

Kristianstads Vattenrike

Biosphere Reserve

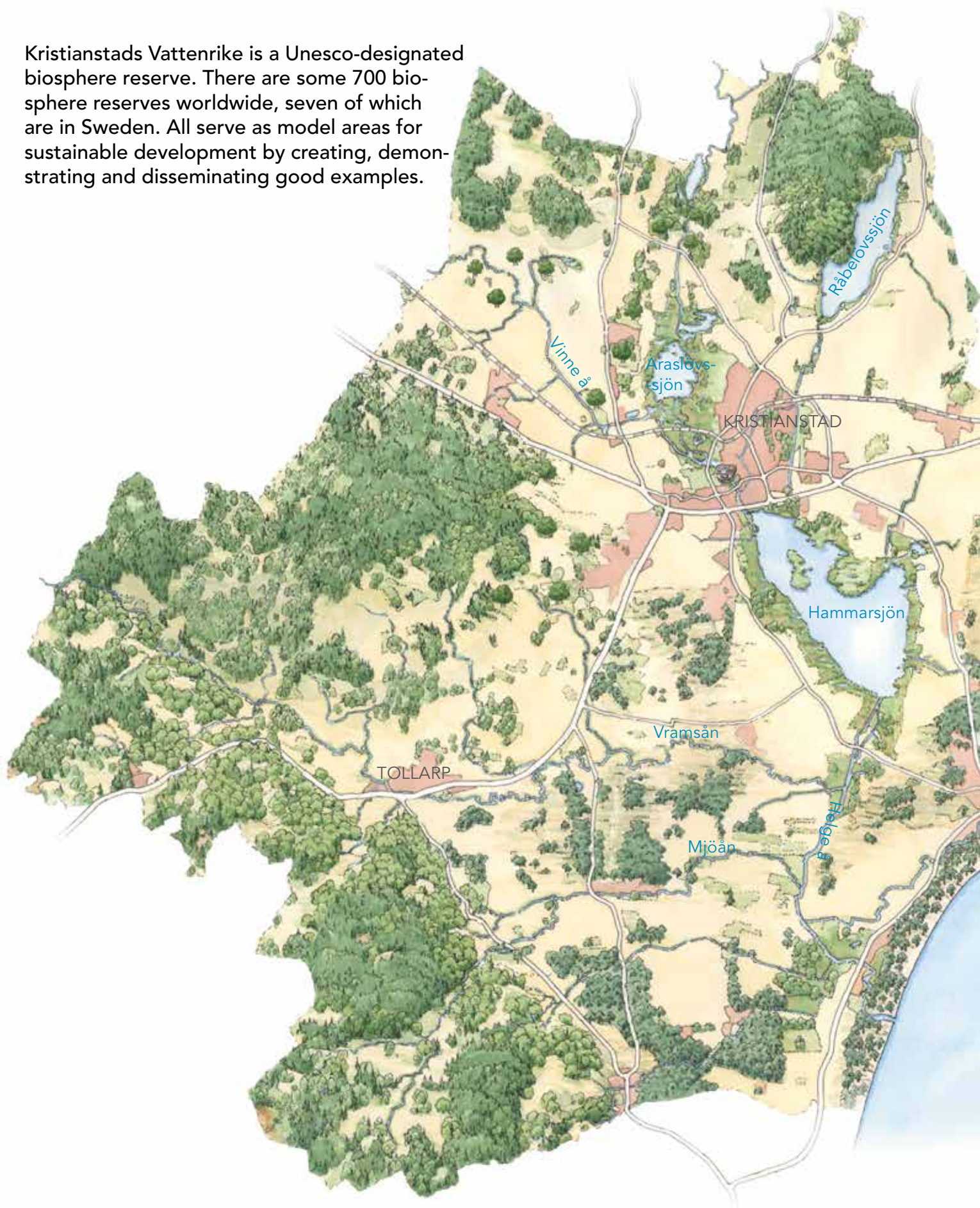
ACTION PLAN 2021-2025



Vattenriket® 

Kristianstads Vattenrike Biosphere Reserve

Kristianstads Vattenrike is a Unesco-designated biosphere reserve. There are some 700 biosphere reserves worldwide, seven of which are in Sweden. All serve as model areas for sustainable development by creating, demonstrating and disseminating good examples.



Kristianstads Vattenrike Biosphere Reserve is a model area to show how education, collaboration and participation strengthens the bonds between people and nature. Activities combine local and global perspectives and link the past to the future.

Kristianstads Vattenrike Biosphere Reserve (Vattenriket) covers two thirds of the municipality of Kristianstad, a rich cultural landscape endowed with almost every type of natural habitat to be found in Sweden.

The majestic River Helge å is a central feature. Fed by streams from the ridges and plains, it expands into Lakes Araslövssjön and Hammarsjön before reaching the sea in Hanöbukten Bay. The river is fringed by wetlands and seasonally flooded grasslands, but there are also leafy forests and dry sandy arable lands within the reserve.

Rich in species

Such variety creates numerous habitats for animals, plants and fungi. The species-rich reserve, covering less than two tenths of one percent of the area of Sweden, is a refuge for some 20 % of the nation's red-listed species!

To make Vattenriket a haven for both nature and people, Biosphere Office projects seek to conserve the area's natural values while enabling people to enjoy the benefits of nature without compromising them.

Robust ecosystems and biological diversity are key factors in combatting climate change.

Sustaining and celebrating the rich diversity in Vattenriket also helps mitigate the effects of climate change.

Rich in knowledge

To conserve and strengthen biological diversity and ecosystem services we need to learn more about the

landscape and nature, for example through research and sharing new insights. The Biosphere Office conducts inventories, publishes reports, works with researchers and hosts conferences. The naturum Vattenriket visitor centre provides guides, holds lectures, welcomes school visits and offers a programme of activities.

Rich in ideas

Sustainable solutions for using and conserving local natural values are developed in collaboration with landowners, business and associations. We create wetlands and restore sandy grasslands. Species diversity and efficient ecosystems help us to cope better with climate change and other challenges.

Rich in experiences

Enabling people to experience nature inspires more of them to help conserve it. We have around 20 visitor sites with outdoor museums, birdwatching towers and marked trails. The naturum visitor centre has displays, meeting rooms and a restaurant. Here we explain how the biosphere reserve works and encourage visitors to explore the area for themselves.

Rich in enjoyment

Humour and fun are keywords in our work. We believe the way to shift mindsets towards sustainable social development goes via the heart, by arousing curiosity and stimulating interest.

Rich in water

Today the area's wetlands are no longer seen as a problem but as a valuable natural resource – proof of a change in attitude towards the sustainable use of nature's resources.

Our work is defined by expertise, committed co-workers and good stewardship. Genuine enthusiasm and a great team spirit make Kristianstads Vattenrike Biosphere Reserve a strong brand and an international good example of development that benefits both nature and people.



United Nations
Educational, Scientific and
Cultural Organization



Vattenriket®

Vattenriket – This is what we do

In 2005 Kristianstads Vattenrike (Vattenriket) was accorded biosphere reserve status by Unesco as an internationally recognised model area for sustainable development. Kristianstad Municipality has accepted the challenge of showing in practice how development and conservation can go hand in hand. Vattenriket is not only a motor in the municipality's sustainability work, but also an important element of the Kristianstad brand and a resource for creating an attractive and sustainable environment to live in, to work in and to visit.

Our Action Plan for 2021–25 sets out the focus of Biosphere Office work over the next five years. Priorities will be reviewed as new opportunities arise. Work is based on the goals of Unesco's Man and the Biosphere (MAB) Strategy for 2015–2025, Kristianstad Municipality's vision and strategic road map, and the Swedish Environmental Protection Agency's national guidelines for naturum visitor centres.

Benefiting nature and people

Like all 700 biosphere reserves worldwide Vattenriket works to conserve, develop and support local natural values. We do so under the motto 'Benefiting nature and people' by creating, demonstrating and sharing good examples.

Vision for Unesco's biosphere programme

Our vision is a world where people are aware of their shared future and the impact they have on our planet. We act collectively and responsibly to create thriving, sustainable societies that are in harmony with nature.

A tool in Kristianstad Municipality's strategic road map

Kristianstad Municipality's strategic road map emphasises the importance of ecological sustainability. A 'blue-green' structure with low climate impact and nature that is healthy and diverse are key to making the region attractive.

Vattenriket's action plan is not only an important tool for achieving the goals of this vision and the municipal road map, but also a step towards meeting global sustainability targets, environmental goals and recreational objectives.

UN global development goals – Agenda 2030

As ecological sustainability is crucial for achieving social and economic sustainability, so-called green and blue values are the foundation for all sustainability work. Biosphere reserves support global development goals by serving as neutral forums for collaboration, building bridges between sectors, maintaining efficient ecosystems, promoting education for sustainable development, and finding local solutions to global challenges.

Naturum – meeting place and showcase

Swedish EPA guidelines describe naturum visitor centres as gateways to nature. The naturum Vattenriket fills multiple functions. It is a meeting place and a showcase for our biosphere activities, while also encouraging visitors to explore the local natural surroundings for themselves.

The aims of the Unesco MAB Strategy 2015-2025

- Conserve biodiversity
- Restore and enhance ecosystem services
- Foster sustainable use of natural resource
- Build sustainable, equitable economies and thriving societies
- Develop tools to mitigate the effects of climate change and other aspects of global environmental change
- Promote research and education about biodiversity and sustainability

'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'

*The UN World Commission on
Environment and Development.*

Good examples that inspire

Every biosphere reserve has a biosphere office, led by a coordinator, to put the Unesco concept into practice at local level. Work in Vattenriket's Biosphere Office focuses on 10 landscape themes with high natural values. A Consultation Group promotes dialogue and collaboration among landowners, authorities, organisations, etc. to support the various projects, each designed to serve as an example to inspire others.

Dialogue and collaboration

Work is predicated on broad local support and cooperation with local, regional, national and international stakeholders: associations, local authorities, government ministries, schools, entrepreneurs and landowners. Kristianstad Municipality and the County Administrative Board of

Skåne have also signed a declaration of intent in which both confirm their intention to continue close cooperation in matters relating to Kristianstads Vattenrike Biosphere Reserve.

Towards a sustainable mindset

The overall long-term objective of Vattenriket's activities is to create a shift in attitude towards economic, ecological and social sustainability. Work is based on certain themes that are made clear in activities that extend from initiatives for naturum programmes to specific concrete measures. Over the course of the next five years the current 'Explore Vattenriket' theme will be replaced by 'The Sea' and a focus on the Baltic Sea and coastal areas of Hanöbukten Bay. As always, activities embrace six core values: richness in species, knowledge, ideas, experiences, enjoyment – and water!



GLOBAL GOALS (SDGS). An efficient ecosystem is the basis for well-being and economic development. SDG 17 is key to achieving the global goals. Here biosphere reserves play a central role.

Five focus areas

Activities undertaken by Kristianstads Vattenrike Biosphere Reserve extend over five focus areas, each constituting its own chapter in the Action Plan.



Healthy ecosystems and rich biodiversity, pages 7–9

- Seasonally flooded grasslands
- Unique sandy grasslands
- Sustainable forests
- Urban nature



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- Better water quality and greater diversity
- A healthy Baltic Sea



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- Letting nature flourish in farmland
- New innovation – 'Bream-time



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- The feel-good factor
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Healthy ecosystems and rich biodiversity



Kristianstads Vattenrike's rich and varied nature is home to unique biodiversity. The reserve is a mosaic of almost every type of Swedish landscape apart from mountains. Such variety provides habitats for many uncommon plants, animals and fungi.

The varied landscape provides a number of essential services – so called ecosystem services – for us humans. Conserving and developing biodiversity and ecosystems by strengthening ecosystem services and using natural resources responsibly is absolutely vital. This is also one of the most important goals in the Unesco biosphere programme.

Focus area: Healthy ecosystems and rich biodiversity

Seasonally flooded grasslands

Since the Biosphere Office was established in 1989, it has restored many of Vattenriket's seasonally flooded grasslands, which are unique in terms of their extent and biodiversity. Today large contiguous areas are managed with grazing and haymaking. The species-rich grasslands are home to many threatened birds, mammals, amphibians, insects and plants (black-tailed godwit, fen ragwort, natterjack toad, etc.) and important resting places for wetland ducks, geese, cranes and waders. Central to the Biosphere Office's tasks is the commitment to work with local farmers and the County Administrative Board to conserve these grasslands and develop the knowledge needed to manage and develop them.

Since 2000, probably for several related reasons, ground-nester numbers have dwindled, leaving the eggs and fledglings of today's small, isolated populations vulnerable to predators. In 2019, inspired by the success of a similar initiative on the island of Öland, the Biosphere Office embarked on a project with the County Administrative Board, Skåne Hunting Association and Kristianstad-Bromölla Game Preservation Association to improve survival rates



by controlling predators (fox, badger, crows, etc.) on the grasslands.

It is also important to restore adjacent areas and improve access to food for wading birds. One important initiative has been 'rewetting' to retain water longer on the seasonally flooded grasslands in spring. The effects of these measures are being followed up by monitoring the nesting success of waders.



Unique sandy grasslands

The unique diversity of Vattenriket's sandy grasslands – remnants of an open landscape worked by humans since time immemorial – is of international importance and deliver several essential ecosystem services. The Biosphere Office works to conserve these values for future generations by developing management techniques and conducting major restorations.

We work with various partners to continuously manage sandy grasslands with high natural and cultural values in the biosphere reserve's agricultural landscape, recreation areas, pine forests, along roads, in private gardens and on golf courses. Information and management work requires both general and more specific advice and measures. It is particularly important to alert those working with physical planning to the values of the sandy grasslands.

Local involvement is key. Ecologists and nature educators introduce schoolchildren to nature management techniques, homeowners are encouraged to safeguard the natural values in their gardens, and municipal green areas are managed in conservation-friendly ways. Certain specific projects (a fund for supplying oak fence posts to farmers, field trips etc.) are carried out to protect threatened species.

Sustainable forests

Vattenriket's forests provide unique habitats for flora and fauna. They are also important as carbon sinks, as a source of renewable raw materials and for nature tourism and recreation. Specially adapted management systems are essential to conserve and develop these ecosystem services, so the Biosphere Office is working with the Land Development Unit on a plan for responsibly managing municipal forest holdings to make sustainable use of the values the forest produces.

To conserve and develop the most important municipal forests and grazing grounds a review of the municipal nature conservation fund is needed and new land areas must be set aside. Recreational areas and natural environments of special value must be protected as nature reserves. In 2020 the Biosphere Office was tasked with providing data on which to base decisions and

management plans for two new urban nature reserves: Ekenabben/Kvarnäs and Södra Äspet.

The 'Sustainable Forests' environmental quality objective recognises hard deadwood as a key indicator. Today this habitat for wood-inhabiting insects, fungi, mosses and lichens is in short supply in most types of forest. Part of our work is to spread knowledge about how important deadwood is for sustainable forests.

Oak trees make an important contribution to rich biodiversity in Vattenriket's forests. Through various targeted efforts we will plant oak seedlings and set up strategically located wood-mould boxes to lend wood-inhabiting insects a helping hand.

Urban nature

Nature close to built-up areas is important in many ways. It delivers ecosystem services in the form of natural and cultural experiences and is also important for pollinators. Urban nature can be species rich but must be properly managed to conserve and develop its values. It is also a key element of green infrastructure planning. The Biosphere Office has embarked on an exciting collaboration with the municipal Public Works Department to manage certain footpaths and cycle paths in a conservation-friendly way. Naturum Vattenriket and several visitor sites close to urban areas play an important role in spreading information and

arousing interest in experiencing nature.

For many years the Biosphere Office has been working closely with the Public Works Dept. to reintroduce wild flowers along the roads into Åhus by reverting to traditional cultivation methods. The success of this approach – a profusion of flowers and rich biodiversity – has inspired similar initiatives in other communities (Vä, Degeberga and Tollarp) and also adjacent to the naturum visitor centre. It is important to link these oases of green infrastructure and make them accessible for recreational use.



Water in balance from source to sea



The majestic River Helge å, fed by rivers and streams of varying character, runs through the wetlands and seasonally flooded grasslands of the biosphere reserve from Torsebro in the north to Hanöbukten Bay in the south-east. Numerous habitats and great biodiversity deliver many important ecosystem services.

Work to promote the sustainable use of water, create carbon sinks and retain water for longer in the landscape conserves species diversity and ecosystem services, and helps to mitigate the effects of climate change.

Broad collaboration with stakeholders at local, national and international level is taking place to combat eutrophication and brownification in Hanöbukten Bay and breathe new life into the Baltic Sea.

More water in the landscape

Trying to restore a more natural hydrology in the drainage basin is one of the main challenges we face in the work ahead of us. As a side effect, success in this respect will also result in more ecosystem services which are important for both nature and people.

Slowing the passage of water in the drainage basin evens out high flows. This means that water levels vary more slowly and protects against flooding downstream.

This is not the only aspect of these measures that helps mitigate the effects of climate change. Rewetting ditched peatlands reduces emissions of greenhouse gases and the damp ground acts as a carbon sink. Holding water within the landscape also has a positive effect on groundwater formation, increases the yield from forested land, reduces the risk of forest fires and brownification and provides a good basis for biodiversity.

Better water quality and greater diversity

The Biosphere Office has long been involved in creating wetlands to help reduce nutrient run-off. These efforts will be fine-tuned to capture nutrients as high up in the system as possible. Parallel with this, selective fishing will be used to help improve the water status in our lakes.

To maintain and improve opportunities for high biodiversity, we will collaborate with various stakeholders on biotope conservation measures. Laying spawning gravel and brushwood bundles improves conditions for perch and pike. To boost catfish numbers in the River Helge å we will continue to monitor the development of the population, for example by individually marking the fish.

We have initiated collaboration with researchers from

several educational establishments to evaluate the function and optimise the design of these measures. This includes a study to investigate and ultimately reduce the leaching of iron and aluminium from ditched land in order to protect and enhance high natural values. Together with a raft of other measures, work to follow up and optimise the design of wetlands will bring us closer to a sustainable use of water resources.



A healthy Baltic Sea

The coastal areas of Hanöbukten Bay have always been important for fishing and shipping. The health of the sea is hugely dependent on human activities on shore, so regenerating the vitality of the Baltic Sea has been an important objective ever since our work started.

Eelgrass meadows are important nurseries for many sea creatures. In collaboration with WWF, the Biosphere Office will create new eelgrass meadows and work to inform the public about the importance of the sea and the marine environment. Measures includes plans for a 'Day of the Sea' and a 'BioBlitz'. The Biosphere for Baltic network is another example of collaboration to improve Baltic Sea habitats by sharing experience and knowledge among biosphere reserves in the Baltic Sea region about projects to improve water quality and promote sustainable tourism and lifelong learning.



Changing attitudes, spreading knowledge



The long-term aim of biosphere work is to create a shift in attitude towards sustainable social development in line with Agenda 2030 global goals. Communication plays a key role in this.

Promoting research and education in biodiversity and sustainability is one of the Unesco biosphere programme's goals. New knowledge is produced and shared continuously in Vattenriket. The Biosphere Office works with educational establishments in Sweden and abroad, with Kristianstad University as a key research node.

The naturum is a natural meeting place and showcase for our activities. Visitors learn about the biosphere reserve and are encouraged to explore the reserve's 21 visitor sites, where they will find more information as well as marked trails and observation towers.

Developing local links and strengthening local involvement through consultation groups, collaboration with societies and training our own Biosphere Ambassadors are important aspects of our work.



Naturum – meeting place and showcase

The naturum Vattenriket has served as the biosphere reserve's visitor centre since 2010, welcoming over a million visitors and becoming an iconic symbol of Kristianstad. The building, with free admission to its displays, auditorium and café, is located in wetlands close to the city centre in the heart of Vattenriket. Exhibits appeal to a broad target group and give visitors a tempting glimpse of what awaits them in the biosphere reserve. Well-trained nature interpreters and educators are on hand to explain more about the reserve and its projects, and to encourage visitors to experience Vattenriket for themselves.



Broad programmes help to change attitudes

One of the most important tasks of the naturum Vattenriket is to create a shift in attitudes towards a more sustainable society. We do this through displays that focus on the values of Vattenriket, through outreach programmes that fascinate and inspire, and through lectures and guided tours that focus on our local nature, the biosphere reserve and biosphere projects.

Accessible, welcoming and inspiring

In its agreement with Kristianstad Municipality the Swedish EPA (owner of the naturum trademark) specifies the criteria for the scope of naturum activities and the quality of the display. A new agreement is due to be signed during the next five years. Work to developing activities – based on values that require the naturum to be accessible, welcoming and inspiring – is ongoing.

Generous opening hours and lots to see and do

The naturum will continue to have generous opening hours and free admission. Every visit must be safe for both visitors and staff, with clear guidelines for dealing with unexpected situations, such as the corona pandemic. Work will continue on a thematic basis: the current theme – 'Explore Vattenriket' – will be followed by 'The Sea', each with its own corresponding programme of events, displays and other educational activities. Each year we conduct some 500 activities across a broad span, both in-house initiatives and together with associations.

Updated exhibitions

Every year the well-maintained naturum exhibition is updated with new modules. Over the next five years our sights are set on a new film for visitors riding the Optrerx. Together with the café, the naturum aims to remain a major tourist attraction in Kristianstad, while maintaining its status as the standout venue for meetings about the biosphere reserve, with the auditorium playing a key role.



Focus area: Changing attitudes, spreading knowledge

Exploring Vattenriket

The naturum visitor centre is the natural starting point for discovering all that Vattenriket has to offer, but encouraging people to experience the varied landscape and rich diversity of the biosphere reserve for themselves is an important part of our work that increases interest in conservation and helps create a shift in attitude towards sustainable social development.

Vattenriket's 21 visitor sites with information boards, observation towers, marked trails and picnic sites provide easy access to the biosphere reserve and spread knowledge about the different localities' natural and cultural history. Seven sites are outdoor museums with visual and tactile displays and audio-guides. We have worked closely with the municipal Public Works Department to create an infrastructure at several sites to facilitate access for visitors with functional variations.

Information about visitor sites is available on the Vattenriket homepage and in the Visitors' Guide. All sites are searchable on Google maps. We have also produced a series of maps showing where to go walking, cycling, canoeing and fishing in Vattenriket.

Fairy-tale trails and outdoor games

Increasing numbers of people are using nature for recreation and recuperation. Our visitor sites will continue to

serve as nodes in the biosphere reserve where visitors can experience nature and learn more about it. LONA funding will create a 'fairy-tale trail' at Norra Lingenäset, a nature game at Ekenabben and a nature trail adjacent to the naturum.

In the next few years we plan to review the potential for visitor sites at Torsebros, Åbjär and elsewhere. We are also working on plans to provide information about ongoing Biosphere Office conservation projects at project sites.

Together with the Public Works Department, the Culture & Leisure Administration and local associations, we are continuing to develop opportunities to hike, canoe, cycle, fish and go birdwatching.

The Skåne Trail in Vattenriket

A new walking trail through Vattenriket, the SL6 section of the Skåne Trail, is currently taking shape. The first stretch was inaugurated in spring 2020. When completed in 2023, the entire sub-trail will link 10 of Vattenriket's visitor sites.

As part of the 2021 ARKNAT architecture festival, students will build shelters they have designed at three sites in Skåne, including one along the SL6 Skåne Trail in Kristianstad.



Focus area: Changing attitudes, spreading knowledge

Focus on nature education

One important aspect of work at naturum Vattenriket is to welcome teachers and groups from pre-schoolers to university students. Our resident nature educator has worked with 850 classes and more than 17,000 pupils, and a Biosphere Camp for 10–14-year olds is arranged every year. Such educational activities help to change attitudes by encouraging participants to act mindfully and work for sustainable development.

Over each of the next five years our nature educator will welcome around 80 school classes and their teachers, and we will continue to offer and develop the biosphere camps. Collaboration will continue with Kristianstad University's teacher training programme and Vattenriket's ecologists, and we plan to extend collaboration with researchers from Lund University and the Swedish Anglers' Association.

We will develop more pedagogical tools and methods to inspire schoolchildren and support teachers. A new creative environment will be built at naturum, using technology that encourages visitors to inquire, investigate and marvel at what they discover. Nature education activities are part of LONA and WWF projects. We will develop new Biosphere Classrooms, conduct teaching and nature conservation measures with schoolchildren, and have ambitions to develop a tool for mapping ecosystem services along the coast.



New knowledge is essential for success

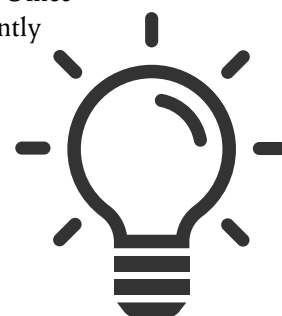
One of the aims of Unesco's biosphere programme is to promote research and education in the fields of biodiversity and sustainability. Kristianstad University has a key role as a research node in the biosphere reserve.

Researchers from universities in Kristianstad, Lund, Stockholm and elsewhere have studied various aspects of Kristianstads Vattenrike Biosphere Reserve – everything from working methods and contexts such as adaptive co-management, pedagogics and changing attitudes to ecosystem services and the benefits of wetlands. The Biosphere Office supports this research by participating in the studies, arranging meetings and sharing contacts.

Work to increase knowledge about the biosphere reserve's natural and cultural values continues. There are numerous reference areas and sampling points for environmental monitoring and research. In addition, the Biosphere Office will continue to work with other stakeholders to

initiate projects to monitor birds that live on the seasonally flooded grasslands, plants, insects, catfish and mussels. New insights are shared via the Vattenriket homepage, in reports, meetings, guided tours, lectures and conferences at naturum. Publications in the Vattenriket i fokus series spread the results to authorities, libraries, schools, public servants and politicians.

Each November the Biosphere Office and Kristianstad University jointly arrange a Biosphere Research Conference to disseminate new findings linked to the work of the biosphere reserve. Work to spread new insights via various channels will continue.



Broad communication spreads good examples

The international action plan for biosphere reserves identifies communication as one of four main aims to fulfil Unesco criteria. Biosphere reserves are to generate, show and share good examples of sustainable social development. To do this they need to produce communication strategies, inform via their homepages and attract interest and spread knowledge via social media.

Vattenriket's communication explains what is involved in conserving and developing nature through various projects. It also spreads knowledge about the natural values of the area and inspires people to visit the naturum and the visitor sites. We reach our target groups through a variety of channels – guide books, reports, website, films, information signs, etc.

The popular Vattenriket website has useful tips for visitors, descriptions of our local nature and details of the various biosphere activities. We have Facebook

and Instagram followers locally, nationally and abroad and we are able to use social media to show the full breadth of our biosphere work. On #vattenriket visitors can share their photos on the Vattenriket homepage and in the displays in the naturum.

News about biosphere work is published on the homepage and sent as a quarterly newsletter to those registering their interest. Emails detailing naturum activities are sent more regularly. We also issue press releases and hold press meetings to inform about our activities. In addition we meet the public through guided tours and study visits, in educational activities and through various forms of collaboration.

We will continue to communicate through multiple channels to reach many different target groups. In the future we will develop our digital presence with tours of the naturum and visitor sites, nature interpretation activities and live broadcasts.



Local involvement, pride and pleasure

The long-term objective of Kristianstads Vattenrike Biosphere Reserve is to create a shift in attitude towards sustainable social development by informing, inspiring and involving people in different ways.

Biosphere Ambassadors spread knowledge

Our Biosphere Ambassadors – currently 280 in number – play a key role in this. After a four-part training course acquainting them with the area and biosphere work, they are able to spread knowledge about Vattenriket, inspire others to become involved, and assist in practical nature conservation activities. We will continue this initiative, maybe even offering more advanced, specialist courses for groups with different professional skills.

Consultation Group and Programme Committee

The work of the biosphere reserve is endorsed by the Kristianstads Vattenrike Consultation Group – an advisory body of some 30 associations, public servants and politicians. The naturum's Programme Committee engages various local associations and other players in Vattenriket's own activities.

Joint campaign with the Friends of Vattenriket

The Friends of Vattenriket, a voluntary association set up in 2010 to provide ideas and funding to support the



biosphere reserve's work, encourages various forms of local involvement and plays an important part in our activities.

'I love Vattenriket' is a new joint initiative to enable residents, visitors and companies to demonstrate their support. The campaign emphasises Vattenriket's role, both as a biosphere reserve and a key component of the Kristianstad brand. It also enables Friends of Vattenriket to collect money for the association by permitting sponsors to use the 'I love Vattenriket' slogan.

The 'Big Vattenriket Clean-up' – a litter-picking initiative together with local associations – is an example of how involvement at local level helps meet the UN's global SDGs. In the future the project may be extended to include the Right of Public Access.



Sustainable business, agriculture and hospitality



Kristianstads Vattenrike Biosphere Reserve works for sustainable development from an ecological, economic and social perspective – development that is good for both nature and people, using and developing nature and natural resources in a sustainable manner.

Nature tourism is a rapidly growing trend. There is great potential for developing Vattenriket as a node for tourism in harmony with nature, thus supporting Kristianstad's profile as a sustainable destination.

Kristianstad Plain has long been a centre for agriculture. Local, sustainable production is important here. Below the fertile soils is northern Europe's largest groundwater reservoir, a life-giving resource for drinking water, irrigation and production. Various stakeholders are liaising to find solutions to reduce water consumption. The key to this and to strengthening ecosystem services lies in innovation and climate-smart thinking, along with new crops and new food traditions.



Focus area: Sustainable business, agriculture and hospitality

Sustainable tourism

Kristianstads Vattenrike Biosphere Reserve and the naturum attract 250,000 visitors a year. Nature tourism is an expanding sector of the hospitality industry and Vattenriket is key to developing Kristianstad as a tourist destination by promoting nature tourism and creating the right conditions for sustainable business.

The naturum and Vattenriket's 21 visitor sites with marked trails, boardwalks, observation towers, information signs and picnic sites, complemented by various activities and nature interpretations services, are a resource for the local tourist industry.

Over the next five years we will complete the 150 km SL6 sub-trail of the Skåne Trail that links many visitor sites and accommodation facilities. 'On the Water in Vattenriket' is a project to improve opportunities for visitors to experience nature from the water, with jetties and launch sites for boats and canoes. The 'Fishing in Vattenriket' project provides fishing jetties and maps for anglers.

By training Biosphere Ambassadors we can increase knowledge among entrepreneurs and their customers about biosphere work and the area's natural values. A 'Sustainable Weekend in Vattenriket' initiative will offer tourist packages that combine experiences of nature and fascinating tales. Visitors will be able to explore the nature and culture of Vattenriket on foot along the Skåne Trail, by bike along the South-East Trail and by canoe on the River Helge å, passing traditionally managed seasonally flooded grasslands and discovering local eel-fishing traditions.



Over the next five years the Biosphere Office will continue its work to develop sustainable tourism by providing support for sustainable business ideas from local entrepreneurs.

Close encounters with cranes at Pulken

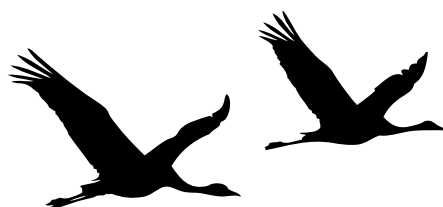
Every year tens of thousands of cranes migrating from Spain to nest in Scandinavia land in north-east Skåne and hungrily devour newly sown barley and wheat. To prevent crop damage, a crane management project supported by the Biosphere Office, the County Administrative Board, the KLF agricultural cooperative, farmers and North-East Skåne Ornithologists' Club provides diversionary feeding on a field adjacent to the Pulken outdoor museum.

Visitors and ornithologists generate income for the local tourist industry. The cranes attract huge attention from nature-lovers, who watch the birds' courting rituals from the outdoor museum, which has information about the cranes and the history of the location. Pulken's observation tower is adapted for wheelchair users.

In recent years we have worked with local associations to

provide crane wardens who inform visitors about the birds and encourage them to visit other sites in Vattenriket. The Biosphere Office will continue to work to enable Pulken to serve as a B&B for cranes, in the interests of farmers, visitors, entrepreneurs and the birds themselves.

We will work with the municipality's tourism developers to make Pulken a more sustainable destination, for example by possibly offering a shuttle bus service from the nearby town of Åhus.



Focus area: Sustainable business, agriculture and hospitality

Tomorrow's farming will use less water

Farming is big business in the biosphere reserve, with numerous agricultural companies specialising in crops, milk or meat production. Vattenriket's high quality groundwater is used for cultivation, production and consumption, and irrigation is essential for many agricultural activities.

As climate change makes itself felt, the sustainable use of water resources is becoming increasingly important in economic and environmental terms, as is climate-smart agriculture that involves the use of sophisticated cultivation methods and cover crops.

More knowledge, collaboration and new methodologies are essential to equip agriculture to meet the future. We are continuing to work closely with the agricultural consultants HIR, the Federation of Swedish Farmers, agricultural companies and Kristianstad University on these important issues.



Letting nature flourish in farmland



Rich biodiversity in farmland provides many free services and contributes to robust ecosystems. The Biosphere Office works with Kristianstad University and local companies on projects to support biodiversity through conventional farming practices, for example by developing new concepts on model farms.

Pollination is an ecosystem service essential for food production. Changes to farmland and farming methods have put many pollinators under great stress. To help pollinating insects the Biosphere Office is part of the 'Let Skåne Blossom' project run by HIR Skåne, where sponsored seed-corn provides an incentive for farmers to sow flowering plants along the edges of fields and on fallow land.

The flowering strips are home to predatory beetles, parasitoid wasps and hoverflies. These natural enemies of noxious insects reduce the need for chemical pesticides. Flowering strips also create dispersal corridors in the landscape and provide protection, homes and food for birds and wild animals. The Biosphere Office will communicate this concept to the general public via information boards and seed packets.

The importance of local production has been highlighted by the pandemic, and we will continue to support local initiatives to cultivate and sell produce from the biosphere reserve and to develop local food experiences.

Sustainable innovations – ‘Bream-time’

One of the main focus areas for biosphere work is to inspire innovations that showcase the biosphere reserve as an arena for sustainable development. Broad collaboration with Kristianstad University, Krinova Science Park and local, national and international stakeholders is key to this work. The aim is to develop local products and innovations that open up new opportunities for entrepreneurs.

Bream is an underexploited resource. Selective fishing measures to produce clearer water in Lake Råbelövssjön include catches of cyprinids such as bream. Today this fish is used to produce biogas, but it is hoped that catches can

be used as a protein source for food production at some point in the future.

Historically, bream has been caught for food in Sweden and it is still eaten in many parts of the world. The ‘Bream-time’ project is investigating the potential to reclaim bream’s status as a food-fish and turn what is today’s problem into tomorrow’s sustainably used resource.



New dishes with raw ingredients from Vattenriket are created at ‘food jams’ together with local players.

Health, quality of life and social development



3 GOOD HEALTH
AND WELL-BEING



10 REDUCED
INEQUALITIES



11 SUSTAINABLE CITIES
AND COMMUNITIES



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Vattenriket's fantastic nature, exciting cultural history and opportunities for outdoor recreation are important ingredients in a good quality of life. Research shows that nature has a positive effect on us humans, and that time spent in natural surroundings reduces stress and anxiety.

Biosphere reserves serve as model areas for sustainable social development. Urban planning and development play a key role in this respect. Integrating and developing urban nature, strengthening ecosystem services and taking initiatives to mitigate the effects of climate change when planning newbuilds are all factors that contribute to sustainability and improve quality of life.

Unesco has tasked those engaged in biosphere work with helping to create sustainable, equitable economies and thriving societies. Nature can be a meeting place for people of all ages and cultures.

Focus area: Health, quality of life and social development

The feel-good factor

Kristianstad is fortunate to have such fantastic natural surroundings. Research shows that nature has a calming, invigorating and healing effect. Nature's ability to relax and refresh is increasingly important in a society where stress levels and sickness rates are high.

The values of nature are evident at our 21 visitor sites. We want as many people as possible, regardless of age or functional variation, to be able to experience Vattenriket as a source of calm and relaxation. This includes improving accessibility at our visitor sites over the next five years by making paths, toilets and barbecue sites accessible for wheelchair users and children's buggies.

Along the SL6 sub-trail of the Skåne Trail we will enhance the experience at three visitor sites that are already easily accessible for all. There will be a Fairy-tale Path at Norra Lingenäset, a nature game for our youngest visitors at Ekenabben, and an informative and inspiring Diversity Circuit adjacent to the naturum visitor centre.

As part of the 'Vattenriket Feel-good Factor', the naturum



will continue to offer lectures, qigong and forest bathing for the general public and group bookings.

New in Sweden's nature

Nature can serve as a meeting place and gateway to integration. Naturum Vattenriket collaborates closely with Swedish for Immigrants (SFI), and many new Swedish citizens find their own way to the naturum. Some take part in our regularly recurring initiatives, such as the summer Biosphere Camp and school holiday activities like fishing and netting.

Over the next five years we will work to attract more people who are unused to spending time outdoors to our visitor sites. This may necessitate multilingual translations, guided tours in simple Swedish or with interpreters, and closer cooperation with immigrant associations. The Swedish EPA has designated 2021 'Outdoor Recrea-

tion Year'. The focus is on simple, sustainable outdoor activities in urban nature, and the target groups are those unused to spending time outdoors, primarily newcomers to Sweden and pupils in years 4 to 6.

We will work with the Culture & Leisure Administration to enable more new Swedes of school age to experience Vattenriket's great outdoors. Ideas include working with 'outdoor friends' to lower thresholds and encourage more people to engage with our fantastic nature. There will also be opportunities to test canoeing, hiking, fishing and picnicking, which we will link to information about the Right of Public Access in Sweden.

Sustainable urban planning

Nature, always close at hand in Kristianstad, plays a key role in improving quality of life, the appeal of an area and opportunities for recreation and relaxation. The many different flowers along the approach roads to Åhus are just one example of the high natural values to be found even within urban environments.

Meeting Unesco's criteria as a model area for sustain-

able social development also extends to urban planning. Kristianstad is working with many exciting projects and challenges. The evolution of a new sustainable residential area at Näsby, flood prevention work in the city, changes to the general plans for Kristianstad and Åhus, and work to create a thriving urban centre by integrating Vattenriket into the city are just some of the future projects involving the Biosphere Office.

Action Plan 2021–2025

This action plan describes the focus for work in Kristianstads Vattenrike Biosphere Reserve. We will continue to work on projects to conserve, develop and support local natural values. Work will take place in dialogue and collaboration with many different stakeholders.

The biosphere reserve extends over two thirds of the Municipality of Kristianstad. It is a varied and species-rich landscape, formed by generations of human toil and endowed with almost every type of natural habitat to be found in Sweden.

Our work includes projects linked to the River Helge å, its tributaries and the wetlands, Hanöbukten Bay, the unique sandy grasslands, urban nature and sustainable urban development. Acquiring and spreading new knowledge is important, as is encouraging people to explore Vattenriket for themselves.

There are over 700 biosphere reserves worldwide, seven of them in Sweden. Kristianstads Vattenrike became Sweden's first in 2005, when Unesco granted the area biosphere reserve status to serve as a model for sustainable social development.

Biosphere reserve work is based on the goals of Unesco's Man and the Biosphere (MAB) Strategy, Kristianstad Municipality's strategic road map and the Swedish Environmental Protection Agency's national guidelines.

The naturum visitor centre is a meeting place and showcase for the biosphere reserve's work. Here visitors can learn how the biosphere reserve works, discover this species-rich area and get hints and advice about activities and excursions.

The varied landscape, biodiversity and wealth of ecosystem services are fantastic resources for Kristianstad. The Biosphere Reserve works both to derive the benefits of these natural values and to strengthen them – under the proud motto 'Benefiting nature and people'.

For more information and full contact details please see our website vattenriket.kristianstad.se



Kristianstads
kommun