Biosphere for Baltic

Blekinge Archipelago BR
Finland, 5th of October, 2018
Steering documents

Sveriges biosfärområden – arenor för implementering av Agenda 2030

Lima Action Plan
Global handlingsplan för Unescos Biosfärrådprogram 2016-2025

Attraktiva Blekinge
Blekingestrategin 2014-2020
Our working fields

Learning and participation in sustainable development
Information, forskning och kunskap för att öka förståelse, inspirera och vägleda i riktning mot ett hållbart biosfärområde. Genom samarbeten och kommunikation.

Health and viability in sustainable societies
För hållbar bebyggelse, stärkta kretslopp, förbättrad infrastruktur och ökad attraktivitet. Deltagande, stolthet, identitet och jämställdhet. För en hälsosam närmiljö.

Sustainable companies and flourishing tourism
För konkurrenskraft och lokal hållbar produktion av varor och tjänster. Resurs- & energieffektivisering. För gemensamma, långsiktiga turismsatsningar.

Water in balance and a living coast and archipelago
För god status i vattendrag, sjöar och hav. En ren kust och skärgård. För att bevara och stärka vårt kulturarv och blekingekustens kulturhistoria.

Biodiversity and intact ecosystemservices
För att bevara och återställa områdets unika mångfald och viktiga ekosystemtjänster. Främja hållbar användning av naturresurser.
Specific challenges of BR, Requests from the public, local authorities and municipalities. BR org. viability at the moment.

5 themes with different actions and goals -2020:

- Information, learning and participation
- Keep the biosphere clean
- Sustainable tourism industry
- Sustainable fishing
- Sustainable farming
Different stakeholders of the damaged ecosystem service fish wanted to use Blekinge Archipelago as a joint arena to see if there was something we could do together.
• Thiamine deficiency (a lack of thiamine, or vitamin B1) has been scientifically known and proved since 1990.

• Then found on salmon eggs – M74 – top of mountain

• Today found in important symbolic species (among others) for a vital sea and coast (Eider), fresh rivers (Salmon), healthy forests (Moose)

The deficiency makes it difficult to reach SDGs on a regional, national and global level.
In our famous salmon river Mörrumsån from 2013- (Second biggest travel reason).

* Different behaviour
* Difficulties in feeding and breeding
* Reduced immune system and higher susceptibility to virus and bacteria
* Paralysis
* Death
A frank question: Why is this a problem?

• Animals suffer and die – effecting populations
• Loss of attractivity around the river as a place for recreation, lower prices of properties in the area.
• Anglers stop fishing – effecting economy in small businesses, less jobb opportunities, loss of identity for the whole village.
• Reduced fish resource is a potential conflict between sport anglers and fishermen at sea.
(Why is the cause still hidden?)
Why are scientists not supported?

- Occurrence and symptoms are episodic (If you can’t see it, it's not there?)
- Different levels – different symptoms (Same cause!)

SCHEMATIC PICTURE!
Why is the cause still hidden? Why are scientists not supported?

• Biochemistry on cellular level – lack of knowledge
• It has disappeared before – let’s wait and see
• BIG efforts has been made to enhance swedish salmonpopulation (f ex through river restoration) Denial from different stakeholders
• Biodiversity in the shadow of climate change
• The modern method: reducing nitrogen, microplastics, greenhouse gases...without dealing with the problem

Working hypothesis demands direct action
How can BR support this science?

NGO and private initiatives

Department of Environment

Inform about the problems

Produce a public opinion by sending a supporting letter

Invite national politicians to info meeting
A model for optimized irrigation
Blekinge Archipelago BR

Scientist KTH

(Tourism companies, farming expertise)

Farmers
The model:

• Using new mathematical logarithms on weather data from SMHI and NASA

• Producing weather forecasts and long term scenarios

• The farmer will know when and how much to irrigate, also based on the specific crop and soil

• Sustainability produced in several aspects:
Optimized irrigation for more sustainable:

• Fresh water consumption (Ecological, social)
• Electricity consumption (Ecological, economical)
• Farmers crop yield (Economical)
• Nutrient contribution to the Baltic sea (Ecological)
• Coastal algae situation and tourism (Eco + Eco)
Next step:

• Application answer for further development (November, FORMAS)
• If positive, contact with different stakeholders in Blekinge Archipelago BR
• Applicate the model on farmland in BR