

# SYKE – collaboration on current issues

WORKING WITH OUR PARTNERS TO BUILD A SUSTAINABLE SOCIETY

We are all decision-makers.

We act at all levels from grassroots to international networks, looking together for ways to make our lifestyles more sustainable.

To resolve environmental problems we utilize each other's expertise.

Our partners include politicians, ministries, businesses, other research institutes and universities, cities, regional and local authorities, and individual citizens.



## politicians and ministries REALISATION OF THE PARIS CLIMATE AGREEMENT BY THE EU

The Paris Climate Agreement obliges its signatories to mitigate climate change and promote adaptation measures. SYKE's research findings and expertise are being used to shape Finland's national actions towards targets defined at EU-level. An energy transition, involving a shift to renewable energy, plays a key role. At the same time we must build up effective carbon sinks, by creating a circular economy involving the use of durable wood-based products, for instance, while ensuring that progress on building a bioeconomy continues in step with efforts to mitigate climate change. Global cooperation and exchanges of information between scientists and decision-makers are crucial when combatting climate change. SYKE is deeply involved in such efforts.



## international partners NEW WATER AND CLIMATE SERVICES FOR ANDEAN COUNTRIES

Due to their location in the Andean region, Bolivia, Ecuador, Columbia and Peru are highly vulnerable to climate change. SYKE's experts have helped our partners in these countries to enhance their hydrological monitoring, data systems and flood protection measures. Collaboration between the countries has intensified, and they are now better prepared to face risks related to climate change. Improved water and weather services can also help local residents to safeguard their property and livelihoods. SYKE's open data policy, our long-term collaboration on cross-border waters, and our flood warning service, realised together with the Finnish Meteorological Institute, all provide inspiring examples of cooperation for the countries involved.



## provinces PROMOTING SUSTAINABILITY IN URBAN GROWTH

It is important to ensure that the structures of urban areas remain compact, in order to respond to climate challenges. Together with urban planners SYKE has drafted a future analysis and mapped out a decision-making path towards 2030 for 14 urban areas around Finland, aiming to help planners create cities that are more structurally compact and thereby more effective in ecological and economic terms. Well-designed urban homes and functional routes for cyclists and pedestrians are essential elements of sustainable urban living. Infill developments on brownfield sites can create new districts that also attract investment and boost the economy.



**FORERUNNER MUNICIPALITIES CUT CLIMATE EMISSIONS BY ALMOST A THIRD**

Finnish municipalities in the pioneering Carbon Neutral Municipalities (Hinku) network have been actively combatting climate change by achieving significant reductions in their greenhouse gas emissions, averaging 29% over the period 2007–2015. They have largely done this by shifting away from the use of fossil fuels towards renewable energy sources, while improving the energy efficiency of buildings and infrastructure. The Hinku municipalities have widely utilised SYKE's expertise to identify and model favourable practices and create new innovations. Their sustainable procurements, such as the joint acquisition of more than a hundred solar energy facilities, help to build markets for climate-friendly technologies.



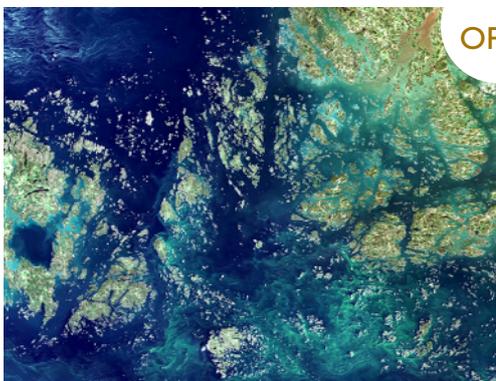
**TIPS ON SUSTAINABLE CHOICES FROM THE BALTIC IMPACTS CALCULATOR**

Food production accounts for about 60% of the average Finnish citizen's eutrophication impacts on the Baltic marine environment. Wastewater effluent is also significant, accounting for a quarter of the total footprint. Devised by SYKE and Natural Resources Institute Finland (LUKE), the Baltic impacts calculator shows consumers how their choices affect inputs of nutrients into the Baltic Sea. As the first of its kind anywhere, the calculator breaks new ground by enabling everyone to measure their eutrophication footprint and act to improve the state of the sea through their consumption choices.



**BRINGING NATURE CONSERVATION INTO THE CONSTRUCTION INDUSTRY**

New practices adopted within the construction industry have led to considerable improvements. Finland's construction sector has now got a clearer picture of its impacts on nature, and is actively looking for new solutions to reduce harmful impacts. SYKE has helped Finnish construction businesses to work more sustainably, and results from trials have been promising with regard to the consequent conservation of biodiversity.



**OPEN ENVIRONMENTAL DATA FOR RESEARCH PURPOSES**

SYKE was the first research institute in Finland to open up its data banks to the public. Our metadata services meet the requirements of the Academy of Finland, enabling our data to be widely shared and utilised. All of the open data banks, information systems and metadata maintained by Finland's environmental administration have been compiled under the web service [www.syke.fi/en-US/Open\\_information](http://www.syke.fi/en-US/Open_information). Interest in this material grew greatly during 2016.

Photos: Natasha Vasiljeva / Unsplash, Johanna Korhonen, Plug.fi, Olli-Pekka Pietiläinen, Riku Lumiaro, Minna Pekkonen, SYKE/NASA/LC8.



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The Finnish Environment Institute SYKE is a national research institute that provides wide-ranging expertise.