



# Proudly EcoCentric

MIKKELI

**Eco**Sairila

Become part of blue and green circular economy

BLUE  
ECONOMY  
MIKKELI

**BEM**

GREEN  
ECONOMY  
MIKKELI

**GEM**

**MIKSEI** MIKKELI

[mikseimikkeli.fi/ecosairila](http://mikseimikkeli.fi/ecosairila)



# EcoSairila - a centre for the blue and green economy

Climate change, water scarcity and environmental degradation are the global challenges of our time. Finland is a pioneer in the transition to the circular economy. EcoSairila provides solutions for these global challenges, new innovations and business opportunities. We use our resources wisely: through reuse and recycling, through the best technology and best practice. For EcoSairila, saving the world is high-value business!

EcoSairila specializes in combining the use of municipal material cycles with water treatment technology, bringing together experts from water technology and the circular economy. In EcoSairila, the blue and the green circular economy are intertwined to form an holistic, circular economy, development platform. We close all the loops and bring together an extensive group of companies specializing in the circular economy, as well as R&D organizations studying new technologies and business models.

The companies operating in EcoSairila form a viable ecosystem to generate new business opportunities. The ecosystem of companies is boosted through the collaboration of the private and public sector: EcoSairila opens up the public infrastructure to welcome private businesses to bring growth and strengthen the region.

## Come and take advantage of a 100 million euro investment

In Mikkeli, over 100 million euros has been invested in the research and infrastructure of water technology, material cycles and renewable energy. A state-of-the-art water treatment plant with research and pilot facilities, and a biorefinery producing biogas and organic nutrients, are under construction.

We offer your company access to our innovation, research and development platform, strong networks and properties zoned for industrial use, in a modern green-industry centre. The City of Mikkeli, its strongly committed officials and local authorities, and various funding organizations offer their full support for companies relocating to EcoSairila.

**We are actively looking for companies to take advantage of all of these strengths. Welcome to Mikkeli.**

**Juha Kauppinen**

CEO, PhD

Mikkeli Development Miksei Ltd



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Helsinki

St.Petersburg

### EcoSairila's three dimensions

Industrial production and technology development

Utilizing material flows, data and digitalization

Operating and networking locally and globally

## The transition to sustainability is being driven from Finland

Finland is the cleanest and the greenest country in the world. We have fresh air, pure water, vast and diverse forests - and that is the way we want to keep it in the future as well. Finland has the perfect position for your company to drive sustainable development and transition to the circular economy.

## EcoSairila - the site for success

Mikkeli's EcoSairila is a perfect place for a cleantech company to relocate to - either to start production based on our material flows and clean energy - or to develop a new technology to be tested and presented to global markets.

At EcoSairila we have modern infrastructure and we apply best practice in waste management, recycling, waste water treatment and energy production. We provide companies with targeted services and digital platforms to manage their business and environmental data. In Mikkeli your company will find a solid technological foundation and a vast variety of RDI environments to support technology development.



**The development platform for the blue circular economy**

# Expertise, research, technology development & new business opportunities in water technology

**The Blue Economy Mikkeli aims to strengthen research, technology development, innovation and education, as well as to turn new water technology solutions and concepts into international exports.**

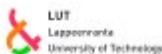
Together with companies and stakeholders, the new membrane bioreactor (MBR) waste water treatment plant, the water recycling plant, water technology testbeds and open and accessible data form the Blue Economy Mikkeli - a unique water technology development platform.

Companies have an opportunity to become part of a network and take part in research and development work, which will enable the acceleration of new commercially viable innovations to the market, at a considerably faster pace than via traditional innovation paths.



“Our research team provides the Blue Economy Mikkeli with a solid scientific and technological base and the security required by every green technology company. I hope that an increasing number of companies will find collaboration with our research community beneficial and will take advantage of this unique research and product development platform.”

**Mika Sillanpää**  
Head of the Department  
Department of Green Chemistry  
LUT University  
Mikkeli, Finland



“The Blue Economy Mikkeli is a great example in Europe of how to connect important stakeholders in the water technology sector. It is a pleasure to cooperate with them and I wish BEM a great deal of success!”

**Hein Molenkamp**  
Managing Director  
Water Alliance  
Leeuwarden, Netherlands



“The Blue Economy Mikkeli has a significant role in enabling Aquazone to grow and internationalize through innovative technologies in water recycling and reuse.”

**Jyri Koivisto**  
Managing Director  
Aquazone Ltd.  
Mikkeli, Finland





**The development platform for the green circular economy**

# Knowhow, partnerships, technology development & new business opportunities in the circular economy

The EcoSairila green industry centre closes the material loops giving new life to recycled materials.

EcoSairila is not only an industrial site for a new era, but a foundation stone for the Green Economy Mikkeli - a versatile circular economy development platform.

At EcoSairila companies can create added value for each other by utilizing technical and biological material flows, technology, services and the energy available in the area. Companies have access to biomethane, carbon dioxide, recycled water, surplus heat, sludge, ash, recycled wood and other materials. Companies can benefit from the environmental information platform and services tailored for their needs. Collaboration with public operators helps new businesses to grow. The Green Economy Mikkeli enables industrial production and the acceleration of new technologies and services to the market.



"The environmental safety research group offers applied research, product development and measuring and monitoring solutions for the fields of environmental technology and the circular economy. Xamk's focus area expertise and laboratories excel in wastewater purification, environmental safety and intelligent monitoring.

In wastewater purification and environmental safety. The collaboration between research and education helps us to find new technological solutions and innovations. Annually we cooperate and provide services with 400 companies in research and development projects."

Members of the environmental safety research group **Arto Sormunen**, **Tiina Tervaniemi** and **Hanne Soinen** are looking forward to future collaboration with companies relocating to EcoSairila.

South Eastern Finland University of Applied Sciences XAMK



"As a key demonstration partner in the EU funded 'CityLoops' project, Mikkeli is acting as a European pioneer in driving the transition to a circular economy."

**Simon Clement**

Coordinator, Sustainable Economy and Procurement

ICLEI - Local Governments for Sustainability

ICLEI is the leading global network of more than 1500 cities, towns and regions committed to building a sustainable future.



"In our project 'Innovation Ecosystems in the Circular Economy' EcoSairila is recognized as one of the most interesting concepts, offering companies a new kind of platform for testing, piloting and growth. The EcoSairila Team is competent and enthusiastic - It is a true pleasure to collaborate with them."

**Inka Orko**

Project Manager  
VTT Technical Research  
Centre of Finland Ltd.





# EcoSairila's Blue and Green RDI environments bring value to companies

EcoSairila's development platform contains a variety of environments supporting companies' product development. The platform consists of research, development and innovation facilities located in the area as well as versatile production units applicable for product development. Utilizing these environments to benefit companies is made possible through local collaboration and partnerships.

## Water technology

The new membrane bioreactor (MBR) waste water treatment plant incorporates versatile testbeds for wastewater treatment and water recycling. The testbeds utilize the waste water and treatment processes and cover various treatment methods and technologies. LUT University's Department of Green Chemistry is focused on the use of micro- and nano-materials in the development of new water treatment techniques. The research infrastruc-

ture is being reinforced with new equipment for piloting new water treatment concepts. The South-Eastern Finland University of Applied Sciences supplements the selection of RDI services by providing applied research, laboratory services, product development and monitoring solutions. An excellent example of Xamk's expertise is a demonstration site for treating urban run-off.

## Biological cycles

The RDI environment for biological cycles is composed around the activities of composting and biogas plants, and the processing and refinement of organic material flows. For instance, product development can be focused on new solutions for the use of sludge and ash. The research and development on closing the biological cycles entwines organic waste treatment and waste water treatment - both located at the same site

## Technical cycles

The RDI environment for technical cycles is composed around the waste sorting and recycling centre along with Metsäsairila's other operations and infrastructure. The next phase is to build a testing and piloting hall providing companies with a low-threshold opportunity to start new business or development projects based on the processing of recycled materials.



## The RDI environment for treating urban run-off

The treatment system uses biochar and other filtration medias to clean the run-off water before discharging to the local lake. The system is equipped with a continuous monitoring system for obtaining data on the functionality of different filtration medias. This RDI environment combines water competence and biochar-related research.



"The testbed for urban run-off water treatment offers concrete opportunities for new biochar based biofilters to be developed and tested. We are very happy to see the City of Mikkeli taking research and development into consideration when planning public infrastructure."

**Tuomo Leppänen**  
Managing Director  
Noireco Ltd.



## Renewable energy

The renewable energy RDI environment includes a heat pump plant that uses heat from wastewater, a landfill gas motor with an ORC testbed, a solar power demonstration plant designed especially for product development, a regional district heating plant using a combination of solar energy and woodchips, and a biogas plant with biomethane upgrading and distribution system.

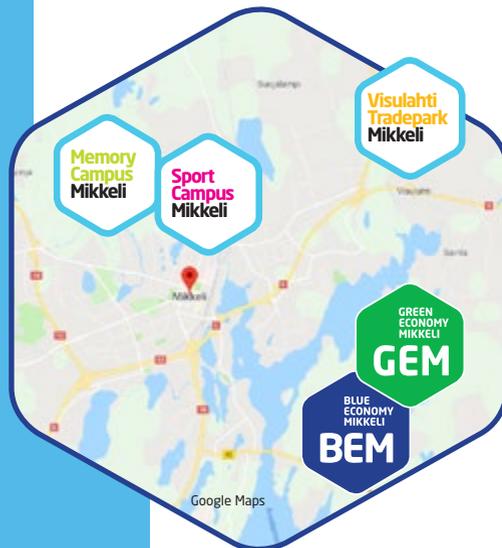
The Mikkeli region has a long tradition in sustainable forestry. Research and development is focused on fuel logistics and analysis, combustion processes and biochar processing as well as carbon capture.

More information on RDI environments:  
[mikseimikkeli.fi/ecosairila](http://mikseimikkeli.fi/ecosairila)

## Platforms for success

Mikkeli offers fantastic opportunities for research, development and innovation activities. With different profiles, the platforms provide companies opportunities for growth and success both locally and globally.

These business platforms are also at the disposal of companies based around the blue and green circular economy.



Kuva: Piha Luukkonen



Kuva: Piha Luukkonen

## Find yourself in Mikkeli

In the comfortably-sized Mikkeli, creativity generates vital business activities and well-being. An unrivalled quality of life originates from our respect for nature: vast forests and clean freshwaters.

Here equality, education and taking pride in one's work have always been the basis of a good life. We are certain of our future achievements as pioneers, and we boldly sculpt the future of our fast fast-evolving city.

### Three facts about Mikkeli

Sustainably evolving and viable regional centre on the shore of Lake Saimaa.

Excellent location only a couple of hours away from the Helsinki region.

Personalized business plots and flexible cooperation with authorities



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EcoSairila

# We offer you a wide mix of materials, industrial symbiosis, modern infrastructure and targeted services to start your business in EcoSairila



Over 100 ha of industrial plots have been zoned in the area for new business. The plots will be available for construction after the completion of the water treatment plant.

### Metsäsairila waste treatment centre

Sorting, recycling and treatment centre for waste and recycled materials

### Mikkeli Waterworks

Wastewater treatment plant, water recycling plant and demo sites

### BioSairila Biorefinery

Biorefinery producing biomethane and organic soil products and fertilizers

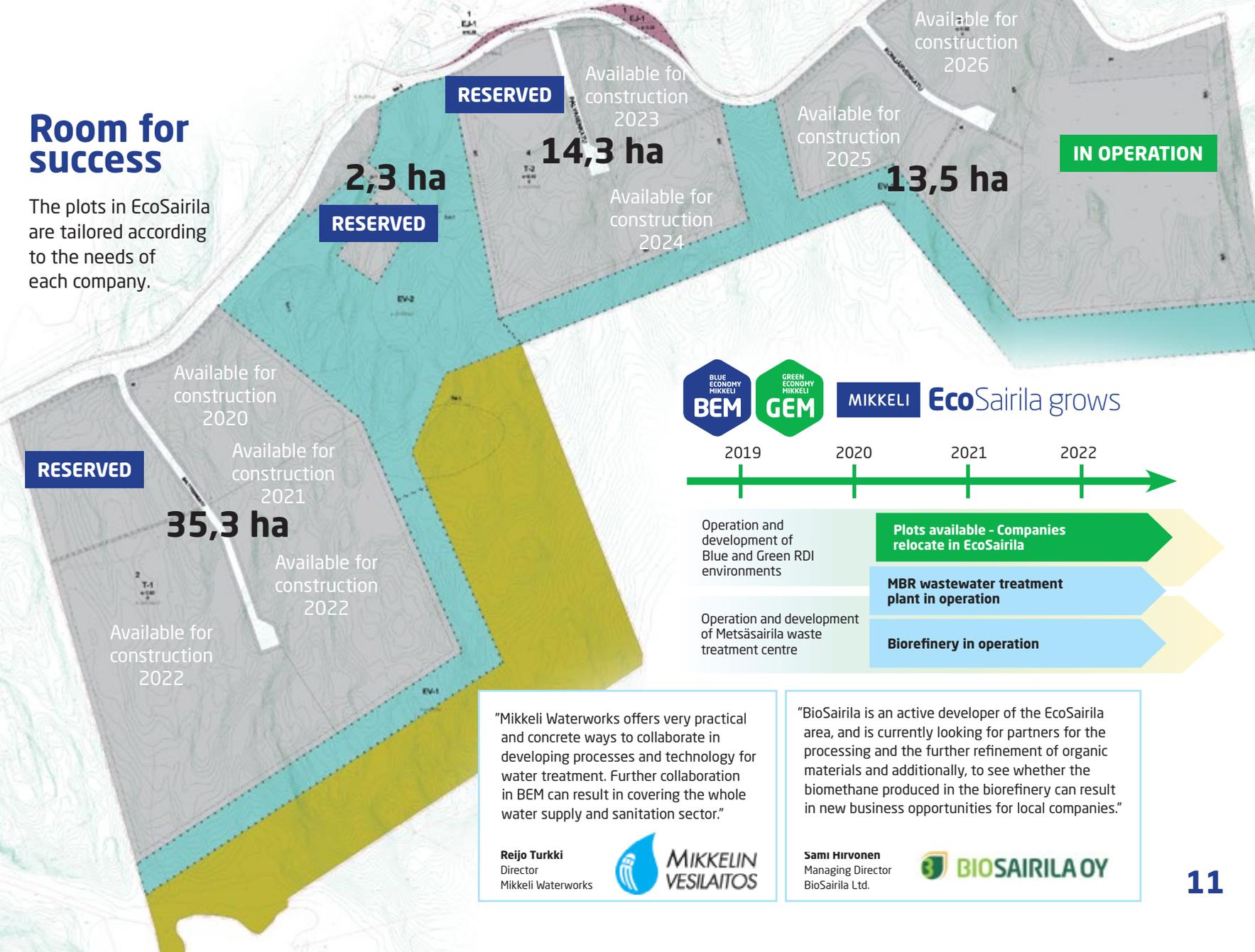
**EcoSairila is the hub for biological and technical material flows generated in the Mikkeli region and from areas further afield.**

A modern waste treatment centre, the new membrane bioreactor (MBR) waste water treatment plant, and the biogas plant, offer synergy benefits and business opportunities to companies relocating to the region. The renewed EcoSairila Green Industry park will also better serve the local residents and companies using the waste treatment services: completed in collaboration with the municipal waste treatment company Metsäsairila and a local third sector operator, the waste sorting and recycling centre accepts all

types of obsolescent materials and waste and is developing new methods for reuse. This improves the recycling rate of materials and makes the reuse and processing of recycled materials more profitable. The EcoSairila Green Industry Park is already a vibrant centre for the circular economy. Several other companies are already operating alongside the local waste management company. Mikkeli Development Miksei Ltd is coordinating the development of the region and the collaboration between operators.

# Room for success

The plots in EcoSairila are tailored according to the needs of each company.



"Mikkeli Waterworks offers very practical and concrete ways to collaborate in developing processes and technology for water treatment. Further collaboration in BEM can result in covering the whole water supply and sanitation sector."

**Reijo Turkki**  
Director  
Mikkeli Waterworks



"BioSairila is an active developer of the EcoSairila area, and is currently looking for partners for the processing and the further refinement of organic materials and additionally, to see whether the biomethane produced in the biorefinery can result in new business opportunities for local companies."

**Sami Hirvonen**  
Managing Director  
BioSairila Ltd.



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All this is  
ready and  
waiting

- Technical and biological material cycles and Industrial symbioses
- An environmental information platform and cost-effective environmental services
- A digital marketplace for recycled materials and services
- High level education and research activities
- RDI environments and testbeds for the circular economy and water technology
- 100 hectares of zoned industrial plots

## Contact us!

We will help your company to become part of EcoSairila's success story

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European Union  
European Regional  
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Leverage from  
the EU  
2014-2020

