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## **1** The Baltic Sea needs our help

**Professor Sakari Kuikka stresses that we can all influence the condition of the Baltic Sea.**

Matti Välimäki Photos Alisa Piirla

There has been a tanker disaster in the Gulf of Finland. A large oil slick is drifting towards the coast, a hundred threatened plant and animal species are at risk.

In the view of Sakari Kuikka, Professor of Fisheries Biology at the University of Helsinki, this worst-case scenario is frighteningly likely to become reality.

“Although shipping technology has improved, the volume of oil transports and the risk of accidents have multiplied. In higher seas, it is not always possible to use the control equipment, and there is only little time.”

Kuikka is involved in developing models of the best course of action in the event of accidents.

“As an example, we are currently looking into the possibility of protecting certain threatened plant species by covering them with protective mats before the oil reaches the shore.”

### **Everyone can make a difference**

Sakari Kuikka believes that we should be prepared for the worst. On the other hand, we

must naturally take every possible precaution in order to prevent accidents.

“An individual consumer can also make a difference by being proactive, by voting and lobbying politicians. Consumer behaviour is also highly significant. When I fill up my car, I’m happy to spend a few extra cents if I know that the company is doing its utmost to operate well and responsibly with regard to environmental issues.”

Energy production and the Baltic Sea are also connected in many other ways.

“Oil tankers and other ships bring invasive species, at least some of which are harmful to indigenous species, into the Baltic Sea in their ballast water. The dams of hydropower production affect the stocks of migrating fish. A man-made basin designed for regulating nuclear power could affect the stocks of sea-spawning whitefish”, Kuikka says.

“Even wind power has negative environmental impacts, too. The wind turbines planned for the Gulf of Bothnia could disrupt

the spawning of saltwater lavaret. This is another issue where more research is required.”

So, from the perspective of even an environmentally aware consumer, it is largely a case of value judgments.

### **Controlling eutrophication**

One of the central problems of the Baltic Sea is eutrophication or overgrowth of marine vegetation. One of its causes is the fertilisers used by agriculture. This, too, can be affected by every consumer through his choices.

“Buying organic products is a good environmental deed. It’s worth buying sustainably produced fish. It’s hard to imagine a food lower in environmental impacts than Baltic Sea perch and pike-perch (sander).”

Finland and Sweden have become pretty well aware of the importance of protecting the Baltic Sea. However, in many other Baltic Sea countries the situation is different.

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## 2 Controls and equipment in order

The Housing Companies Act has been reformed. The Act draws particular attention to repairs and maintenance of the building, and this is a good thing.

It pays to invest in the quality of living and safety of the occupants, as well as the value of the housing company and therefore that of the apartment. The new Act obliges the board of the housing company to draw up a report of the repairs covering five years. The intention is to guide housing companies to adopt long-term, systematic property maintenance procedures. For the resident and shareholder, this increases information, but also security. Maintenance and repair work carried out in time save money and ensure that the conditions for good living are met.

In our climate, a heating system and its reliability are essential. As the result of development over many decades, district heating equipment is reliable, durable and economical. Replacing it is easy, quick and economical, and it secures energy-efficient and environmentally friendly living a long way into the future.

Helsingin Energia helps its district heating customers to prepare a repair plan by sending a notice, complete with instructions, to housing companies where replacement of district heating equipment is recommended during the next five years. A timely decision to replace allows the housing company to put the contract out to competitive tender in accordance with its needs.

For housing companies with equipment that does not need replacing, Helsingin Energia carries out a free inspection of the heat distribution centre in conjunction with their own maintenance measures at roughly five-year intervals.

At Helsingin Energia, we talk about eco-efficient city energy. The fastest, most economical and best way to save is to check and set all controls as they should be. In addition, we can all consider our own customary living conditions. Our choices and actions have an impact.

Get ready for the approaching heating season!

Turo Eklund  
Manager, Heat Sales



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“In Russia, the Baltic Countries and Poland, agriculture and partially unpurified effluents are placing a load on the Baltic Sea.”

Kuikka believes that it is important to emphasise good news alongside the risks and bad news. There have been positive developments, too.

“The volumes of environmental toxins have declined. The Gulf of Bothnia is still in pretty good shape overall. The bladderwrack, a sign of clean Baltic Sea water, has become more common, and visibility in the water has improved in recent years.”

Kuikka remembers a boat trip he made with his family last summer to the westernmost islets of the Åland Islands.

“The water was unbelievably clear. On one rock, there were signs of seals and sea eagles, and there were even cloudberry growing there. The diversity of nature was amazing.

All of it reminded me of what may still be within our reach, if we invest in protecting the Baltic Sea.”

In honour of its hundred-year-old history, Helsingin Energia has set up a fund in support of Baltic Sea research, with an initial deposit of EUR 100,000. All centenary donations have also been channelled into the Baltic Sea Fund.

### University of Helsinki projects

The Oilrisk project seeks to identify the actions necessary to protect natural biodiversity after an oil spill, and how to increase the interest in accident prevention by oil companies.

The Ecolknows project develops methods of calculating the risk of extinction for species for the monitoring of which there are no resources in society.

The Tarmo project examines the benefits to society brought by the grey seal and salmon fishermen.

Thanks to the DNA methods developed by research at the University, non-toxic and toxic blue-green algae blooms can be identified. In the future, it may even be possible to utilise the algae in energy production.

**Additional information:** [www.helsinki.fi/insight](http://www.helsinki.fi/insight)

## Sizeable investments

Helsingin Energia's development programme towards a carbon-neutral future is still under consideration by the city's decision-making organs. Sizeable investments can bring about a considerable increase in the use of renewable energy sources and ensure that climate targets are met.



## Kalasatama to become carbon-neutral area

The carbon-neutral future of energy services will be realised in Kalasatama, Helsinki. In the smart grid model area, the electricity consumer may also be a producer and vendor.

Helsingin Energia, Helen Sähköverkko, ABB and Nokia Siemens Networks have signed a letter of intent regarding technological collaboration to develop and test smart energy solutions in Kalasatama.

The aim is to create a globally significant model area for a smart grid, where, by combining latest energy, information and communications technology, a sustainable energy system complete with services is created and will also be capable of being applied elsewhere.

A smart energy system includes, for example, local renewable power generation, such as solar or wind power, an infrastructure and power storage supporting electric vehicles, and energy-efficient property automation for both homes and commercial buildings.

## 4 Even warmth

A correctly heated building saves a pretty penny. After the radiator network has been balanced, all the radiators in the apartments heat evenly.

A correctly functioning radiator releases its heat into the air in the room, so its upper part should be warm and the lower part cooler. If the radiator is cold all over, the thermostatic valve has closed off the water circulation in the radiator. This does not matter, if the room temperature is 20–23 degrees centigrade.

The occupant must ensure that there are no curtains or sofa in front of the thermostats hampering the measuring of the real temperature.

"If the radiator is making a noise or it feels cold, it may need 'bleeding' or releasing the air lock", says **Minna Peltonen** from Helsingin Energia. The service company takes care of bleeding the radiators.

The occupant can only reduce the room temperature by setting the thermostat. The temperature of interior air cannot be raised above the level set as the water temperature at the district heating centre by the property manager.



When the thermostat is set at the maximum output, one can make sure that there is always water circulating in the radiator and it will always give off heat.

### Balancing the network

Sometimes it is necessary to balance the radiator network. It makes sense to carry out the basic adjustments in conjunction with other improvement work, such as replacing windows.

This was the kind of job done last autumn at Mottitie 2, Helsinki. The HVAC planner checked the doors, windows and communal areas on site. He determined the pressure required in the system so that every radiator in each apartment heats up evenly.

The key of the whole issue is the HVAC plan which ensures that the work runs smoothly.

First, the whole radiator network was drained. Then the radiator valves in every apartment were replaced, as well as the zone control valves in the basement. When fresh water had been added into the radiator network, each radiator in all the apartments was bled. Checks were made in the basement to make sure the balancing was correct and complied with the HVAC plan. Finally, new thermostats were installed in all the radiators in the apartments.

"After the heat exchanger and radiators have been balanced, savings are made in heating costs. At this site, the annual district heating consumption fell by almost 9 per cent", Minna Peltonen says.

## ● AT YOUR SERVICE Service numbers and price info

### Helsingin Energia

Telephone 09 6171  
Sähkötalo, Kampinkuja 2,  
FI-00090 Helen  
www.helen.fi

### Customer service, 3rd floor

Mon–Fri 8.30–16  
Telephone service Mon–Fri 8–18  
Domestic customers 010 802 802  
Business customers 010 802 803  
Electricity meter readings 010 802 804

### Fault reports

Breakdowns in electricity supply  
08001 80808

Breakdowns in district heating supply 08001  
60602

Faults in outdoor lighting 08001 73173  
Telephone calls received by Helsinki

Energy customer service are recorded.

Call charges for numbers beginning with 010:

- from landlines: 8.28 c/call + 5.95 c/min.
- from mobile phones, all operators:  
8.28 c/call + 17.04 c/min.

The prices include VAT at 23%.

Our free e-services are available on our  
website: www.helen.fi

### Advisory services

Energy Advisory Centre 09 617 2726

Advice on how to choose and use domestic  
appliances. You can also borrow energy,  
moisture, structural, surface temperature and  
light meters from us:

energiakeskus@helen.fi

Advice on electricity use and energy saving

09 617 4010

### District heating

New connections to district heat

09 617 2961

Advisory service on heat use

09 617 2969

Billing and consumption enquiries

09 617 2856

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