services are of significant importance
- Financial profits are to a high degree reinvested in the venture, in similar ventures or in the generation/regeneration of ecosystem services.

The ambition to integrate human-social and ecological perspectives is central to the concept of sustainable development, which is one of the most important concepts of policy and research today. At the same time it is also a highly contested concept, where values, theories and actions sometimes come into conflict. It is not uncommonly described as three separate perspectives: ecologic, social and economic. However, the separation of these perspectives provides an incorrect view of their relationship that often leads to simplifications.

Another way of describing the interrelation between society, economy and environment is of the economy nested within society, which in turn is nested within the environment. Placing the economy in the centre refers to the fact that it is subordinate and dependent to the others. One advantage of this model is also that it shows that although the economy is totally dependent on the resources from environment, this relationship has to be negotiated through the social dimension.

The workshop ended with group discussions around the following question: *What conditions (political, historical, economic, etc.) affect the establishment of biosphere entrepreneurship in different biosphere reserves?* The groups gave following comments:

1. Enough with people who live in the Biosphere
2. Entrepreneurial Culture/Heritage
3. Willingness of people to create
4. Dedicated BR staff focusing on this issue
5. Capacity and abilities of local people in the BR:s
6. Place identity that supports action
7. Property rights
8. Good relations among actors in the Biosphere

9. Sustainable aims in the Biosphere

Conclusions

Social entrepreneurship was a new concept for many of the participants during the workshop, which resulted in a number of issues surrounding this type of entrepreneurship. The purpose of the workshop was to make visualize the link between the biosphere reserve values and a new form of entrepreneurship for sustainable development, as we called it *Biosphere entrepreneurship*.

It became very clear that participants saw biosphere entrepreneurship as an interesting resource for growth and development of a biosphere reserve. Participants felt that ecosystem services and the concept of resilience are directly linked to this type of entrepreneurship. It also became clear that the cultural component is a key for developing this type of entrepreneurship. A supportive environment in which actors trust each other leads to action and in turn to a resilient biosphere. We also noted that people in the group saw social entrepreneurs as a new dimension as it maximizes all values in the biosphere reserves, in contrast to traditional entrepreneurship that is mainly about the profit. These views and perspectives will be a valuable basis for further work.

Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle will in the coming 2-yearperiod promote and continue to develop biosphere entrepreneurship through education, support, projects, etc. The aim is also to develop a new type of incubator, *HUB- Big Lake*. These Ideas will lead to capacity building within the biosphere reserve and are globally applicable.

Read more: Biosphere Reserve Entrepreneurship – A pilot study on social entrepreneurship in Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, Sweden. (2011) by Fredrik Björk et al., Malmö University.

Moderators, rapporteurs and contact persons: Per-Eric Ullberg Ornell, marketing strategist, Lidköping municipality.

Bert-Ola Bergstrand, Manager and co-founder, Social Capital Forum, Gothenburg,

COOPERATION BETWEEN COASTAL PROTECTED AREAS AND SURROUNDING SOCIETIES

Abstract

Biosphere reserves are usually inhabited areas with rich natural and cultural values. The BRs should promote co-operation between protected areas and surrounding societies within the BR in order to increase discussion among different stakeholders. The cooperation would fulfill one of the basic MAB Programme goals - to integrate economic development that is socio-culturally and environmentally sustainable. During the short workshop participants tried to answer questions like who is stakeholder, what are the benefits of cooperation and what kind of factors can hinder co-operation.

Workshop

The workshop included presentations and short discussion after them. After the workshop participants took part in the inauguration of Brommö Island Nature Reserve.

Presentations

1. " Brommö Nature Reserve - renovating a protected area

Henrik Roos, Reserve Establishment Officer, County Administration of Västra Götalands län

- Example of concrete co-operation on local level.

2. " The Local Perspective: Torsö Island NGO's and Mariestad municipality

Örjan Nilsson, Representative of Torsö Island and Kristofer Svensson, Mariestad municipality

- Mariestad (24 000 inhabitants) is situated by the Lake Vänern, Torsö island (545 inhabitants) is part of the municipality.
- An example of a rural development planning process in waterfront location, Torsö island.
- The tool for planning development in Mariestad is the Strategic Plan of Mariestad.
- A new challenge for rural development in waterfront location comes in the form of a change in Swedish law:
 - The law implies a general shoreline throughout the country. The aim of the change is to increase local and regional control of shore protection and to create opportunities to allow relaxation of shoreline protection if it leads to business development.
 - A free passage is ensured along the shorelines.

- Via physical planning, the municipality shall select areas of rural development in near-shore locations for relaxation of the shoreline protection.
- The County Administrative Board will monitor shoreline interest in the municipal planning.

The County Administrative Board shall consider the municipal decisions.

- The planning process includes:
 - Identification of the established areas
 - Identification of areas where people live and where the municipality already has engagements for example with waste, with elderly care, with public transportation, etc.
 - Identification of the potential for economic and business development, shops and other facilities.
 - Identification of basic infrastructure
 - **A strong dialogue with interest groups**

3. The Landscape Convention

Michael Frisk, Temp. Head of Unit, Department for Sustainable Management,
Swedish National Heritage Board

4. Stakeholders – who is a stakeholder, how to define

Kristina Thorell, Cultural Geography, Gothenburg University

- What is a stakeholder?
 - An organization, group or a person with interest in a project/effort.
- Why is stakeholder involvement important?
 - It may be seen as a right to take part in processes that affects me.
 - We reach better decisions when people with different kinds of knowledge and human resources take part in policy making
 - To reach effectiveness and successful implementation.
 - The efforts become better adapted to local conditions and needs.
 - To improve relations, trust and links between the public, civil and private sector.
- Key issues
 - Identify your stakeholders.
 - Define who needs to be involved and informed.
 - Understand their perceptions, issues and resources.
 - Analyze how to make use of the input.
 - Ensure that your involvement activity is relevant to stakeholders' interests.

- Consider who is likely to be affected by the implications

5. Cooperation between coastal protected areas and surrounding societies (the Interreg-project COASTSUST)

Laura Lehtonen, (BR Archipelago Sea Area, Finland)

- A concrete example of co-operation on international level.
- Aims of the COASTSUST project, Interreg III B (2005-2007)
 - To increase people's awareness of the coastal protected areas
 - **To improve cooperation and information exchange**
 - Two levels:
 - Baltic Sea region level: sharing the experiences and good practises between countries and areas
 - Local and regional level: how to increase awareness, how local communities can benefit from the areas and how local networking can be improved
- Recommendations based on the cooperation study done during the project:
 - Regarding park administration, more attention should be paid to grass-root level cooperation. Contact persons could be used.
 - More should be invested in cooperation with entrepreneurs as they provide services that the protected areas cannot offer.
 - Information on management planning and relevant information should be disseminated more effectively to all stakeholders. Participatory planning!
 - A system for regularly monitoring the attitudes of local-level stakeholders could be developed.
 - Cooperation between schools should be developed.
 - A system for round-table discussion between the protected area administration, municipalities, entrepreneurs and other stakeholders should be developed as a long-term channel for cooperation.
- Best outcomes of the project
 - More widespread common knowledge of the coastal protected areas and biosphere reserves,
 - New contacts and useful networks,
 - Knowledge and inspiration from other countries.

Discussion

After presentation there was a limited time for discussion. It was stated that in every BR or protected area nobody operates alone but in a web of different interests and numerous stakeholders such as land owners, agricultural enterprisers, cultural workers, tourism entrepreneurs, foresters and forestry enterprises, local administration, local NGO's, oil company, local societies, regional and national agencies, national and international NGO's etc.

Most likely there is always a need to increase communication and cooperation between stakeholders around and within a BR or protected area. General opinion among participants was that the main reason for this is simply **that prevailing interests are not known**. Inadequate knowledge of local traditions and culture may partly explain the lack of communication and cooperation. Sometimes also unwillingness to communicate or the lack of the time or the lack of local participation or failed participation process explain limited understanding of the prevailing interests.

How to overcome these hinders leading to insufficient amount of communication and cooperation between stakeholders, then? Mechanisms surely vary according to sites. Yet participants could list several methods: more work with media, collaboration and co-operation during processes, meetings and discussions around the same table, clarification of roles and responsibilities, promotion and encouragement (municipalities) of open platforms for exchange of experiences. Sometimes money may operate as incentive to increase interest.

Rapporteur and moderator: Laura Lehtonen (Archipelago National Park, Finland)



EuroMAB 2011

Sharing Sustainable Futures

APPENDIX 4 – Programme of the BiosFAIR



SHARING SUSTAINABLE FUTURES,
Report from EuroMAB 2011, Sweden





EuroMAB 2011

Sharing Sustainable Futures

BiosFAIR

"Sharing Sustainable Futures"

An event during the EuroMAB2011 Conference
7th July 2011

PROGRAMME

10.00	Opening of the BiosFAIR
10.00-17.00	The BiosFAIR – a fair to share sustainable futures Exhibitions, Presentations and Outdoor Demonstrations
12.00-14.00	Lunch (The BiosFAIR does not close during lunchtime)

Presentations will start every 15 minutes. 2 presentations will be held in parallel in different rooms during the whole day (see program. An announcement will be made when a presentation is about to start.

EXHIBITIONS

Biosphere Reserve Wienerwald

By Christian Diry

Czech MAB program

By Eva Jelinkova

Biosphere Reserve North Vidzeme /Nature Conservation Agency, Latvia

By Andris Urtans

ELY-Center Lahti

By Sanna Vääriskoski-Kaukanen

Ecoprofile

By Johan Erlandsson

Silvaskog AB

By Martin Jäntzen

Biosphere Reserve Nedre Dalälven

By Christina Ericson Turstam

Agroväst Livsmedel AB

By Kjell Gustafsson

Energy and climate councellery Götene - Skara municipalities

By Fredrik Hedman

Lidköpings municipality Vinninga pre- and primary school

By Susann Johansson

Biosphere Reserve Östra Vätterbranterna

By Simon Jonegård

University of Gothenburg

By Bo Magnusson

Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle Fishing

By Johanna Olsson

Biosphere Reserve Kristianstads Vattenrike

By Åsa Pearce

Westelius Architects

By Mattias Westelius

ac-wellness

By Ann-Charlotte Wiktorsson

Biosfärkommunerna : Municipalities of Lidköping, Mariestad and Götene

By Gun Johansson

Berits textileservice

By Berit Bertilsson

Regional authority of Västra Götaland

By Lave Thorell

County administrative Board Västra Götaland

By Bengt Larsson

Biosphere Reserve Lake Vänern Achipelago and Mount Kinnekulle Ecotourism

By Anette Stilner

Skaraborgsbild

By Nils Axelsson

Formas

Swedish National Commission for UNESCO

Swedish environmental Protection Agency (Statens Naturvårdsverk)

UNESCO

PRESENTATIONS

BROBY ROOM

- 10.30 **Biosphere Reserve Wienerwald :**
11.00 **Networking for a sustainable future -
the most "biospheric" projects**
*By Christian Diry, Manager of the
Biosphere Reserve Wienerwald (Austria).*
- 11.00 **The LTER-network and BRs**
11.30 *By Marcus Drotz, Researcher at the
Vänermuseet, Biosphere Reserve Lake
Vänern Archipelago and Mount Kinnekulle
(Sweden).*
- 11.30 **Biosphere Reserves for conservation
and development? A case study in
Ukraine**
12.00 *By Marine Elbakidze, Researcher at
the Swedish Agricultural University in
Uppsala (Sweden).*
- 12.00 **Republic of Bashkortostan - plans to
join the World Network of BRs and
possible input to EuroMAB**
12.30 *By Valery Neronov, Deputy Chair of
the Russian MAB Committee, and Azat
Kutliakhmetov, Minister of Natural
Resources and Ecology of the Republic of
Bashkortostan.*

LUNCH BREAK

HUSABY ROOM

- 10.45 **Value, functions and main usage
11.15 directions of the protected forests
in the biosphere reserves of Belarus**
*By Valery Iukovich, Deputy director for
scientific and research work, PhD (Republic
of Belarus).*
- 11.15 **"Doing together – learning
11.45 together"- How to make a Biosphere
reserve partnership really work?
Experience of the partnership
between Rhön Biosphere reserve,
Germany and Kruger to Canyons
Biosphere Region, South Africa**
*By Doris Pokorny, PhD and Deputy
Coordinator for the Bavarian Unit at the
Rhön Biosphere reserve (Germany).*
- 11.45 **Biosphere Ambassadors - a useful
12.15 resource in marketing a Biosphere
reserve**
*By Fredrik Hedman, Biosphere Ambassador for
the Biosphere Reserve Lake Vänern Archipelago
and Mount Kinnekulle (Sweden).*

LUNCH BREAK

14.30 **Comparative analysis and results of**
15.00 **the evaluation of protected areas,**
which could be candidates for the
biosphere sites in Moldova
(biodiversity, historical patrimony,
development of the Seville Strategy)

*By Dumitru Drumea, Head of
Department of Biogeocenology and member
of the Moldavian National MAB Committee
(Moldavia).*

15.30 **Towards the First Biosphere Reserve**
16.00 **in the Republic of Armenia**

*By Armen Saghatelian, DSc
(geochemistry, geology), Director of the
Center for Ecological-Noosphere Studies of
the National Academy of Sciences
(Armenia).*

16.00 **Overview of the 20-year activity of**
16.30 **The West Estonian Archipelago**
Biosphere Reserve

*By Arvo Kullapere, Advisor at the
Environmental Board (Estonia).*

14.45 **What was achieved in Russia after**
15.15 **EuroMAB2009**

*By Valery Neronov, Deputy Chair of the
Russian MAB Committee (Russia).*

15.15 **Transition to Ecological Civilization :**
15.45 **Experience of Azerbaijan National**
MaB Committee

*By Urkhan Alakbarov, Academician,
Prof., Dr. ; Chairman of the Azerbaijan
National MaB (Man and Biosphere)
Committee, UNESCO (Azerbaijan).*

15.45 **Creating Biosfärurum – a gateway to**
16.15 **the Biosphere Reserve**

*By Lars Hillström, Lecturer in Biology
(PhD) at Högskolan i Gävle (Sweden).*

16.15 **The LIFE-project “Kinnekulle Plateau**
16.45 **Mountain – Restoration and**
Conservation” opened the door for
the Biosphere Reserve

*By Maria Thordarson, from the County
Administrative Board of Västra Götalands
län (Sweden).*

OUTDOOR DEMONSTRATION

- The Ecobus outdoor education in BR Eastern Slopes of Lake Vättern -

Jönköping municipality has a bus that takes students (age 13 - 19), one class a day, to different locations where studies and exercises are conducted. The chauffeur/excursion leader are biologists with knowledge in general environmental issues, local challenges in various aspects of sustainable development and local knowledge of biotopes and landowners. One or two teachers accompany the class (often their class teacher and/or biology teacher). The Ecobusday is a part of the education in school, a complement and not a single amusement trip. The ordinary teacher works with the class before and after excursions to prepare and evaluate the experience.

The Ecobus has been in action for 19 years and approximately 35 000 teenagers has experience of one or more days with it. The goal for the is to create a positive attitude to outdoor studies. Many teenagers today spend very little time in nature and many have a non-European background witch means that they also have very little cultural background to nature and rural areas in Sweden.

Themes that are frequently demanded from the schools are; water environment (examining ground fauna in small rivers or lakes with different Ph or nutrient status), biodiversity in forest (broadleaved forest versus spruce plantations and semi natural taiga), biodiversity in farming landscapes (today's landscape versus farming 200 years ago ore ecological farming compared with conventional), ornithology (visiting bird lakes and "collecting" species with binocular) etc etc.



To fulfill the purposes the bus is equipped with instruments like Ph-meter, conductivity meter, binoculars, camera, TV-monitors connected to a microscope, nets etc. The bus also have extra clothes, raincoats and rubber boots (teenagers always tend to be overoptimistic concerning the whether conditions).

In all kinds of excursion the experience of being outdoors in nature is the central focus. A eutrof lake smells, sounds and looks different than a dystroof one, the spruce plantation is, after a visit to a broadleaved forest, obviously a poor environment for most species. All senses must be involved to create a long-term memory of an excursion day!

We often push the students to do something challenging at the end of the day, it can be a race through a swamp, crossing a storm effected forest with hundreds of logs ore climbing a steep mountain. This more playful part of the day helps to give the lasting, positive, memory of being out. A day near water or swamps

in BR Lake Vänern Archipelago and Mount Kinnekulle

where no one have become real wet is a failure - young people love challenges and, to some extent, mistakes with consequences (being soaking wet for some time). The teacher catches the class with video camera and the film is used later in the classroom, during school meetings with their parents, and, sometimes, to evaluate the interaction within the group. Being out together is good team building.

Linköping university has a programmed resulting in a two-year master's degree. It focuses on how outdoor environmental education and outdoor life can contribute to sustainable development, environmental health and citizenship - read more: <http://www.liu.se/en/education/master/programmes/L7MOE?l=en> and <http://www.mastersportal.eu/students/browse/programme/997/outdoor-education.html>



➔ **During the BiosFAIR, the bus will be demonstrated outdoors at Lundsbrunn Kurort.**

Demonstration by Claes Hellsten, from the Biosphere Area Östra Vätterbranterna.

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APPENDIX 5 –Presentations during the BiosFAIR



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The BiosFAIR

On 7th July EuroMAB 2011 turned into a fair - the BiosFAIR. Presentations, indoor exhibitions and outdoor demonstrations covered a wide spectrum of the notion sustainable development and biosphere reserve concept.

In this appendix, the presentations are presented as abstracts or full manuscript. The presentations original titles are found below a title to show how they can in more general terms contribute to other biosphere reserves.

There is truly a lot of knowledge presented here from how to find and fund new sites for biosphere reserves, how revive old biosphere reserves, and how to communicate sustainable development via different tools.

What is the MAB Programme?

TRANSITION TO ECOLOGICAL CIVILIZATION: EXPERIENCE OF AZERBAIJAN NATIONAL MAB COMMITTEE

Urkhan Alakbarov, academician, prof., dr., Chairman, Azerbaijan National MAB (Man and Biosphere) Committee, UNESCO

Abstract

The paper is dedicated to the new concept: ecological civilization (ecocivil) planning, management and monitoring as a goal of sustainable development. The paper discusses also the role of BR in these processes. The principal elements of ecological civilization such as green economy, formation of a new consumption patterns as well as new ecologized life style and behavior have been described. The activities of the Azerbaijan National MAB Committee on human capacity building for transition to ecological civilization through research, formal and informal education and awareness are also the subjects of this presentation. The human capacity building processes initiated and implemented by National MAB Committee involve the different actions, including the development of the new curriculums and textbooks for general secondary and tertiary schools. The green

occupational education also is the part of these processes. The special training has been conducted and handbook for journalists has been developed by Azerbaijan National MAB Committee for increasing the awareness of the population. The BR concepts and achievements in this field are the crucial elements of all learning and informational tools. The paper proposes for the first time such sustainable development indicator as Ecocivilization Index.

MAB identity

I would like to start my presentation from the questions which have been placed on EuroMAB site prior this meeting. What is the MAB? An organization for biodiversity? A Company (European)? A Biologist blogg? UNESCO Man and Biosphere Project? May be MAB is equal to biosphere reserve? MAB is something else? I think that presentations and discussions which we have today and will have on this meeting will support to understand the role and place of the MAB in ensuring of the sustainable future. In my presentation I'll try to explain MAB identity through activities of the Azerbaijan National MAB Committee.

Azerbaijan National MAB Committee activities involve scientific, educational and cultural activities for nature and biodiversity conservation, supporting long, healthy and creative life of people, sustainable mobilization of recoverable and non-recoverable resources, mobilization of the traditional knowledge and experience for sustainable development planning and management, "greening" industry, agriculture, transportation, construction, people's mentality, behavior, etc. All these activities are the elements of the national sustainable development policy (Figure 1).

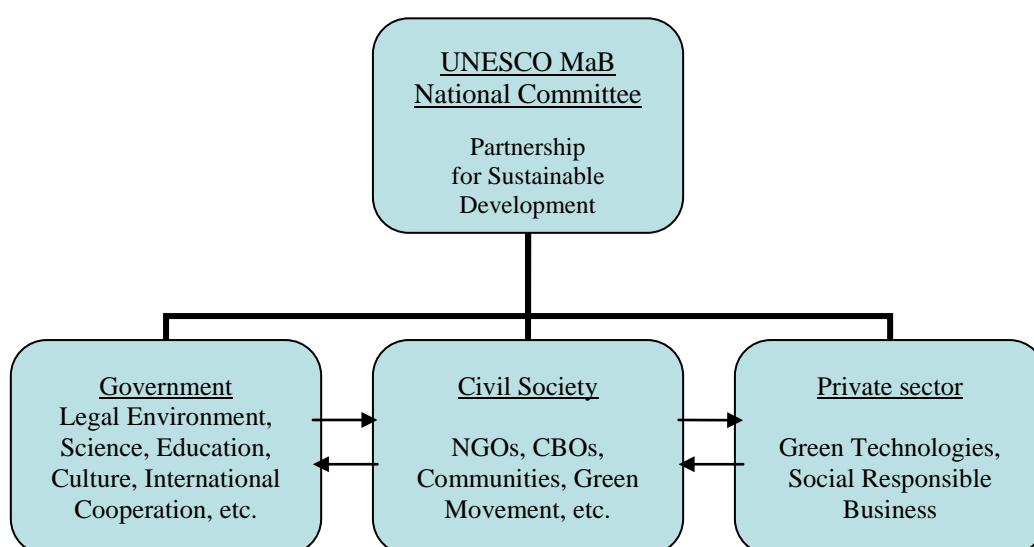


Figure 1: National sustainable development policy: identity of National MAB Committee

Ecocivilization concept. Ecocivilization concept and this term have been suggested by author of this presentation in the 1998. The principal elements of the ecological civilization (Ecocivil) presented in Figure 2.



Figure 2: Ecological civilization (Ecocivil): principal components

Results of the partnership activities for improving of the environmental quality

The following results have been achieved in the partnership for sustainable development: increased the territory of the existing protected areas and established the new national parks. The share of the protected areas in country has been increased for last decades (Figure 3). The steps for improving the environmental quality have been undertaken through the reforestation (Figure 4), bioremediation, recultivation, etc.

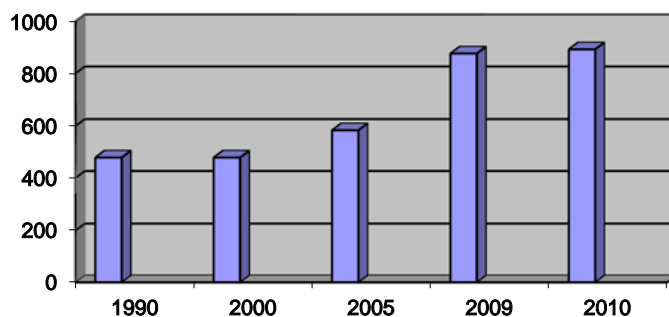


Figure 3: Increasing the territory of protected areas in Azerbaijan, the hectares

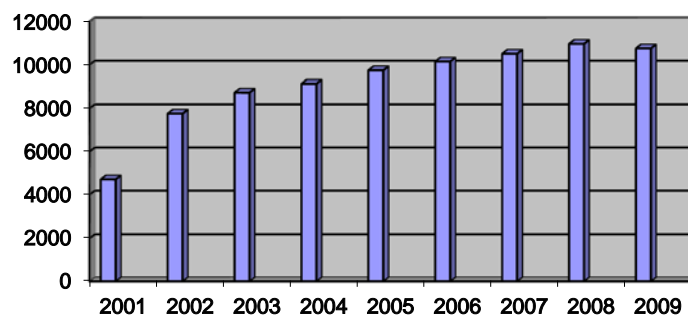


Figure 4: Reforestation in Azerbaijan, hectares

Special governmental bodies on alternative energy mobilization and increasing the energy efficiency have been established in the country.

Human capacity building for transition to ecological civilization

Human capacity building for transition to ecological civilization involves the different actions, including formation through formal and informal education relevant occupational/professional knowledge and skills both on secondary and tertiary levels, as well as increasing the people's general knowledge and awareness. The implementation of this program is based on knowledge and awareness about existing ecological situation, sources of environmental contamination and degradation, updated information about the environmental quality assessment and management methodology. The prevention and mitigation of the environmental damages are also based on information about the ecologically status of environment. Ecocivilization of the human society, successful implementation of "green technologies" in industry, agriculture and other sectors of

economy also can be achieved through the human capacity building. The situation with state policy on sustainable education and dissemination of knowledge and information on ecological civilization is presented in Table 1.

Table 1: MAB activities on human capacity building: education on sustainable development and ecological civilization on secondary and tertiary levels in Azerbaijan

Year	World	Azerbaijan
2001	No information	Sustainable Development (SD) in the Curriculum of the schools on secondary level Order of the Ministry of Education # 964
2003	No information	Curricula and textbook on SD for 10th grades secondary schools (Orders #175, 688)
2005	2005-2014 – decade on SD education (ordered by UNESCO and UN, March 1)	SD and green education (GE) in the curricula for all tertiary schools (Order # 640)
2007	No information	Textbook on SD for all tertiary schools (Order # 961)
2010	No information	“Green” occupational education started (Order #569)

Table 1 demonstrates that according to the national educational and sustainable development policy the information and knowledge in this field is presented in the curriculums for all schools on secondary and tertiary levels. The education in this field started in Azerbaijan in 2001, while UNESCO and UN announced decade of education on sustainable development only in 2005. This fact demonstrates that country is making steps toward transition to new ecological level of civilization. These learning tools have been initiated and developed by members of National MAB Committee.

The special handbook for journalists on climate change and ecological stability has been developed by the National MAB Committee in collaboration with National Press Council. This learning tool has been developed for the purpose to increasing knowledge of the awareness of the journalists on sustainable development and ecological civilization.

Ecocivilization index

Azerbaijan National MAB Committee suggested the new ecological indicator for ecocivilization assessment. The Fuzzy logic method has been mobilized for numerical assessment of the countries' readiness for transition to ecological civilization. Ecocivilization Index involves 8 subsystems: (1) consumption level, (2) green economy, (3) organic agriculture, (4) demography, (5) health, (6) education, science, new technologies (7) poverty indicators, (8) legal environment. The following indicators have been used as indicators: GDP per unite energy, protected areas, BR, %, recoverable energy, %, GG emissions per capita, biodynamic agriculture, organic food, %, fertility rate, population density, poverty index, science, education, % GDP, life expectancy, population density, consumption culture, Gini Index, "Green fashion", population under the poverty line, antimutagens, anticarcinogens and geroprotectors consumption, etc. The first Ecocivilization Index has been calculated for Azerbaijan. This is the first attempt to assess the ecocivilization. Hope that this method has been developed.

Again, what is the MAB? MAB is the roadmap for transition to sustainable future, to an ecological civilization. From our points any activity in this direction can be considered as MAB function.

I would like to take this opportunity and express my gratitude to National Commission for UNESCO, UNESCO's Moscow Office for kind support.

What is Sustainable Development and how can BRs contribute?

NETWORKING FOR A SUSTAINABLE FUTURE - THE MOST „BIOSPHERICAL“ PROJECTS

Christian Diry, Biosphere Reserve Wienerwald, Austria'

The Biosphere Reserve Wienerwald in Austria is situated in the provinces Lower Austria (90%) and Vienna (10%), with 750.000 people living in communities that are part of the Biosphere Reserve, and at the rim of Vienna with about 1,8 million inhabitants. It is a very

special approach to implicate the basic idea of biosphere reserves, to link conservation with sustainable use, to the specific situation of the Wienerwald and its extraordinary ecosystem.

Due to the position of the Biosphere Reserve between the capital of the Province of lower Austria, St. Pölten, and Vienna, the capital of Austria, all sorts of governmental and non governmental organisations and programs are working on various aspects of sustainable development. To find the unique function of the Biosphere Reserve, the concrete tasks to fulfil to really add value to the region, is not so easy. How to act between four large regional managements, several smaller regional managements, organisations for tourism, education for sustainable development or nature park managements, to name only a few? And how to communicate to 750.00 people that they are living in or near a biosphere reserve?

As an instrument to transport the topic we chose to show the people our projects, to get them a feeling what biosphere reserve can mean and what we really do in the Biosphere Reserve Wienerwald.

The project “Wienerwald free range cattle” for instance combines all three “pillars” of sustainability. In producing a high quality beef, feeding the cattle on pastures and with hay from local meadows, the Farmer gets a better price for the beef, actually in doing conservation work to manage the, for biodiversity very important, meadows and pastures in the area. Conservation work that brings money! In strengthening the income of the farmer he is able to survive better with farming, he does not have to change his profession and abandon agricultural area. This is also a social asset, as well as the contact of the farmer with the butcher and restaurant owners in the area, as they have to talk to each other to accomplish this project. All participants get economic advantages and even the tourists are happy to pay a little more to get a special local product. It is a win - win situation for man and nature.

Of course many projects and activities are dealing only with one or two aspects of sustainability, sometimes the Biosphere Reserve is only peripheral involved.

The Wienerwald Climate Alliance is an example that subsidiaries for sustainability are focused on the area by the government because it is a Biosphere Reserve. This program funded activities concerning traffic saving, ground improvement and mostly energy saving and renewable energies on community level with about € 840.000 in three years.

One of the very special duties of biosphere reserves is to share examples of sustainable projects at least within the network of biosphere reserves. But in sharing best practice examples it is also important to share the difficulties and the things that didn't work out. Sometimes we forget to share the unsatisfactory experiences, which makes the knowledge transfer incomplete and causes unnecessary difficulties.

Scientific networks of cooperative interest for MAB - LTER

THE LTER RESEARCH NETWORK AND BIOSPHERE RESERVES

Marcus DROTZ, Researcher at Vänermuséet, Biosphere Reserve Lake Vänern Archipelago and Mount Kinnekulle, Sweden

Abstract

Long-Term Ecosystem Research (LTER) is an essential component of world wide efforts to better understand ecosystems. This comprises their structure, functions, and response to environmental, societal and economic drivers as well as the development of management options. Today around 200 LTER/LTSER sites exists in more than 20 countries across Europe.

For the first two decades of its existence LTER built on natural sciences. The ongoing re-design of LTER aims at expanding its scope to the human dimension. Strongly coupled and integrated socio-ecological systems are driven by economic, cultural and environmental forces likewise. Their investigation requires a new generation of socio-economic and ecological research (LTSER) with adequate infrastructure.

A LTER site is being developed for Lake Vänern with the long term aim to develop a LTSER network.

What is the experience of collaborator between biosphere reserves and LTER sites? How can biosphere reserves and LTER/LTSER-network form a strong collaboration? For more information visit the website Europe LTER network: <http://www.lter-europe.net/>

A Systematic Selection of Suitable Sites for Biosphere Reserves

COMPARATIVE ANALYSIS AND RESULTS OF THE EVALUATION OF PROTECTED AREAS, WHICH COULD BE CANDIDATES FOR THE BIOSPHERE SITES IN MOLDOVA (BIODIVERSITY, HISTORICAL PATRIMONY, DEVELOPMENT OF THE SEVILLE STRATEGY)

Dr. Dumitru Drumea, Institute of Ecology and Geography of the Academy of Sciences of Moldova, Dr. hab. Alexei Andreev, Institute of Zoology of the Academy of Sciences of Moldova, Dr. Alexandru Teleuta, Botanical Garden (Institute) of the Academy of Sciences of Moldova

Key words: biodiversity, management, protected areas, species

Abstract

Comparative analysis of protected areas in Moldova was performed for identification of the most suitable areas to be selected as candidates for biosphere sites in Moldova. It was organized in 7 regions of the country. Comparative analysis performed in selected sites allowed to rank potential sites from diversity of ecosystems and landscapes, presence of species of international and regional importance, diversity of the geological and archeological monuments, touristic attractions, agricultural and other social and economic activities, infrastructure. Based on that total evaluation of sites for the creation of biosphere areas was performed.

On the base of research activities were identified number of species treated as distinct in Moldova and in the world for vascular plants –70/ 4 species, mammals –15/ 6 species, birds –30/ 6 species, amphibians and reptiles –5/ 2 species and insect – 18/5 species. According to the results of the ranking of candidate sites the most suitable for creation of the biosphere area in Moldova could be – Lower Dnester region.

Main impacts on the state of environment in the candidate sites come from agricultural activities. Based on the results of the study around 90% of nutrients reaching water ecosystems have agricultural origin. Mainly nutrients achieve water bodies with the superficial runoff from adjacent agricultural areas. According to the results of previous studies actual level of nutrient pollution can cause eutrophication in Lower Prut lakes region (Manta, Beleu) and thus influence development of aquatic species, especially fish ones.

In the frame of the study a number of consultation meetings with local authorities were organized for estimation of the commitment of local communities to contribute to the creation of the biosphere sites in different parts of Moldova and theirs' relevant expectations. According to the results of the study, there is a strong willingness from local communities to create biosphere reserves and main expectations of local communities due to this issue are: Improvement of the state of environment, development of traditional trades based on the use of traditional use of natural resources, creation of new jobs, touristic activities, development of rural infrastructure.

Transformation of a pre-Rio/ Seville/MAP biosphere reserve

THE WEST ESTONIAN ARCHIPELAGO BIOSPHERE RESERVE – OVERVIEW OF 20-YEAR ACTIVITIES

Arvo Kullapere – Environmental Board and Hanno Zingel - Ministry of the Environment

West Estonian Archipelago Biosphere Reserve was established in 01 January 1990 with the total area of 1 560 078 hectares. It consists from 1 156 300 ha of sea area and 403 778 ha of land area. The total area of arable land is less than 50 000 ha. This is an area with very large natural and cultural values. Here is located more than 100 of the Natura 2000 areas. The human population in the islands is slowly decreasing and nowadays approximately 45 000 inhabitants live in Biosphere Reserve area.

The last twenty years biosphere reserve activities were carried out by the Man and the Biosphere Programme in Estonia. During 1990-2002 three local regional centres in three islands managed under local County Governments and under the Ministry of the Environment. In 2002 Ministry of the Environment decided to transfer the biosphere reserve management to the Biosphere Reserve Foundation. Since year 2009 Environmental Board under Ministry of the Environment employed advisors for biosphere reserve. The main task of advisors is to create a new sustainable development plan that incorporates sustainable and conservative use of nature, environmental monitoring, regional planning, nature-related education, institutional cooperation and ecotourism activity. Particular attention is being paid to ensure the biological diversity, climate change and the relationship between species.

The new direction for West Estonian Archipelago Biosphere Reserve is to focus its development and to become a model region for sustainable development.

The implementation of the BR concept in Ukraine

BIOSPHERE RESERVES FOR CONSERVATION AND DEVELOPMENT? A CASE STUDY IN UKRAINE

Marine ELBAKIDZE, Researcher at the National Agricultural University, Uppsala, Sweden

Study made by: Marine Elbakidze, Per Angelstam, Robert Axelsson, Sarah Crow, Galyna Stryamets, Natalya Stryamets and Taras Yamelynets.

Abstract

The Man and Biosphere (MAB) Programme and its network of biosphere reserves (BR) is an approach that seeks to simultaneously reconcile and promote conservation of natural and cultural diversity, environmentally and socio-culturally sustainable economic development, and research. The number of BRs has been steadily increasing in the world.

Therefore, it is timely to analyze and evaluate how BRs have been legitimized as a sustainable development (SD) concept in different countries, and what impact this has had on BR implementation on the ground. In this paper, we (1) analyzed the Ukrainian national legislation and its specific provisions for BRs to understand the legal function of BRs; (2) studied how the BR idea was perceived by different stakeholders using the emerging Roztochya BR initiative in Ukraine as a case study by conducting qualitative, semi-structured interviews with local stakeholders; and (3) discussed opportunities and challenges associated with legitimizing SD initiatives.

The results show that the BR concept was incorporated to the national nature conservation legislation in Ukraine. However, MAB's aim with the BR concept as a tool to promote sustainability by stakeholder collaboration was poorly reflected in the Ukrainian law. The "legislative misplacement" of BRs created a deep misunderstanding of this SD initiative by local people.

Our study shows that for legitimization of SD concepts, including BRs: (1) the name of the SD concept should be chosen carefully because it creates a precondition of its perception not only by local landowners, but also by politicians and decision-makers; (2) the legislative domain of a SD initiative in national legislation or national policy should reflect its multi-sectoral character; (3) those who implement SD initiatives should have the knowledge and skills to work with and communicate all different sustainability dimensions, as well as the SD as a collaborative social process.

Developing the first BR in Armenia and how to fund it

TOWARDS A FIRST BIOSPHERE RESERVE IN THE REPUBLIC OF ARMENIA

Dr.Armen Saghatelyan, UNESCO Armenian MAB National Committee

Mag. Günter Loiskandl – independent expert, g.loiskandl@aon.at

Up to 2004 the UNESCO Moscow Office promoted biosphere reserves according to the modern “offer sevilla” concept in the South Caucasian countries in particular by a project “Identifying priorities territories for the creation of biosphere reserves, creation of a database, development of GIS and preparation of project documents for the countries of the South Caucasus”. In Armenia, the MAB NC was a driving force in that project.

In the result of the project implementation, on a base of a scientific analysis recommended was the most prospective area: the South of Syunik marz (province) in the very south of Armenia.

Based on good project progress and results, the UNESCO Moscow Office and the Armenian MAB NC worked out a proposal for a EU financed project on further development towards a first Biosphere Reserve in Armenia. Although the proposal attracted a vivid interest with the funding EU agency and got a positive feedback first, finally it was not financed.

A new stage in creation of a BR in Armenia is tied with the Caucasus Initiative of German Federal Ministry of Economic Development and Cooperation (BMZ), through KfW Development Bank. In addition to other strategic instruments for promoting and supporting this Program in line with the “Eco-Regional Conservation Plan for the Caucasus” KfW is supporting specific initiatives. One of them is the envisaged Financial Cooperation Project with Shikahogh State Reserve in the south of Armenia’s southernmost Syunik marz as the core territory (A Shikahogh Project). That project was proposed by the RA Ministry of Nature Protection in consensus with KfW. As reasons for that, the following characteristics of the considered project area were mentioned: “.... highly significant in terms of biodiversity and diverse landscapes, but also with high cultural heritage and economic potential. Forests, wildlife and water resources in the region are threatened by mining industries and by requirements of impoverished population, notable in rural areas. Conservation and sustainable management of natural heritage, biodiversity and natural resources are high priority”. Representatives of MNP and KfW based on a preliminary study done in 2009 shared a vision that the area has a high development potential and would largely benefit from the establishment of a BR. Opportunities to investigate concept of nature conservation and sustainable management of natural resources with strategies for socio-economic development were suggested good.

MNP and KfW agreed on supporting such a development in the framework of the Armenian-German Financial Cooperation (total 4mln EUR) in the context of BR.

Presentation of a potential BR – Bashkirskiyi Ural, Russia

POTENTIAL TERRITORY FOR BIOSPHERE RESERVE “BASHKIRSKIYI URAL”

Dr. V. M. Neronov, Deputy Chair of Russian MAB Committee and Mr. A.N. Kutliakhmetov, Minister of Natural Resources and Ecology of the Republic of Bashkortostan

The Republic of Bashkortostan situated in the Eastern part of the European territory of Russian Federation has remarkable landscape and biological diversity and a number of unique historical monuments of world importance. This diversity well preserved by a network of different protected areas, but up to now, there was no biosphere reserves or World Heritage sites among them. Accordingly the Government of Republic issued two

decrees (# 303 dated of 03.08.2010 and # 470 dated of 07.12.2010) concerning creating a Biosphere Reserve to be named “Bashkirskiy Ural” for further strengthening the protection of natural and cultural heritage. Tasks of the proposed Biosphere Reserve should be following:

1. Conservation and popularization of data on unique historic and ethnic-cultural heritage
2. Conservation and popularization of data on natural heritage
3. Development of methods of sustainable use of natural resources
4. Involvement of the Biosphere Reserve’s services into socio-economic development of the region.

The proposed Biosphere Reserve is situated on the western macro slope of the South Urals within the limits of the mountainous-forested zone. The peculiarity of its territory - widespread karst processes: there are 166 known caves; some of them, such the cave "Shulgan-Tash" (Kapova) and Novomuradymovskaya are unique on the world scale. Weak human impact, a variety of landforms, a complex history of the vegetation formation during the Pleistocene and Holocene and the junction of two major forest biomes and interpenetration of flora and fauna complexes of Europe and Siberia are the main reasons for the extremely high biological diversity of this territory.

To implement the above tasks the territory of the proposed Biosphere Reserve will include five neighboring protected areas of different level of subordination: State natural reserve “Shulgan-Tash”; National park “Bashkiriya”; Republican Natural park “Muradymovskiy canyon”; Natural zoological (entomological) refuge “Altyn Solok”; Zoological refuge “Ikskiy” (for protection of wildlife) and will cooperate closely with five neighboring administrative districts of Bashkortostan (Burzyanskiy - 127 463 ha; Meleuzovskiy - 95 629 ha; Kugarchinskiy - 78 838 ha; Ishimbaiskiy - 24 027 ha; Zilairskiy - 9 417 ha). Up to the present within limits of the proposed Biosphere Reserve were found many animal and plant species (Invertebrates – 1737; Fishes – 30; Amphibians – 5; Reptiles – 6; Birds – 208; Mammals – 61; Lichens – 233; Fungi – 117; Algae and Cyanobacteriae – 202; Musci – 212; Higher vascular plants – 824 species). Some of species protected in the proposed Biosphere Reserve included into the Red book of the Bashkortostan (84 species), into the Red book of Russian Federation (40 species) and Red Data Lists of IUCN, Europe and Bern Convention (177 species).

According to the Seville Strategy (1995) the proposed Biosphere Reserve will have the following zonation: Core area (47,9 thou ha, 14% of total area); Buffer zone (79,4 thou ha, 23% of total area) and Cooperation zone (213,6 thou ha, 63% of total area). The Coordinating Council will conduct the management of the whole territory of the proposed

Biosphere Reserve with active participation of representatives of different stakeholders. It is worth to mention that at the territory of the proposed Biosphere Reserve special measures are undertaken for protection of the gene pool of the Burzyansky wild-hive bee and the unique Bashkir folk craft – wild-hive beekeeping (bortnichestvo) has been restored.

We very much hope that after approval by UNESCO of a nomination form of this candidate it will be a good addition to EuroMAB regional network and some joint projects with EuroMAB country-members will be possible to conduct at its territory.

LIFE-project Kinnekulle: sustainable development in a Natura 2000-site

THE LIFE-PROJECT “KINNEKULLE PLATEAU MOUNTAIN – RESTORATION AND CONSERVATION” OPENED THE DOOR FOR THE BIOSPHERE RESERVE

Maria Thordarson, Assistant Director, Nature Conservation Department, County Administrative Board of Västra Götaland.

Kinnekulle is a very special plateau Mountain with an unusual concentration of biodiversity.

The whole of Kinnekulle is a SAC area of Natura2000 with 17 different habitat types according to the Habitat directive. In the LIFE-project we have restored grasslands and wooded pastures which had become overgrown all over Kinnekulle. As a result of the project we have achieved favourable conservation status for most habitats and after the project there is a notable change in the whole landscape of Kinnekulle.

The project was done in collaboration with the land owners, tenants and other interested parties. The work with preparations and anchoring before the project started was a key for success. The continuous dialogue was important for keeping confidence. To make use of the knowledge of the farmers generated a positive atmosphere, and the possibilities for the landowners and tenants to do restoration work on their own land was important for their involvement and acceptance of the project. The project had a win-win concept which meant that nature conservation got back irreplaceable nature conservation values and the landowners got new opportunities for production on previously overgrown pastures. Benefit for both.

By different kinds of information we have also made Kinnekulle more accessible for visitors, which give possibilities for a new tourist market and a better understanding of nature values. In that way we have also canalized visitors and minimized disturbance on sensitive habitats.

During the project we investigated and started the work to make Kinnekulle into a Biosphere Reserve with the aim to increase the possibilities for a sustainable local development of the whole Kinnekulle area, where nature conservation and development go hand in hand.

The LIFE-project was 2009 awarded the price “Best of the Best” LIFE-project in Europe.

International partnership between BRs – how to make it work

DOING TOGETHER – LEARNING TOGETHER

HOW TO MAKE A BIOSPHERE RESERVE PARTNERSHIP REALLY WORK?

Doris Pokorny

Case study: Rhön Biosphere Reserve (Germany) and Kruger to Canyons Biosphere Region (K2C)(South Africa)

Framework for partnerships

Biosphere reserves are **learning regions for sustainable development**. This includes educational programme on site (ESD) for all ages (kinder garden/ pre-school, school children, families, professionals...). At the same time a biosphere reserve is a learning region in itself on all levels where stakeholders need to learn how to best address sustainability issues (institutional, technical, organisational level....)

It all depends on the local people who make the biosphere reserve work and put the idea into action with creativity, pioneer spirit and the willingness to co-operate beyond boundaries with many different partners. A strong regional identity is an important driving force.

The strategy of the BR co-ordinators is the **creation of vertical and horizontal networks within the region and within the UNESCO world network of biosphere reserves**, as it is called upon in the Madrid Action Plan for the sake of **sharing experience and best practice examples**.

Biosphere reserve coordinators learn from each other (e.g. how to facilitate sustainability projects, face challenges and translate the BR idea into action). **Local actors in the two regions learn** from each other technically and socially, which makes them aware of being an important part of a greater picture - which is a tremendous motivating factor.

The partnership can serve as an "environment" for a trust and team building experience, making both biosphere reserve coordinators and local actors reflect their current approaches and see their initiatives in a new light. It is a mind-widening experience for all.

In this respect a **biosphere reserve partnership can be regarded as a framework and as a tool for mutual intercultural learning for sustainability (intercultural ESD)**. This sharing can happen even beyond continents!

Since **2008 the Rhön Biosphere Reserve in Germany and the Kruger to Canyons Biosphere Region in South Africa co-operate in a close partnership** and have gained experience which is worth sharing with other biosphere reserves who intend developing an international partnership.

How it all started...

The partnership has been initiated by the South African institutions. The South African Mpumalanga Rural Development Programme (MRDP) in 2006, the Mpumalanga Tourism and Parks Agency (MTPA) and the Kruger to Canyons Biosphere Reserve Executive Committee (EXCO) agreed on developing an exchange programme with a partnering biosphere reserve. The Rhön Biosphere Reserve was suggested by GTZ (today GIZ) as it was considered to be a suitable partner. The goal was to establish a long-term co-operation between the two biosphere reserves, involving also the private sector.

Although the two biosphere reserves are rather different in terms of size, natural and cultural setting and the number of population they have a lot in common, such as:

- **Peripheral** locality – rural settings
- Importance of local **agricultural produce** (including organic products facing an increased domestic/ international demand)
- Economical dependence on (outdoor-) **eco-tourism** and nature-oriented sports
- Economical importance of **handicrafts** (food- and non-food sector)
- **Land reforms** due to past political systems (property restitution on collective farms of former GDR/ Land under claim due to the former Apartheid Regime)
- Risk of change in landscape through **land use change**

- Focus on sustainable rural development, including nature conservation, on the basis of established **links of conservation with tourism, agriculture and forestry**
- Ecological and economic importance of abiotic resources and **biodiversity, including agro-biodiversity**
- Differences within the BR in wealth/ employment due to **political and social history**
- Seeking new opportunities esp. for disadvantaged groups like **women in rural areas**
- Importance of **stakeholders involvement**, especially of the private sector, interest groups and NGOs, while participatory approaches have not historically been used
- Need for BR **coordination beyond administrative boundaries** (Transboundary Provinces)

What were the necessary steps?

Step 1

Based on a preparatory analysis, common issues were identified, the expectations of an a partnership and questions were compiled and local stakeholders were selected which could best contribute to the key issues.

Tailor made **mutual exchange visit programmes, consisting of project excursions and common workshops**, took place in both biosphere reserves. So, stakeholders from K2C BR visited the Rhön BR (2007). This was followed by a counter visit of participants from Rhön BR to K2C BR (2008). The delegations' visit reports, reflect the visited projects in both areas.

Most importantly, a trust building process on the social and technical level took place between stakeholder groups as well as amongst the groups of the partnering BRs.

Step 2

In May 2008 a **Memorandum of Understanding (MoU)** was signed, to:

...“Use and develop the two areas as learning platform for all stakeholders in the biosphere reserve/region in order to foster:

- Mutual inspiration
- Sharing of experience, knowledge and problem resolution approaches
- Networking between local actors
- Joint ventures and trade options for the private sector.”...

Based on the Memorandum of Understanding, the two BRs (each) have installed a **coordinator** for the technical support of the cooperation. They mutually and regularly inform each other in the undertaking and promotion of activities and projects and publish the development of the cooperation. Furthermore, they agreed on exploring options of joint meetings and on assisting each other in fulfilling BR's goals and initiate projects.

Step 3

Through intensive co-operation, a **range of projects** has been initiated, concerning the following issues:

- Educational sector - on different levels: The educational sector has been extraordinarily active and has focused on different levels:

School level: A school partnership was facilitated between Southern Cross School in K2C BR and Martin Pollich Gymnasium (grammar school) in Rhön BR: an individual 3 month student exchange from Rhön to K2C took place in 2010, being followed by a group school exchange visit in 2011 (students and teachers of both school undertook a three week training course on sustainable regional development in the Rhön Biosphere Reserve). A counter visit and training programme in K2C are envisaged in 2012.

University level: The Technical University of Fulda (Germany) and Witswatersrand University Chairs for Nutrition and Health Science (South Africa) have started cooperating. In 2011 two Fulda master students have undertaken an internship in K2C in an agro-social project. One student will develop her master thesis on this project.

Professional level: Staff exchanges took place in the fields of gastronomy (cooking internship of a young professional, in 2009; internship of a young professional in organic horticulture/ agro-social project, in 2010);

Renewable energies (hydro-electricity): Inspired by water turbines in old mills in the Rhön Biosphere Reserve, which nowadays produce electric energy, K2C actors are planning the establishment of a water turbine on the Blyde River dam. With the technical assistance of the Rhön energy agency, K2C commissioned a first pre-feasibility study on the water turbine which has proven that it would be economically and technically feasible. Further steps are yet to be taken, such as the setting up of an adequate organizational structure. The vision is that the benefit from the water turbine remains in the region and be re-invested in sustainable regional projects.

- Trade relations in the private sector:

The envisaged establishment of private public partnership with BIONADE GmbH in the agricultural sector has been explored. A pre-feasibility study on organic agriculture has been accomplished with the assistance of GTZ/GIZ. Further steps remain in negotiation.

Lessons learned: How to make a partnership really work?

Before starting a partnership, it is important that **both biosphere reserve coordinators**

- Define the **fields of cooperation, goals and expectations** and the **level** of cooperation (e.g. should it be a cooperation on the biosphere reserve coordinators' level only or as well on the local actors level?)
- base the partnership on a **Memorandum of Understanding (MoU)** which, although it has no legally binding status, is an important reference and can be used for fund raising
- install a **(bilingual) partnership coordinator on each side**
- **make the partnership** widely known.

Preconditions for making mutual learning in biosphere reserve partnerships possible and effective, are the identification of mutual similarities between the biosphere reserves for developing common projects and a common understanding. **Trust building** among local actors does need time and can only happen **if they meet their counterparts in person**. Therefore **well prepared visits and counter visits** (including workshops, seminars and project excursions) are key. Electronic connection (e-mail, internet) can build on it but never replace it. Furthermore it is most important **to identify and overcome language barriers**. **Personal continuity on all levels** as well as continuing facilitating work of the two biosphere reserve coordinators is important for the development of the partnership! Meeting each other in a long distance partnership (as between K2C and Rhön) is costly! So, last but not the least, **financial support for building and maintaining the partnership** is an important precondition.

Before starting a partnership, **strategic issues** should not be neglected either. Partnerships with the "right" biosphere reserve in the "right" country can open doors and budgets! It is e.g. favorable building a partnership with a biosphere reserve **on already existing official international partnerships in other fields** (such as development cooperation, trade relations etc.).

However, there is no guarantee, that a biosphere reserve partnership will be a success. It all depends on the creativity and the commitment of the people involved. As the biosphere reserve coordinators in their own regions are **merely facilitators** of bottom-up, multi-stakeholder approaches, **continuous moral and institutional support** is needed to carry the

partnership - especially if it concerns lengthy projects. The **challenges are the keeping momentum of the local actors' commitment** to the agreed upon projects and the fostering of the stakeholders' role as multipliers for this partnership. Another challenge is the involvement of **additional local actors** for new projects, including the **overcoming language barriers**.

More info on: <http://biosphaerenreservat-rhoen.de/en/38-south-africa>

Biosfärum – A Visitor Centre for a BR

CREATING BIOSFÄRUM – A GATEWAY TO THE BIOSPHERE RESERVE

Lars HILLSTRÖM, lecturer in Biology (PhD), Höskolan i Gävle, Sweden

Abstract

A biosphere reserve is a trademark that stimulates curiosity and attracts people to learn and to experience the functioning of a landscape—It may also increase people's knowledge of sustainability and become a way to bring insight concerning the development of the environment in a sustainable way. The idea of a Biosfärum is to become a connecting link to the Biosphere Reserve. A Biosfärum could be a place where one can take part in the contents of the Biosphere Reserve, its different places /habitats. A Biosfärum can disseminate information and knowledge about long-term sustainable development and it can also be an arena for scientific and educating information in terms of exhibitions, courses and experiences. A Biosfärum could give good examples of conservation and management of the different landscapes in the Biosphere reserve. It can also show and demonstrate good examples - "best practices" - in the community, e.g. unorthodox energy production, the use of biofuels, and local and ecological food production. The Biosfärum at Nedre Dalälven River Landscape Biosphere Reserve Candidate will focus on a) how a biosphere reserve can increase the possibilities for people to stay and live in this area, i.e. to get insight into the stimulation of the socio-economic sustainable development, b) set an arena for visitors to discover and learn about the different values of nature and culture, and c) to inform about sustainable practices in agriculture and forestry and for maintaining the ecosystem services, keeping it in balance in nature; in the long-run a necessity for humans!

Biosphere Ambassadors – expanding communication in a BR

BIOSPHERE AMBASSADORS - A USEFUL RESOURCE IN MARKETING THE RESERVES

Fredrik Hedman, Biosphere Ambassador, BR Lake Vänern Archipelago and Mount Kinnekulle

Abstract

The concept of Biosphere Ambassadors was first established in 2007, during the candidature of the area "Vänerskärgården med Kinnekulle". The purpose was to create a complimentary channel of information about the Biosphere Reserve out in the community and also to get some input from different stakeholders within the area. The Ambassadors go through a short educational programme to learn the basics of the Biosphere concept and to visit some hot-spots inside the Reserve. All in order, to have a minimum common base of knowledge and a confidence to spread the message further.

The first group of Ambassadors consists of seven persons with a common interest in the nature and culture of their residential area and a wish to help spreading the word about it. Through advertising in local media or personal contacts they found out about the Ambassador program and got involved. These Ambassadors have so far been useful by assisting the MAB-officials in different information activities concerning the reserve. For example by giving lectures, providing visitors with printed material and in general by being active in talking about the Biosphere Reserve in different settings. Furthermore, some of the Ambassadors special knowledge on particular topics has been helpful in projects concerning for example sustainable tourism.

Another group of Ambassadors have now been educated, which means that the total number of Ambassadors is today above twenty in this area alone. Could this be a useful concept to other biosphere reserves? What hints, tips and points of discussion can the insiders of the National Ambassador programme offer? With a growing number of Biosphere Ambassadors, perhaps even spread over more MAB areas, some kind of network could be established to further increase the value of the Ambassadors and what they could contribute with.

Protected Forests in BRs in Belarus - Values, Function and Main use

VALUE, FUNCTIONS AND MAIN USAGE DIRECTIONS OF THE PROTECTED FORESTS IN THE BIOSPHERE RESERVES OF BELARUS

Valery IUKOVICH, Berezinsky Biosphere Reserve, Belarus

There are three biosphere reserves in the Republic of Belarus:

BEREZINSKY BIOSPHERE RESERVE	– 113,9 thous. ha	1979
BELOVEZHSKAYA PUSHCHA	– 191,3 thous. ha	1993
PRIBUZHSKOYE POLESIE	– 48,0 thous. ha	2004

Forest ecosystems occupy the main part of the biosphere reserves' territory in Belarus: from 62% in Pribuzhskoye Polesie to 89-90% in Berezinsky Reserve and Belovezhskaya Pushcha

The most valuable of the biosphere reserves' forest complex are:

- the sole in Europe old-age plain forests of Belovezhskaya Pushcha,
- the unique virgin wetland forests of Berezinsky Reserve.

The significant part of the biosphere reserves' forests is under the strict protection regime and is used on the following main directions:

- reserve considerable stocks of dead wood and many trees-veterans with the aim to maintain biological diversity of forest ecosystems;

Forests of Berezinsky Reserve and Belovezhskaya Pushcha have many features, typical for natural primeval forests: this is a complicated age and space structure, significant stocks of deadwood (as dead standing, so fallen trees), rich species composition, presence of a great number of old-age forest stands. It is typical for Belovezhskaya Pushcha forests the presence of numerous giant trees, the age of which reaches 400-600 years. Thanks to that biological

diversity only in the forests of Belovezhskaya Pushcha accounts about 700 higher vascular plants, 270 moss species, 290 lichen species, about 600 mushroom species.

- support the progress of natural processes and a compliance with long guarding regime of forest ecosystems for protection the habitats of plant and animal species, listed in the Red Data Book of Belarus, and protected in accordance with the international convention;

As an example, in the Biosphere Reserve «Belovezhskaya Pushcha» there are 99 plant species under protection, including 68 species of vascular plants, 3 species of mosses, 16 lichen species and 12 mushroom. At that the most of them refer to forest or forest and mire complexes. Fauna of Belovezhskaya Pushcha also include a number of species listed in Red Data Book of Belarus. Among them are 64 species of birds, 11 mammal species, more than 20 species of insects. At that more than 20 plant species and 100 animal species have international nature protection status.

Among the protected plant and animal species of Berezinsky Reserve dominate representatives of forest and wetland complexes as well. Within the Reserve's territory are listed 46 species of vascular plants, 10 – mosses, 14 – lichen, included in Red Data Book of Belarus. Also under protection are 9 mammal species, 58 species of birds and more than 40 species of insects. Only at the territory of the Reserve one can come across a so called European five of large mammals – bison, elk, brown bear, wolf and lynx, at the same time.

- use as a unique nature laboratory, meant for holding researches on natural processes and phenomena flow in pristine environment;

Forest complex of Berezinsky Biosphere Reserve and Belovezhskaya Pushcha is considered to be a unique natural scientific laboratory, aimed for conducting researches on natural processes and phenomena flow in pristine environment.

Priorities of scientific research are: inventory of plant and animal biological diversity; study of dynamic processes of forest ecosystems; biology and state investigation of individual species. Multiplan researches are performed by scientific departments with involvement of the senior scientists of the National Academy of Sciences of Belarus, a number of higher educational establishments, either domestic or abroad.

- use as the objects for ecological education and cognitive tourism development on the basis of visiting ecological informational and cognitive routes and paths;

One of the most important use directions of the protected forest ecosystems of the biosphere reserves is providing wide approach to the unique nature objects on the basis of visiting ecological informational and cognitive routes and paths. Covering almost all the diversity of forests, the ecological routes are meant for different categories of visitors and foresee moving on them in organized guided groups. Subject to duration and way of movement in the forests are laid pedestrian, bicycle and automobile routes. Only at the territory of Berezinsky Reserve there are more than 10 of them.

- use as an object for carrying out the integrated monitoring of forest ecosystems in the frames of national environmental monitoring system;

Since 2006 at the territory of Berezinsky Reserve and Belovezhskaya Pushcha has started the implementation of The State program of development the national environmental monitoring system, according to which they are one of the key objects of observing the forest ecosystems. For this purpose a network of permanent plots (100) and monitoring routes (10) have been made at their territories, where regular observations are performed annually. All the information, received on monitoring program, reaches the analytical centers and is widely used either in our republic, or abroad.

- use as a natural study auditorium for performing field practical trainings of students and pupils;

Protected forest ecosystems of the biosphere reserves are used as natural study base for performing summer field practical trainings of students and pupils. An example can be Berezinsky Biosphere Reserve, where annually is organised summer field school for students-ecologists of Griefswald University of Germany. In 2010 on the basis of Berezinsky Reserve there took place the third gathering of young ecologists of Russia and Belarus «Ecology without borders». annually there have a field practice more than 500 students of belarussian universities.

- use as the places for organising and carrying out hunting with a camera;

The diversity of Biosphere Reserve forests combined with opened and wetland landscapes are ideal for performing the photo-safari there. Ecological tours for hunters with a camera are organized by all the reserves, but a special popularity among the photographers have the unique tours on camera shooting black grouse and capercaillie species on their mating places at early spring that are organized by Berezinsky Biosphere Reserve. Also quite

popular is photography of large hoofed mammals, and bison in particular, possibilities for which provides Belovezhskaya Pushcha.

- use as a keeper of ancient forest trades;

One of the examples of reservation on the protected territories of Belarus the ancient forest trades is forest apiculture or wild-honey farming.

In nowadays due to the technical progress has become breakdown and transformation of wild-honey farming into apiarian beekeeping. But in the southern part of the Republic, including protected territories, wild-honey farming has been preserved at almost archaic state till our days. Now it is not just a trade but a work for the soul, and a prospective object of cognitive and historical tourism.

Main Activities of the Russian MAB Committee

FROM SLOVAKIA TO SWEDEN: ACTIVITIES OF RUSSIAN MAB COMMITTEE DURING LAST TWO YEARS

Dr. V. M. Neronov, Deputy Chair of Russian MAB Committee

This year all MAB committees and not only in EuroMAB are celebrating the 40-years jubilee of the UNESCO Program on Man and the Biosphere. The EuroMAB is the largest and oldest of the MAB regional networks and Russian MAB Committee participated in all activities since its formation.

The last meeting of the EuroMAB network was held in Slovakia on 27-30 October, 2009. I am pleased to present here a brief review of what was done in Russia up to the EuroMAB network meeting here in Sweden. The main achievements, we believe, were a publication of the bilingual illustrated Directory “Biosphere Reserve of Russia” and the map and the booklet «Biosphere reserves of the Volga river’s basin», and the approval by 23-rd session of ICC MAB our 40th Biosphere Reserve – “Volga-Akhtuba Floodplain”. Therefore, in total we have now 24 biosphere reserves at the European part of Russian Federation. During two

years our MAB Committee participated in, and itself conducted several meetings. A short description of them is given in the following papers:

1) Seminar “Sustainable development of biosphere reserves in the Volga River basin” (Russia, Nizhniy Novgorod, May 20-21, 2010);

2) Sub-regional workshop «Biosphere reserve concept in the framework of national legislations: challenges, best practices and steps forward of cluster countries of the UNESCO Moscow Office, the Baltic States and Ukraine» (Russia, Biosphere Reserve “Smolensk Lakeland”, September 24-26, 2010);

3) Seminar “Sustainable development of wetland ecosystems in transboundary cooperation” (Russia, Smolensk / Belarus, Vitebsk, February 24-26, 2011); **4) Seminar “Sustainable development of biosphere reserves in the Volga River’s basin: past and future of the MAB Programme”** (Russia, Nizhniy Novgorod, May 19-21, 2011).

The whole sets of materials of these seminars are presented at the website of the on-line Journal «Local sustainable development»: <http://fsdejournal.ru/node/73>; <http://fsdejournal.ru/node/108>; <http://fsdejournal.ru/node/158>.

Among recommendations adopted at our meetings it is worth to mention an appeal to the UNESCO to support pilot projects to strengthen transboundary biosphere reserves with countries adjacent to the Kaliningrad region of Russian Federation; to enhance an understanding role of biosphere reserves in «ecosystem services»; to compile the Atlas of biosphere reserves of the UNESCO Moscow office’s cluster countries and neighboring Baltic States similar to the Atlas produced within East-Asian biosphere reserve Network.

The participants of the sub-regional workshop discussed the specificity of their national legislation in terms of biosphere reserves and other protected areas. The UNESCO «model law» on biosphere reserve presented at the workshop was very helpful in this discussion and it was recommended that this «model law» should be used as an example for development of national legislations related to biosphere reserves. Also among recommendations of the workshop it was underlined a necessity to reinforce a cooperation between IHP and MAB national committees and revitalize working relations with IUCN at local and national levels.

Two Memorandums on cooperation of the Russian MAB Committee with MAB committees of Belarus and Ukraine have been signed and we very much hope that in their framework some joint projects will be initiated, particularly to improve conservation of biological and

landscape diversity and to promote sustainable development of the Volga and Dnieper rivers' basins.

In conclusion, I would like to inform the participants of EuroMAB 2011 that Government of the Republic of Bashkortostan took a decision to join the EuroMAB network and a preparation of the nomination form for large biosphere reserve «Bashkirskiy Ural» was completed. May be some of future EuroMAB meetings will be held in this reserve after its approval by UNESCO.

Outdoor demonstration of the “Nature Bus”

THE ECOBUS OUTDOOR EDUCATION IN BR CANDIDATE EASTERN SLOPES OF LAKE VÄTTERN

Demonstration by Claes Hellsten, from the Biosphere Area Östra Vätterbranterna

Jönköping municipality has a bus that takes students (age 13 - 19), one class a day, to different locations where studies and exercises are conducted. The chauffeur/excursion leader are biologists with knowledge in general environmental issues, local challenges in various aspects of sustainable development and local knowledge of biotopes and landowners. One or two teachers accompany the class (often their class teacher and/or biology teacher). The Ecobusday is a part of the education in school, a complement and not a single amusement trip. The ordinary teacher works with the class before and after excursions to prepare and evaluate the experience.

The Ecobus has been in action for 19 years and approximately 35 000 teenagers have experience of one or more days with it. The goal is to create a positive attitude to outdoor studies. Many teenagers today spend very little time in nature and many have a non-European background which means that they also have very little cultural background to nature and rural areas in Sweden.

Themes that are frequently demanded from the schools are; water environment (examining ground fauna in small rivers or lakes with different Ph or nutrient status), biodiversity in forest (broadleaved forest versus spruce plantations and semi natural taiga), biodiversity in farming landscapes (today's landscape versus farming 200 years ago or ecological farming compared with conventional), ornithology (visiting bird lakes and "collecting" species with binocular) etc etc.

To fulfill the purposes the bus is equipped with instruments like Ph-meter, conductivity meter, binoculars, camera, TV-monitors connected to a microscope, nets etc. The bus also have extra clothes, raincoats and rubber boots (teenagers always tend to be overoptimistic concerning the whether conditions).

In all kinds of excursion the experience of being outdoors in nature is the central focus. A eutrof lake smells, sounds and looks different than a dystroof one, the spruce plantation is, after a visit to a broadleaved forest, obviously a poor environment for most species. All senses must be involved to create a long-term memory of an excursion day!

We often push the students to do something challenging at the end of the day, it can be a race through a swamp, crossing a storm effected forest with hundreds of logs ore climbing a steep mountain. This more playful part of the day helps to give the lasting, positive, memory of being out. A day near water or swamps where no one have become real wet is a failure - young people love challenges and, to some extent, mistakes with consequences (being soaking wet for some time). The teacher catches the class with video camera and the film is used later in the classroom, during school meetings with their parents, and, sometimes, to evaluate the interaction within the group. Being out together is good team building.

Linköping University has a programmed resulting in a two-year master's degree. It focuses on how outdoor environmental education and outdoor life can contribute to sustainable development, environmental health and citizenship - read more:

<http://www.liu.se/en/education/master/programmes/L7MOE?l=en> and

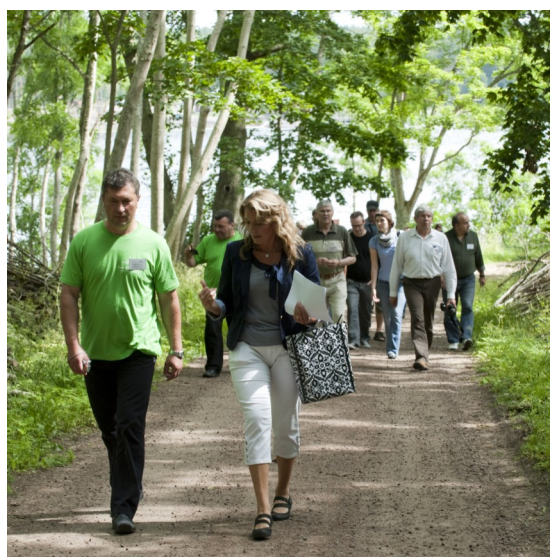
<http://www.mastersportal.eu/students/browse/programme/997/outdoor-education.html>



EuroMAB 2011

Sharing Sustainable Futures

APPENDIX 6 –List of participants



SHARING SUSTAINABLE FUTURES

Report from EuroMAB 2011, Sweden





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Man and
the Biosphere
Programme

EuroMAB 2011- Sharing Sustainable Futures
4th-8th July
in BR Lake Vänern Archipelago and Mount Kinnekulle



EuroMAB 2011

Sharing Sustainable Futures

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EuroMAB 2011
Sharing Sustainable Futures

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Voices of conference participants

“Thank you for a wonderful EuroMAB Conference. I have met very nice people, great experts with dedication to nature for benefit of all.”

“I came home with some wonderful memories and hope for future cooperation and look forward to future cooperation, particularly regarding sustainable tourism.”

“It was a wonderful experience: so many different people from European countries sharing the idea of biospheres as useful instrument and ways of living for a sustainable future. Thank you very much for everything!”

BIOSPHERE RESERVE LAKE VÄNERN ARCHIPELAGO AND MOUNT KINNEKULLE
SWEDEN

