



Nordic Council  
of Ministers

# UNESCO BIOSPHERE RESERVES – A PATH TO LOCAL HOLISTIC SUSTAINABILITY



A guide to establish UNESCO Biosphere  
Reserves in the Nordic Countries

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This publication is also available online in a web-accessible version at:  
<https://pub.norden.org/nord2024-023>

*This publication presents findings from the Nordic Council of Ministers - Nordic Working Group for Biological Diversity funded project MAB LAB: Man, and the Biosphere - Local Actions for the new global framework for Biodiversity.*

*The project is based on a fundamental ambition to foster and support local solutions to global challenges by increasing the number of UNESCO biosphere reserves in the Nordic region.*

*The aim here is to inspire locals to investigate, create ownership, anchoring and action in local communities to establish an UNESCO biosphere reserve.*

## UNESCO Man and the Biosphere

A UNESCO Biosphere Reserve is an area designated by UNESCO as part of the Man and Biosphere (MAB) programme. Explained by UNESCO in the following way:

*"The Man and the Biosphere (MAB) programme is an intergovernmental scientific programme that aims to establish a scientific basis for enhancing the relationship between people and their environments. It combines the natural and social sciences with a view to improving human livelihoods and safeguarding natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable.*

*Its World Network of Biosphere Reserves is a dynamic and interactive network of sites of excellence that foster harmony between people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for cultural values and society's ability to cope with change."*

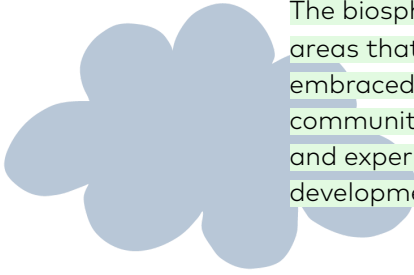
[www.unesco.org/en/mab](http://www.unesco.org/en/mab)

# UNESCO BIOSPHERE RESERVES - A PATH TO LOCAL HOLISTIC SUSTAINABILITY

The interaction between nature and humanity is a critical focus in today's world. As we have distanced ourselves from nature, it's crucial to understand that in the Earth's ecosystem, one cannot take without also giving back. Creating a better balance is imperative, necessitating a holistic approach to living, dwelling, and cultivating for the thriving of all species.

Establishing a UNESCO Biosphere Reserve is one way to initiate local collaboration to strengthen the interactions with environments that sustain both nature and people.

Biosphere reserves are designed to deal with one of the most important questions the world faces today: How can we reconcile the conservation of biodiversity, the quest for economic and social development and the maintenance of associated cultural values?



As UNESCO's Man & the Biosphere (MAB) Programme has evolved, its biosphere reserves have become its principal means of implementation. The biosphere reserve concept has proved its value beyond the protected areas that each biosphere reserve contains. It is also increasingly embraced by scientists, planners, policymakers, businesses, and local communities as a way to link diverse knowledge, scientific investigations and experiences to biodiversity conservation and socio-economic development for human well-being.

A UNESCO Biosphere Reserve is not merely a conservation title but a tool for the well-being of both humans and the environment. Local engagement, representation, and a bottom-up approach are crucial. The location must be representative of its biogeographic region, significant for biodiversity, and involve effective governance, diverse funding, and a focus on three functions: Conservation, Development, and Logistic Support.

## **A guide to emphasizing local ownership, collaboration, and sustainability**

This guide aims to assist people in the Nordic countries in establishing UNESCO Biosphere Reserves. By emphasizing local ownership, collaboration, and sustainability, the guide provides valuable insights to navigate the process of creating areas where nature and humanity thrive in harmony.

It also compiles insights on overcoming challenges. Key recommendations include creating a shared understanding, co-creating solutions, collaboration with municipalities, ensuring support from farmers and foresters, early involvement of local communities, and fostering partnerships with local companies and researchers.



# GLOBAL GOALS NEED LOCAL ACTIONS AND RESPONSIBILITIES

Solutions to global challenges often start locally, amongst people. The global agreements offer a framework expressing the ambitions that can be agreed on by member states of the UN system. The framework does pinpoint the responsibilities of the states, what are the goals and the actions at government level that needs to be taken.

However, experiences tell us, that in order to be successful, a certain translation of the global frameworks need to be undertaken to link the global goals with local actions and solutions in communities, in civil society, in municipalities, in business, in education etc.

The core function of the MAB program and its biosphere reserves is to fulfil the three basic, equal and complementary functions:

- Conservation – conservation of natural and bio-cultural diversity
- Development – support for sustainable economic and social development and cultural diversity
- Logistic support - support and promotion of model projects, training, and education for sustainable development at the local level, while taking into account national and global scales.

The need of stakeholders should be addressed while fulfilling all three functions. By this we aim to facilitate the connection between the global framework and the local actions and by that catalyze the necessary actions for biodiversity.

## Local Hubs for sustainable development

The Man and the Biosphere (MAB) was initiated in 1971 as a program and tool to create model areas where the interaction between mankind and the nature could be studied. From initially being a top-down program, the development in the program in recent years has given room for strong bottom-up initiatives. Thus, the program offers an excellent frame to emphasize and catalyze local solutions to the global challenges.

Given its holistic approach and local anchoring the MAB program and the biosphere reserves holds the potential to be strong hubs for sustainable development, addressing the global challenges such as climate change, biodiversity loss and pollution.

## Local Actions for Climate solutions and the Sustainable Development Goals

UNESCO's MAB Programme aims to enhance the relationship between people and their environments by playing a key role to achieve the Paris Agreement on Climate and the UN Sustainable Development Goals (SDGs). It does so by combining the natural and social sciences in order to promote innovative approaches to economic development that are socially and culturally appropriate, and climate and environmentally sustainable. These approaches can be replicated in various parts of the world.

Spanning over 5% of the world's surface in 134 countries and covering all ecosystems, in both urban and rural settings, biosphere reserves are natural 'learning places for sustainable development'. In their own contexts, they have been implementing projects that address each goal and target of Agenda 2030 in creative and innovative ways.

Hoping these good practices, experiences and lessons learned can inspire others, the MAB Programme made a call for stories, projects, and initiatives from biosphere reserves. Please investigate examples of [Good Practices of Local Actions for the Sustainable Development Goals](#).



## The Kunming-Montreal Global Biodiversity Framework

The biodiversity agreement in 2022 known as the Kunming-Montreal Global Biodiversity Framework is a very comprehensive document containing the whole range of actions for global biodiversity – much more than actions for protected areas (where the goal is 30%). The ambition is that by 2050 our shared vision of living in harmony with nature is fulfilled. This vision will cause big changes at many levels and require that the diversity of collaboration and actions extends. This fits very well with the MAB Programme.

The agreement aligns well with the MAB Programme's goals, emphasizing transformative change involving the entire society. Biosphere reserves can serve as hubs for implementing the agreement, influencing the needed transformation.

Source: <https://www.cbd.int/gbf>

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*The Man and the Biosphere (MAB) Programme has laid the scientific foundation for a new harmony between humans and their environment – one that reconciles conservation and development and teaches us how to live with the living world in the living world, rather than at its expense.*

Audrey Azoulay, Director-General of UNESCO

Source: [www.unesco.org/en/mab/about](http://www.unesco.org/en/mab/about)

# GUIDE TO BECOME A UNESCO BIOSPHERE RESERVE

A biosphere reserve is first and foremost a model area for sustainable development – a tool for advancing well-being for both human beings and nature. It should benefit both people and the environment, promoting a clear understanding of its purpose and how it contributes to everyday life. Local communities should actively participate in the process, with their vision for the biosphere reserve. Biosphere reserves can also be considered as 'learning sites for sustainable development'.

**This guide is built on three consecutive steps:**

1. [Preparation](#)
2. [Pre-analysis and process](#)
3. [Application](#)

## Experiences from the UNESCO Biosphere Reserves in the Nordics

Based on experiences from the coordinators at the existing Nordic biosphere reserves, here are some good advice and recommendations

### Local communities are essential!

Local communities and key actors should promote why they want to create a biosphere reserve, how they expect to use it in their daily lives, and the benefits it brings. Stakeholder participation in drafting, approving, and supporting the vision for the biosphere reserve is crucial. The initiative should come from the local community, ensuring a bottom-up approach. Take a look at <https://biosfar.fi/partners-ambassadors/partnerskap/?lang=en> for inspiration.

## **Keyword for establishing a BR is co-create**

What are the sustainable challenges here? Would you like to be part of the solution? How can we work on these challenges together and how would you like to contribute? Collaboration and involvement with the municipalities must start immediately. If possible, do the process within one election period to avoid a stop or, in the worst case, a whole new involvement process.

## **Ensure Support from Farmers and Foresters**

Clarify the MAB Programme's focus on sustainable use of nature to avoid misunderstandings. Involve and gain support from local landowners, farmers, and forestry organizations. Often, the MAB Programme can be misunderstood as a programme for protecting nature instead of the sustainable use of nature. There have been examples of forestry organizations stopping the process due to this misinformation. Make sure to have landowners, farmers, forestry NGO's and so forth on board from the beginning.

## **Involve local people early and create ambassador programmes**

This has in many cases turned out to be a strong support for the process and to point out the very core of the MAB Programme: Involvement of the community in bottom-up process. Find inspiration in the [ambassador programme](#) at Møn, DK and from the [partner-ambassadors](#) in Finland.

## **Collaboration with Local Companies**

To have backing from local companies gives many advantages. If they find the MAB Programme useful, this will influence many other stakeholder-groups positively and also encourage participation in new solutions, e.g. making their areas more wild with a higher biodiversity.

Be inspired to be a "[Stolt medspelar](#)" (BR Nordhordland):

## **Collaboration with researchers is essential in the MAB Programme**

It is a great advantage to involve researchers early and invite them to contribute to the application – as they can provide the knowledge that is needed. Biosphere reserves can support universities with applications for a UNESCO Chair linked to the MAB Programme, as the example from Norway: [UNESCO Chair: Sustainable heritage and environmental management | University of Bergen \(uib.no\)](#)

## Local trust

The administration of the application process must be done by persons who are trusted by the society. Past examples have shown that it may not be easy to convince stakeholders if the administration can be accused of having hidden agendas.

## Exchange of Experiences

Collaborate with other biosphere reserves, both within the Nordic countries and internationally, to exchange best practices and experiences.

The *World Network of Biosphere Reserves* of the [MAB Programme](#) consists of a dynamic and interactive network of sites of excellence. It fosters the harmonious integration of people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for cultural values and society's ability to cope with change.

## Members and network:

[World Network of Biosphere Reserves and EUROMab](#)

[Nordmab](#)

[Biosphere for Baltic](#)



# PHASE 1: PREPARATION

## Key Considerations

To establish a Nordic UNESCO biosphere reserve requires a thorough process and preparation based on collaboration between authorities, local communities, organizations, and stakeholders. The MAB programme sets the frame and conditions for biosphere areas and promotes sustainable development through an integrated approach to conserving biodiversity and sustainable use of natural resources.

Establishing a UNESCO biosphere reserve can be done in different ways. In the past, it was often based on top-down initiatives taken by ministries of environment and research institutions. However, more and more biosphere reserves have been initiated through local and bottom-up approaches. This is especially the case in the Nordic countries. This approach is often based on a collaborative, bottom-up approach, strong local ownership, and clear communication. Learning from existing reserves, involving various stakeholders, and aligning with global agreements like the UNFCCC (Climate) and CBD (Biodiversity) can guide the process effectively.

## Getting Started

This guide emphasizes the importance of local support, clear vision, and understanding among communities and key stakeholders. Numerous meetings are essential to create ownership, provide information, ensure involvement, and foster real co-creation. It emphasizes the importance of a common strategy or management plan, involving stakeholders in the process, and defining the zonation from an early stage.

## Understand UNESCO's MAB Programme

Learn about UNESCO's Man and the Biosphere Programme and the overall goals for biosphere reserves. Understand the principles of sustainable development and the importance of integrated management.

All UNESCO Biosphere Reserves must fulfil three basic, equal and mutually complementary functions:

1. Conservation – conservation of natural and bio-cultural diversity
2. Development – support for sustainable economic and social development and cultural diversity
3. Logistic support – support and promotion of model projects, training and education for sustainable development, research and monitoring linked to nature conservation and sustainable development at the local level, while considering national and global scales.

Stakeholder needs should be addressed while fulfilling all three functions.

## Visiting existing Biosphere Reserves

A strong aspect of the MAB Programme and its world network is the focus on sharing experiences and cooperation. Therefore, visiting existing biosphere reserves does not only provide insights into possibilities and limitations and help participants form visions for their own areas, it also allows very important networking and exchanges. It is therefore an overall recommendation to visit existing biosphere reserves to understand their experiences and challenges and to create cooperation. These field trips should lead to better understanding and specific examples of zonation, strategies, management, and other aspects. A list of biosphere reserves can be found here:

<https://en.unesco.org/biosphere/wnbr>

## Get involved in networking

The MAB Programme and its networks include many networking and collaboration opportunities and offers a great number of sources, organisations and persons that can be of great help. In this regard it can be advantage to get acquainted with the UNESCO MAB secretariat in Paris, the EURO MAB network and the more informal NORD MAB network including the Nordic Countries, Canada and Estonia.

## Criteria for Establishing UNESCO Biosphere Reserves

The official guidelines detail considerations preceding nomination, including local support, location significance, governance effectiveness, diverse funding sources, and the three fundamental functions of biosphere reserves. Read more in the official guidelines about all the criteria for establishing a UNESCO Biosphere reserve: *Technical Guidelines for UNESCO Biosphere Reserves*

Source: <https://unesdoc.unesco.org/ark:/48223/pf0000375692>

In brief the general criteria for an area to be qualified for designation as a Biosphere Reserve is:

1. It should encompass a mosaic of ecological systems representative of major biogeographic regions, including a gradation of human interventions.
2. It should be of significance for biological diversity conservation.
3. It should provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale.
4. It should have an appropriate size to serve the three functions of Biosphere Reserves, as set out in Article 3 in the guidelines.
5. It should include these functions, through appropriate zonation, recognizing:
  - a. a legally constituted core area or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives.
  - b. a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;
  - c. an outer transition area where sustainable resource management practices are promoted and developed.
6. Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and carrying out the functions of a biosphere reserve.
7. In addition, provisions should be made for:
  - a. mechanisms to manage human use and activities in the buffer zone or zones;
  - b. a management policy or plan for the area as a biosphere reserve;
  - c. a designated authority or mechanism to implement this policy or plan;
  - d. programmes for research, monitoring, education, and training.

Source: <https://unesdoc.unesco.org/ark:/48223/pf0000373378>

# PHASE 2: PRE-ANALYSIS AND PROCESS

Here are some general steps that may be considered in establishing a Biosphere Reserve:

## Preliminary Assessment

Identify a potential area that meets the criteria for a Biosphere Reserve. This area should showcase a balance between conservation, sustainable development, and logistic feasibility. Identify an area with a unique combination of ecosystems, biodiversity, and cultural values and a strong identity. Consider areas that are representative of Nordic natural ecosystems. The area should be representative of its biogeographic region and significant for biodiversity. Governance structures should be effective, democratic, and inclusive of various stakeholders.

## Stakeholder Engagement

Engage the local community, governmental authorities, NGOs, and other stakeholders to ensure their support and involvement in the process. Community participation is a key element in the success of a biosphere reserve.

## Feasibility Study

Establishing a Biosphere Reserve is a process that requires collaboration among various stakeholders and adherence to international standards. The specific steps may vary slightly depending on the country and its regulatory framework. Local context, cultural considerations, and community engagement are critical factors in the success of a Biosphere Reserve in the Nordic countries or any other region. Conduct a feasibility study to assess the ecological, social, and economic aspects of the proposed area. Evaluate the biodiversity, ecosystems, and cultural significance.



## **Funding and Finance – also in the long run!**

Diverse funding sources should be identified before and during the nomination process.

Long-term core funding is essential for effective implementation and should guarantee salaries and support critical meetings.

## **Zonation and Management Planning**

Develop a management policy (strategy) or plan outlining how the area will be managed to promote sustainable development. This document should address sustainable development goals, conservation strategies, and community involvement. It should include strategies for biodiversity conservation, sustainable resource management, and socio-economic development. Involve stakeholders in establishing a strategy/management plan, reflecting the goals and activities, and showcasing how people can contribute.

The design of a biosphere reserve includes zoning to delineate different areas for core conservation, buffer zones, and transition areas.

Biosphere reserves have three different zones:

### **Core areas**

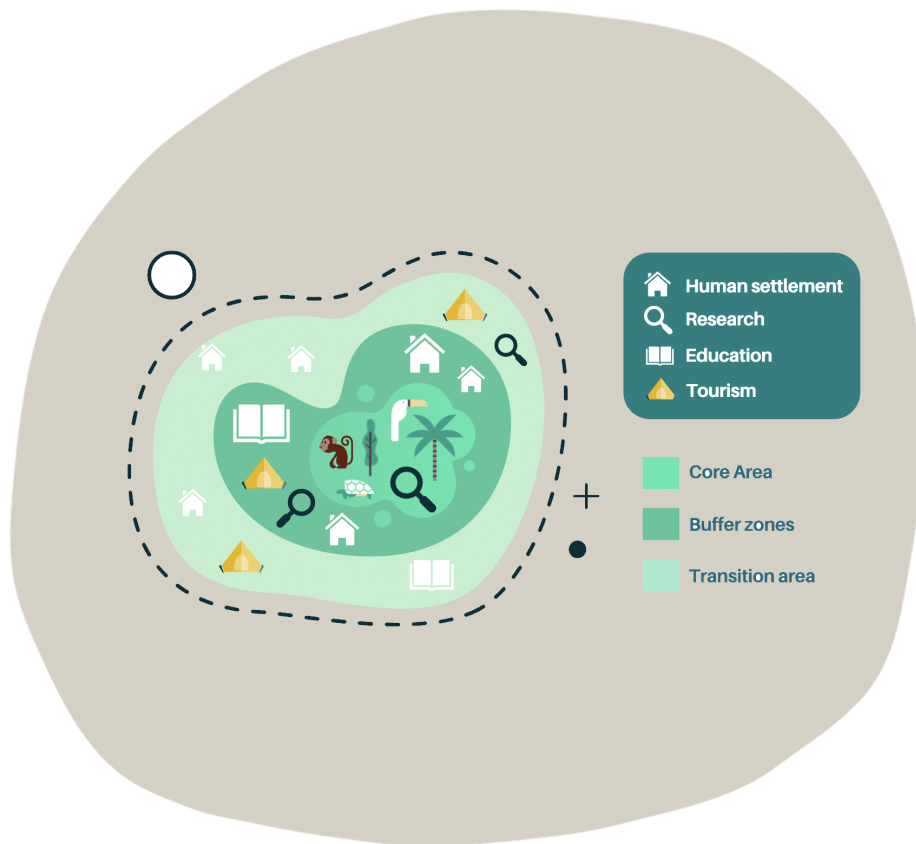
They comprise a strictly protected zone, or zones, that contribute to the conservation of landscapes, ecosystems, species and genetic variation.

## Buffer zones

They surround or adjoin the core area(s), and are used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education.

## Transition area

The transition area is where community foster socio-culturally and ecologically sustainable economic and human activities.



Source: <https://unesdoc.unesco.org/ark:/48223/pf0000373378>

## Nomination Proposal

Develop a nomination proposal that outlines the boundaries, objectives, and management plan for the Biosphere Reserve. This proposal should align with the criteria and technical guidelines.

## **Obtain Approval from the National Committee**

Work closely with national UNESCO MAB committees if you have one (e.g. Norway and Sweden) to obtain their approval and support. Remember that each Nordic nation has its own procedures and requirements related to UNESCO's MAB Programme, so it is important to collaborate closely with national authorities and MAB committees.

## **Government Approval**

Obtain approval from the relevant national governmental authorities for the establishment of the Biosphere Reserve. This may involve coordination with multiple government agencies at national, regional and local levels.

## **International Coordination**

Coordinate with international organizations, including UNESCO, to ensure that the proposed Biosphere Reserve aligns with global standards and guidelines.

## **Monitoring and Research**

Implement monitoring and research programs to track the ecological and social impacts of the Biosphere Reserve. This helps in adaptive management and continuous improvement.

## **Develop Educational Programs**

Develop educational programs and outreach initiatives to raise awareness among local communities and visitors about the importance of the Biosphere Reserve and the need for sustainable practices.

## **Implementation and Evaluation**

Begin the implementation of the management plan and regularly evaluate its effectiveness. Adapt the plan as needed based on the results of monitoring and feedback from stakeholders.

# PHASE 3: APPLICATION

Biosphere reserves are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located. Their status is internationally recognized. Biosphere reserves are designated under the intergovernmental MAB Programme by the Director-General of UNESCO following the decisions of the MAB International Coordinating Council (MAB ICC) Source: <https://en.unesco.org/biosphere/designation>.

Following the decision, a nomination paper will be written. Example of nomination papers:

Source: <https://www.biosphere.im/biosphere/unesco-nomination-papers>

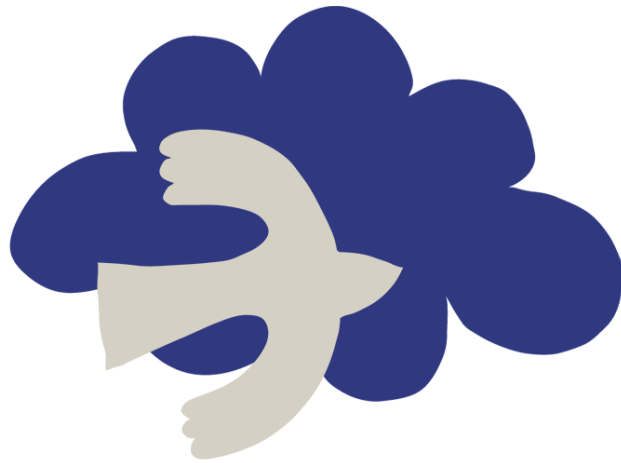
## Designation procedure

Biosphere reserves are designated for inclusion in the Network by the International Co-ordinating Council (ICC) of the MAB Programme in accordance with the following procedure (Article 5):

- a. States, through National MAB Committees where appropriate, forward nominations with supporting documentation to the secretariat after having reviewed potential sites, taking into account the criteria as defined in Article 4
- b. the secretariat verifies the content and supported documentation: in the case of incomplete nomination, the secretariat requests the missing information from the nominating State
- c. nominations will be considered by the Advisory Committee for Biosphere reserves for recommendation to ICC
- d. ICC of the MAB Programme decides which nominations should be designated. The Director-General of UNESCO notifies the State concerned of the decision of ICC

An application must be submitted by the end of September, to (if successful) be approved the following year at the next session of the MAB-ICC.

Please reach out to existing biosphere reserves to learn from their experiences.



## Periodic review

Finally, it must be noted that following a successful approval of an application to become a UNESCO Biosphere Reserve, regular periodic reviews must be done in order to secure the quality of the work.

In other words, keep in mind that the work requires regular monitoring, which takes place every five years. To get an understanding of this task, it can be informative to look at some periodic reviews that have been done recently:

[Vanerkulle](#)

[Vattenriket](#)

[Clayoquot](#)

[North Devon](#)

# ABOUT MAB LAB

This publication presents findings from the Nordic Council of Ministers - Nordic Working Group for Biological Diversity funded project *MAB LAB: Man, and the Biosphere - Local Actions for the new global framework for Biodiversity*. The project is based on a fundamental ambition to foster and support local solutions to global challenges by increasing the number of UNESCO biosphere reserves in the Nordic region.

The overall objective of the MAB-LAB project is to contribute to catalyzing the readiness of the Nordic countries for the work of implementing the new global biodiversity framework. The main findings of the project are presented in two publications:

1. A translation of the global biodiversity framework (Kunming-Montreal Global Biodiversity Framework) into a local context having the Nordic biosphere reserves as case.
2. A guide to prepare for and overcome barriers to the establishment of new biosphere reserves.

This publication is a guide to establish a UNESCO Biosphere Reserves.



## Partners and execution

The MAB LAB project has been developed through a Nordic collaboration involving the following actors:

Denmark: Møn Biosfæreområde (Katrine Dietrich)

Sweden: Vattenriket, Kristianstad (Carina Wettemark) Johanna MacTaggert, National coordinator for the Swedish MAB-program.

Norway: Nordhordland Biosfære (Kari E. Natland), The Norwegian Biosphere Committee (Eva Hauge Fontaine).

Finland: North Karelia Biosphere reserve (Vilma Lehtovaara), Skärgårdshavets biosfärområde (Katja Bonnevier)

Island: Snaefellsness Regional Park (Ragnhildur Sigurðardóttir)

The work was led by Katrine Dietrich (Møn Biosphere, DK) and the report was prepared with help from Mads Randbøll Wolff, Sustainability 2030, Nikolaj Sveistrup, URBAN AGENDA and Kari E. Natland (Nordhordland Biosphere, NO).

# About this publication

## UNESCO Biosphere Reserves – A Path to Local Holistic Sustainability

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## Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland and Åland.

Nordic co-operation has firm traditions in politics, economics and culture and plays an important role in European and international forums. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation promotes regional interests and values in a global world. The values shared by the Nordic countries help make the region one of the most innovative and competitive in the world.

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