

Finland

# Land of Islands and Waters



**The Sulkava Rowing Race** is one of the largest rowing events in the world. The route around Partalansaari Island extends over 60 km. The church boat race for teams is particularly popular, but there are always plenty of entries for the singles and doubles races too.



## Dear Reader

This brochure describes life, sources of livelihood and nature on islands with no permanent road connections, on islands with permanent road connections and in island-like areas in Finland.

Relative to the land area Finland is the world's richest country in fresh-water areas and measured by the number of islands, among countries with the richest archipelago in Europe. We boast 76,000 islands with an area of 0.5 hectares or more, 56,000 lakes with an area of one hectare or more, 36,800 kilometres of river bed wider than five metres and 336,000 kilometres of shoreline. Every Finnish municipality has waters, and most contain islands. The number of islands with either permanent or part-time inhabitants amounts to around 20,000. Every island, lake and river has its place in the hearts of Finns. This brochure describes these unique riches.

Its multitude of islands and waters makes the Finnish landscape fragmented, creating extra costs for the economy, the State and local authorities, but it is also an incomparable resource. Our islands, seas, lakes, rivers and shores are excellent regional assets in a world that thrives increasingly on producing unique experiences. Island municipalities and part-island municipalities boast a large range of sources of livelihood, although structural changes have decreased the number of jobs over the years.

Holiday homes (owned and used by 2.4 million people), boating (about 1 million boats) and recreational fishing (about 1.6 million fishers), nature pursuits and tourism ensure that our islands and waters touch upon the entire nation.

Many public authorities operate in the islands and waterways, including the Defence Forces, the Border Guard, the Police, regional rescue departments, the transport authorities (commuter vessels, piloting, shipping lanes, ports, charting, winter navigation assistance, ferries, cable ferries and roads), the environmental authorities, Natural Resources Institute Finland, the fisheries authorities and the National Board of Antiquities.

Finland's island policy compensates for some of the drawbacks of the fragmented land area, and maximises the benefits of islands and waters as a regional development asset. The Island Development Act is an important tool in these efforts. Consideration for biodiversity as well as for cultural and landscape factors forms an essential part of the island policy.

The Government aims to develop island and water tourism into a European attraction, and to turn our holiday home customs into a foundation for rural development. We have excellent conditions for this. Finland offers citizens and foreign visitors a safe environment in which to experience the warmth of summer, the russet colours of autumn, the snow and ice of winter and the brightness of spring on its numerous islands and in its vast marine and freshwater areas.

Happy reading!

The Island Committee  
Ministry of Agriculture and Forestry



HEMELI PELTONEN / VASTAVALO



SAMPO KIVINIEMI / VASTAVALO



ESA OKSMAN / VASTAVALO



RISTO PUJANEN / VASTAVALO



## Finland is a land of islands and waters

Let's start by looking at islands. Greece has approximately 1,400 islands and Denmark around 500. Although well-known for their islands, these states are dwarfed by the three Nordic 'continental' states of Norway, Sweden and Finland. Sweden has as many as 221,831 islands, Finland 178,947 islands and Norway 117,116 islands. There is no other area of this size in the world with over half a million islands!

Finland has 98,050 freshwater islands and 80,897 sea islands. Slightly over 100,000 of our islands have an area smaller than 0.5 ha and 76,000 islands have an area greater than this. The biggest island in Sweden, Gotland, is almost twice the size of Finland's biggest island, Soisalo.

Norway's biggest island, Hinnøya, is somewhere between the two.

Finland also clearly outstrips certain well-known island states in terms of its number of islands with permanent and part-time inhabitants. Although many islands are linked to the mainland by bridges, Finland still has 550 islands with year-round habitation, with no permanent road connections. Greece has just over 200 such islands and Denmark around 100. More than 200,000 Finns live on islands with bridge connections, including nearly 50,000 in the capital, Helsinki. Approximately 19,600 islands have part-time inhabitants and no permanent road connection.

**A former pilot station on the island of Boistö** in Ruotsinpyhtää, Loviisa, owned by the family of Juha Nurminen, hit the headlines in the summer of 2014 as negotiations concerning potential solutions to the Ukraine crisis were held there.



JUHA NURMINEN

Finnish islands by region

	0,5 ha- 1 km <sup>2</sup>	1- 10 km <sup>2</sup>	Over 10 km <sup>2</sup>	Total
1. Southwest Finland	9,687	145	21	9,853
2. South Savo	8,918	101	5	9,024
3. Lapland	8,594	60	3	8,657
4. Åland Islands	8,014	77	14	8,105
5. Uusimaa	5,448	43	6	5,497
6. North Savo	5,229	46	1	5,276
7. North Karelia	4,386	42	5	4,433
8. Ostrobothnia	4,187	51	11	4,010
9. Central Finland	3,971	37	2	4,010
10. Pirkanmaa	2,897	9		2,906
11. Northern Ostrobothnia	2,570	12	1	2,583
12. Satakunta	2,493	12	1	2,506
13. South Karelia	2,151	29	4	2,184
14. Kainuu	1,933	14	1	1,948
15. Kymenlaakso	1,618	16		1,634
16. Päijät-Häme	1,318	14	1	1,333
17. Central Ostrobothnia	623	3		626
18. Häme	512	1		513
19. South Ostrobothnia	480	1		481
<b>Total</b>	<b>75,029</b>	<b>713</b>	<b>76</b>	<b>75,818</b>

The share of freshwater areas of the surface area of Finland is larger than in any other country. Lakes and rivers cover a total of 33,000 km<sup>2</sup>, which means that they account for a tenth of our surface area. We are just ahead of Canada, where freshwater areas cover almost 9% of the surface area. Finland’s marine area totals about 82,000 km<sup>2</sup>.



HANNU HUTTU / KUVALITTEI

The kicksled was invented by residents of the archipelago region. It was developed in Sweden during the 19th century as a means of transport on ice. Over the years it has been used by fishermen, seal hunters, and postal workers.

Based in Pyhtää, the Kaunissaari fishing village was a bustling community in the middle of the last century. At that time, the island was home to more than 200 residents around the year. The island’s electricity supply was established in 1982, and the mains water supply in 1989. The village shop is a hub of activity during the summer months.



ANTERO AALTONEN

## Largest maritime islands in Finland

Order	Name	Municipality	Area (km <sup>2</sup> )
1.	Mainland Åland	7 municipalities	685
2.	Kimito	Kimitoön, Salo	524
3.	Hailuoto	Hailuoto	195
4.	Replot	Korsholm	160
5.	Aasla/Otava	Naantali	105
6.	Lemland	Lemland	92
7.	Eckerö	Eckerö	91
8.	Öja	Kokkola, Luoto	90
9.	Storlandet	Pargas	72
10.	Ålön	Pargas	70
11.	Kyrklandet	Pargas	64
12.	Kivimaa	Kustavi	57
13.	Pyhämaa	Uusikaupunki	53
14.	Vessölandet	Porvoo	52
15.	Kirjalaön	Pargas	49
16.	Oxkungar-Tengmo-Kvimo	Vörå	46
17.	Lillandet	Pargas	38
18.	Stortervolandet	Pargas	37
19.	Luoto	Luoto	37
20.	Kaurissalo	Kustavi	36

## Largest freshwater islands in Finland

Order	Name	Municipality	Area (km <sup>2</sup> )
1.	Soisalo	Heinävesi, Kuopio, Leppävirta, Varkaus	1 638
2.	Kerimäensaari	Enonkoski, Savonlinna	1 069
3.	Hurissalo	Mikkeli, Puumala	174
4.	Partalansaari	Puumala, Sulkava	170
5.	Viljakansaari	Puumala	115
6.	Manamansalo	Vaala	76
7.	Äitsaari	Ruokolahti	74
8.	Moinniemensaari	Savonlinna	53
9.	Oravisalo	Rääkkylä	49
10.	Kirkkosaari	Taipalsaari	47
11.	Väisälänsaari	Hirvensalmi, Mikkeli	35
12.	Virmaila	Padasjoki	35
13.	Kuivainen	Savitaipale	33
14.	Pyyliinsaari	Heinävesi	28
15.	Varpasalo	Rääkkylä	27
16.	Paalasmaa	Juuka	27
17.	Salosaari	Ruokolahti	26
18.	Judinsalo	Luhanka	25
19.	Lintusalo	Puumala	25
20.	Kyläniemi	Taipalsaari	23

## 60 metres of shore per inhabitant

Finland's shoreline is fragmented and comprises many islands. Its lakes are full of capes, bays and islands; its rivers are winding. All of this means that the shoreline is much longer than you might expect.

In total, Finland's shorelines amount to 336,000 km when river beds wider than five metres are taken into account. This distance is equivalent to almost eight and a half times around the Earth.

The type and shape of the shoreline are important factors for both human activities and nature. No detailed classifications have been made of Finland's entire shoreline, but the seashore has been inventoried. Most of the shore (approx. 43%) consists of moraine, which is most common on the shores and islands of the Gulf of Bothnia. A similar proportion (42%) is composed of rocky shores, which are found particularly in the Archipelago Sea and the Gulf of Finland. Silt, clay and soft-soil shores account for 10%, and gravel and sand shores for 5%. Only just over 1% (approx. 550 km) consists of man-made shore; this includes diverse embankments, harbours, bridges and dams.

In terms of recreational value, flat, firm shores with an inclination of less than 10 degrees are considered the most valuable. Ideally, such shores should also have unrestricted access, scant aquatic vegetation and medium-depth water. These top-quality shores account for just a few per cent of the entire shoreline.

Variations in water level also affect usability. Under one tenth of Finland's shoreline is such that the water level change is less than one metre, measured over a long period of time — all of this is on lakeshores. Around one half of the total shoreline has level changes exceeding two metres, including the entire marine coast. Level changes of more than five metres particularly appear on the Ounasjoki and Tornionjoki (Torne) rivers, and in some regulated lakes.

However, most of Finland's shores are highly appropriate for recreational use and construction, compared for instance to the steep cliffs of Norway and Greece. In France, Britain and Ireland, the tide may change by more than five metres in a single day. Also, tidal flats may be several kilometres in width in those areas.





EERO J. LAAMANEN / VASTAVALO

**Hailuoto is the third-largest island in Finland’s sea areas.** In recent years, the number of residents has increased and, today, around 1,000 people make their home on the island. In addition, around 2,300 summer cottage owners use the island seasonally.

**“There can be no more beloved a shore.”** This sentiment is echoed in the first verse of the Finnish national anthem.

**The Teno River and its tributary, the Inarijoki River,** span the Finnish and Norwegian border for 294 kilometres. The total country border between Norway and Finland is 442 kilometres long. The border between Finland and Sweden is 555 kilometres long and is mostly formed by rivers.

**Composition of shoreline**

	km	%
<b>Total seashore</b>	<b>46,198</b>	<b>14</b>
– mainland coast	6,299	
– islands	39,675	
– lakes on islands	96	
– inland islands on islands	128	
<b>Total lakeshore</b>	<b>214,896</b>	<b>63</b>
– mainland shore	171,506	
– islands	39,443	
– lakes on islands	2,242	
– inland islands on islands	1,705	
<b>Total riverbanks *</b>	<b>76,000</b>	<b>23</b>
– mainland shore	73,600	
– islands	2,400	
<b>Total shoreline</b>	<b>336,000</b>	<b>100</b>

\* Includes the riverbanks of rivers with a river bed wider than 5 metres.



JARI KOSTET



SEPPO ALATALO / VASTAVALO

## Sparkling blue gold

*“Finland is called the Land of a Thousand Lakes, but that figure is not even close to the truth.”*

Zacharias Topelius was right in his Book of Our Land (Maammekirja) in 1875. More than a century would pass before the exact number was calculated, and it was 187,888. The smallest ponds included in the count were only 500 m<sup>2</sup> in size, however; lakes and ponds exceeding one hectare in size numbered 56,012.

Topelius was not always right; in 1838 a Lapp man had told him a story according to which Lake Inari would not let anyone measure its depth. On the basis of this, Topelius wrote a poem that flatly states: “It is as deep as it is long.” A native Inari-dweller might well have said “Nuuvt kukke lii ko čierjal-uv.”

An echo depth sounding of Inari was completed in 1961–62. The maximum depth found was 95 metres. A verifying measurement two decades later took off another three metres, meaning that Inari comes second to Lake Päijänne in depth.

### European champions in large and small lakes

The European Union contains 93 lakes with an area exceeding 100 km<sup>2</sup>. Forty-seven of these are in Finland, meaning we have more than all the other EU states put together. There are few statistics in which one country is so dominant.

Most of Finland’s large lakes were formed during the Ice Age and shaped by the land uplift. Päijänne and some other major lakes were born from cracks in the bedrock formed hundreds of millions of years ago. Lappajärvi and Paasivesi have a heavenly origin, having been caused by meteorites.

In its number of ponds, Finland is fairly even with Sweden, both having more than 100,000 lakelets of less than one hectare. The rest of the EU can only wonder at its northern neighbours’ wealth of waters. More than half of Finland’s ponds are in the municipalities of Inari and Utsjoki. Since the central and eastern parts of the country are known as the Lake District, this might be termed the Pond District.

Water quality is good or excellent in over 80% of Finland’s lake area, although many shall



AARNO ISOMÄKI / VASTAVALO

low lakes are eutrophic and require attention. Almost 1,000 rehabilitation projects have been completed in recent decades. The most common methods are removal of aquatic plants, improvement of food chains, and oxygenation. Another factor in improving water quality has been significant investments in the removal of nutrients from urban and industrial wastewaters.

**Lake Pälkänevesi** manages to squeeze into the list of one hundred largest lakes in Finland. There are many islands, each with plenty of secluded natural habitats. Coastal areas have historically been valuable agricultural resources.



AARNO ISOMÄKI / VASTAVALO

**In the village of Töysä, the ice begins to melt** on Lake Hakojärvi. Owing to warmer spring times, the date of ice breakup has shifted one or two weeks earlier during the last three decades.



The EU Water Framework Directive came into effect in 2000, with the aim of achieving a good ecological status for surface waters by 2015. Collaboration between authorities and local residents is closer in Finland than in most other countries. Due to their love of local lakes and the scarcity of public funding, lakeshore residents have been inspired to start up lake protection groups and to work together in maintaining their lakes.

### Diversity of forms

Finland's lakes differ in character from almost all of their European counterparts. It is difficult to determine where one lake ends and the next one begins. The most interesting is Great Saimaa, which can be viewed as either one or up to a hundred lakes. It is one lake in the sense that the water level is almost constant all the way from Lappeenranta to Joensuu and Varkaus, with a few centimetres' difference in Savonlinna. However, according to the ice, temperature and flow conditions, the many pools of Saimaa could also be considered separate lakes.

In 1933, poet-geographer Aaro Hellaakoski proposed the names *Satanen* or *Satajärvi* (derived from the word *sata*, meaning 'one hundred') for the lake, but these never caught on. Like Saimaa, many other pools in the Lake District form chains

extending over hundreds of kilometres. These are broken up by short rivers or narrow passages where the water level can drop by several metres. Canals and locks are often built at these points for boats. The water systems Vuoksi, Kymijoki and Kokemäenjoki contain a total of almost 40 locks and 30 open canals.

The most extensive network of boating routes is in the Vuoksi system, reaching as far north as

### Largest lakes in Finland

Lake	Region	Area (km <sup>2</sup> )	Max. depth (m)
Suur-Saimaa	South Karelia, South Savo, North Karelia	4,380	86
Päijänne	Central Finland, Päijät-Häme	1,100	95
Inari	Lapland	1,060	92
Pielinen	North Karelia	960	60
Iso-Kalla	North Savo	900	90
Oulujärvi	Kainuu	890	35
Keitele	Central Finland	500	65
Lokka	Lapland	417	12
Längelmävesi	Pirkanmaa	410	73
Puulavesi	South Savo	325	60
Kitkajärvet	Lapland, Northern Ostrobothnia	305	34
Juojärvi	North Savo	297	67
Höytiäinen	North Karelia	293	54
Kemijärvi	Lapland	288	40
Pielavesi-Nilakka	North Savo	278	27
Näsijärvi	Pirkanmaa	265	63



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**The Saimaa steam regatta in Puumala.** More than 80 steam vessels are registered with the Finnish Steam Yacht Association, and more than a third of these sail on the waters of Lake Saimaa.



TIMO VUORINEN / VASTAVALO

**The lakes in Southern Finland** are frozen over for around five months, whereas in Lapland the lakes are frozen for seven to eight months. The early spring sunshine invites us to enjoy the some icy activities.



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**At least 100,000 Finns** practice the hobby of winter swimming. There are roughly the same amount of men as women. The Finnish Winter Swimming Championships have been held annually since 1989.

Nurmes and Iisalmi. This includes nearly 600 kilometres of 4.2-metre deep-water channels, some 1,000 kilometres of 2.4-metre channels and several hundred kilometres of 1.8-metre and 2.1-metre channels. The system discharges into the sea at Vyborg, making it, the EU's largest lake network, important to Eastern Finland's economy. New connections have also been planned between the Kymijoki water system and the sea, and between the water systems of Kymijoki and Vuoksi.

Casting an eye over a map of Finland, one sees the blue colour of the Lake District forming an extensive labyrinth, in which individual lakes are difficult to discern. Further north, the eye is drawn to the two large lakes of Inari and Oulujärvi, and then to Western Europe's largest artificial lakes, Lokka and Porttipahta. The region of Kuusamo also has plenty of blue-tinged areas, and southern Lapland is split by a belt of medium-sized lakes. The most obvious waters in the west are Pyhäjärvi (in Säskylä) and Lappajärvi, and the eye-catcher in the south is Lohjanjärvi. Many of the smaller water systems along the coast contain no lakes, however.

When the Finnish people were given the chance to select a lake to represent each Finnish region, size was not the main criterion; for instance in Uusimaa, Lake Tuusulanjärvi was probably selected due to its cultural significance as the home of many artists and writers.

## Also a land of rivers

The Finnish Environment Institute (SYKE) completed an inventory of Finland's flowing waters in 2014. We have a total of 72,500 kilometres of streams and rivers. Slightly over half of this length, 36,800 kilometres, consists of rivers with a river bed wider than five metres.

Most Finnish rivers are broken up by lakes. Thus, the new river network information system contains as many as 24,880 segments of flowing water and 16,659 lake segments. The single longest lake-free river segment measures no more than 41 kilometres and can be found in the river Temmesjoki in North Ostrobothnia.

The longest Finnish rivers are, however, several hundred kilometres long: Kemijoki measures exactly 500 kilometres from the upper reaches of Kemihaara to the sea. Other long rivers include Iijoki (306 km) and Oulujoki (107 km). On the south face of Halti, a drop of water will travel 550 kilometres along first order streams and four rivers (Poroeno, Lätäseno, Muonionjoki, Tornionjoki) before reaching the Bay of Bothnia.

Streams and rivers can be separated based on whether they run in a clay-dominated catchment area, the coniferous forest zone or the fell area. Large rivers in clay-dominated catchment areas include Porvoonjoki, Vantaanjoki, Aurajoki and Loimijoki. Many rivers with upper reaches in the coniferous forest zone have lower reaches in a clay-



HYDROLOGICAL ARCHIVE / SYKE

dominated catchment area. Such rivers include Kyrönjoki and Lapuanjoki. Large fell area rivers are only found in the northwestern tip of Lapland.

One fifth of Finland's river segments are excellent in terms of water quality. Water quality is good in 45% of all river segments, satisfactory in 24%, passable in 10% and poor in slightly over 1%. Passable and poor water quality is mainly found in coastal rivers.

### Fluvial power

The first mill rights had been granted to Bishop Hemming at the Halistenkoski rapids in the river Aurajoki in 1352. Water-driven sawmills had been in use since the late 16th century, and the first ironworks with a tilt hammer were built in Mustio, on the Karjaanjoki river, in 1616.

**Opened on 25 May 1929, the Imatra hydroelectric power station** is the largest in Finland.

The Imatrakoski rapids also dried up for the first time to reveal the stony river bed below. Today, the rapids rush down on summer evenings, to the delight of visitors to the area.

**The Kukkolankoski rapids** are the largest and most famous on the Torne, the long river flowing through northern Sweden and Finland. Whitefish have been caught there for at least 800 years. Autumn is the season for lamprey fishing.





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**A rubber dinghy** in the rapids of Kuusamo. Whitewater adventures are offered by dozens of tourism businesses around the country.

## Largest rivers in Finland, by region

Region	River	Area (km <sup>2</sup> )	Average flow (m <sup>3</sup> /s)
Lapland	Kemijoki	50,910	538
	Tornionjoki	39,820	378
	Paatsjoki	14,570	146
	Tenojoki	13,780	165
Northern Ostrobothnia	Oulujoki	22,920	254
	Iijoki	14,320	173
	Siikajoki	4,440	40
Kainuu	Kiehimäjoki	8,700	102
Central Ostrobothnia	Perhonjoki	2,690	20
South Ostrobothnia	Kyrönjoki	4,900	45
	Lapuanjoki	4,110	32
North Karelia	Pielisjoki	21,770	240
	Lieksanjoki	8,260	94
South Karelia	Vuoksi	61,560	554
Satakunta, Pirkanmaa	Kokemäenjoki	27,100	216
Southwest Finland	Paimionjoki	1,090	9
Uusimaa	Karjaanjoki	2,010	18
	Porvoonjoki	1,260	13
Kymenlaakso	Kymijoki	37,230	304

HASSE HÄRKÖNEN

In the mid-nineteenth century, Finland had around 4,000 water mills and nearly 200 water-driven sawmills. The father of Finland's paper industry, Fredrik Idestam, opened the first pulp factory in Alakoski, Tampere in 1865. Tampere also saw the lighting of Finland's first light bulb in 1882.

When the first turbines of the Imatra water-power plant were switched on in 1929, people were sceptical: "Can Finland ever need such an amount of electricity?" Its power output was 56 MW, while today's electricity consumption peaks at nearly 15,000 MW. The output of the Imatra hydropower plant has more than tripled since being established.

Finland's rapids now only produce around one sixth of the country's electricity. The majority of Finland's hydropower is produced in the river Kemijoki. Its power stations provide nearly 40% of the hydropower generated in Finland.

### Tar and wood

In addition to providing energy, rivers have served Finnish people in many ways. For centuries, they were used as waterways and transport routes that connected coastal areas to inland locations. Tar was an important product for over two centuries. It was produced inland and up to 200,000 barrels were exported every year after the middle of the 19<sup>th</sup> century. The last tar boat (known as 'paltamo' in Finnish) floated down the river Oulujoki in 1927.

Boat traffic was common in rivers such as Kyrönjoki and Lapuanjoki. In recent years, the boat traffic on Kyrönjoki has been resuscitated and travellers have been provided with the opportunity to take part on tours presenting the local river landscape. Most Finnish rivers have so many

rapids that passenger traffic has been minimal, but almost all rivers have been used for timber floating, log floating in particular.

Log floating was relatively common in the 18<sup>th</sup> century, but it became increasingly commonplace in the second half of the 19<sup>th</sup> century as steam sawmills were taken into use. At the beginning of the 20<sup>th</sup> century, log floating employed up to 70,000 men, albeit for no more than 1–3 months of the year. In the 1930s, it remained by far the cheapest means of transporting timber. Railway transport was approximately four times and road transport up to ten times more expensive.

Several rapids were cleared and flumes constructed to facilitate log floating. In total, there were approximately 13,000 kilometres of floating channels in Finland.

**A tar kiln burns** in the Seitsemien National Park. Tar has been used for centuries to protect boats and buildings. Tar became Finland's most important export product for around a century after 1770. Around 30 litres of tar can be obtained from a cubic metre of pine wood.





**Around 2,000 rapids have been recovered** in Finland since the 1970s. Rocks and boulders have been relocated, gravel has been spread in key spawning sites, and barriers to spawning fish have been removed. The Finnish Association of Waterway Recovery (Virtavesien hoitoyhdistys) works hard to maintain the Vääräkoski rapids on the Hunsalanjoki river in Loppi, Southern Finland.

### Salmon fishing and recreation

Salmon was one of the major causes for early settlements along rivers, particularly those running into the Bay of Bothnia. The economic significance of this pink-fleshed migrant was understood early by the Crown, which declared salmon-fishing the exclusive right of the State. In practice this meant levying a tax on anyone fishing salmon.

After the Second World War, conflicts arose between Finland's electric power industry and the centuries-old privileges enjoyed by Finland's river fishers. They particularly centred around the Oulujoki and Kemijoki rivers.

Today's salmon fishing is a varying combination of sea, coastal and river fishing. The Tornionjoki river supplies 50–100 tonnes of salmon annually, while on the Teno, the average catch is slightly greater. Fishing tourism is a major source of income for entrepreneurs along these rivers.

Projects are underway in many Finnish rivers to restore migrant fish populations: these include the Kymijoki, Vantaa and Aurajoki rivers, as well as the Oulujoki, Kemijoki, Iijoki and Pielisjoki-Koijoki rivers.

Fishing is by no means the only form of river-related recreation. The extensive river network is ideal for canoeing. Some routes consist of river segments alone, but combination routes comprising both rivers and lakes are more common. The difficulty of the routes also varies: some have challenging rapids, whereas others are also suitable for novices.



**You can still see log floating** in the Vuoksi River Basin. An extension of the lease period of the Saimaa Canal with Russia could also lead to new growth in freight transport on Eastern Finland's waterways.



**Loggers' games** have remained popular, especially in the eastern and northern parts of the country. The tradition began on the river Lieksanjoki in the 1930s. Typical events include poling, rolling, the logger's oath, and riding rapids on a log.

## Born of an island

When Finland rose from the sea after the last Ice Age, it started as an island. No one knows precisely where that embryo of Finland was located. It might have been the top of Tiirismaa, the highest point of today's southern Finland (222 m). Some 12,000 years have since elapsed.

In addition to water, the first island may have been fringed by the edge of the continental glacier receding northwest. A millennium after the first glimpse, Finland already consisted of hundreds of islands. The mainland gradually began to emerge at today's eastern border. Finland was no longer wholly insular.

Some 10,200 years ago, the level of the Baltic glacial lake suddenly dropped by almost thirty metres and the Yoldia Sea was created. Many of the islands grew, the largest one being in today's southern Häme. A few centuries later, glimpses of Åland could be caught amid the waves.

The last remnants of the continental glacier melted away from what is now Finland around 9,000 years ago. The Baltic was a lake, with its largest island stretching from Jämsä to Suomenselkä – its area was four times that of Zealand, which is now the largest island in the Baltic Sea.

Around 7,500 years ago, the Baltic became a sea again. Compared with today, the coast was further inland by 50–100 kilometres at the Bay



TOMI MULLIKKONEN

of Bothnia, 30–60 kilometres at the Bothnian Sea and 20–40 kilometres at the Gulf of Finland. There were not many islands at that time, but tens of thousands of them were waiting to rise from the depths. With the continuing land uplift, they began to emerge over an extensive area. While the movement of the coastline merged former islands with the mainland, the largest of Finland's archipelagos – the Archipelago Sea – was gradually formed in the southwest. Today it has almost 40,000 islands. These days the number of Finnish sea islands over 100 m<sup>2</sup> in area totals 80,897, with their coastline stretching over 39,803 kilometres.

**Chives** (*Allium schoenoprasum*) grow on many of the cliffs in the Gulf of Finland. Chives also thrive in inland areas and serve as a reminder of the coastline that once was.

**Kvarken narrows.** Around 300 hectares of new land emerges on the coast of the Gulf of Bothnia every year.



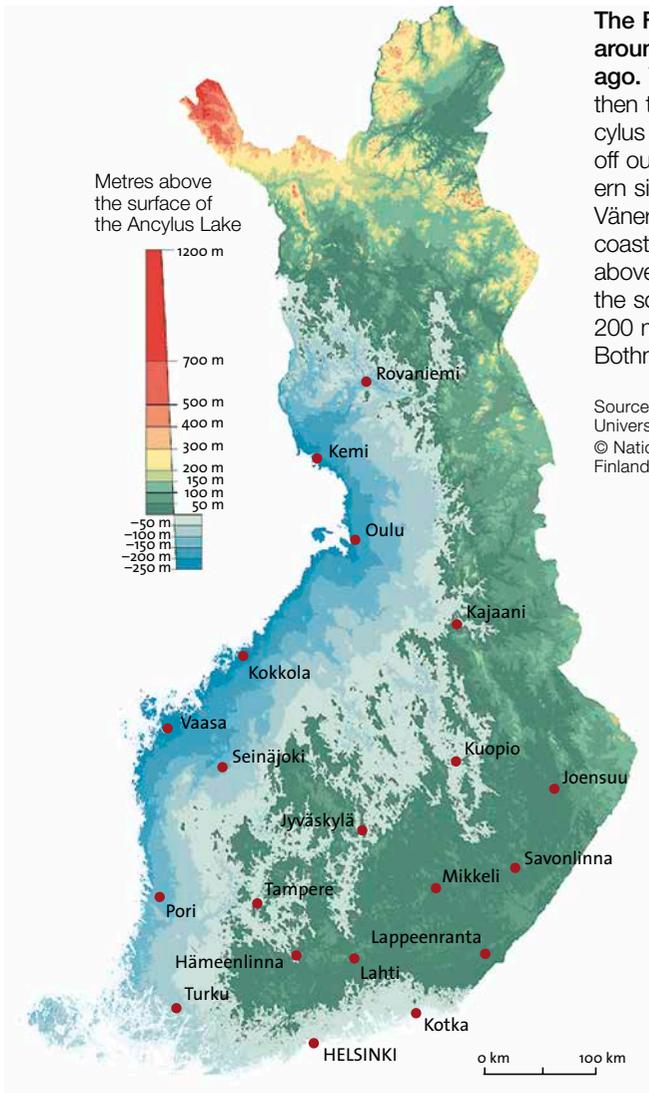


JARI KOSTET

The ruddy turnstone (*Arenaria interpres*) thrives in tern and gull colonies of the outer archipelago. Today, the species has all but disappeared from the inner archipelago. A few pairs nest on the larger inland lakes.

Some of our freshwater islands are older than their home waters: they were already islands before the lake separated from the sea. Over the millennia, the land uplift has tilted lake basins, resulting in the appearance and disappearance of islands. The creation of new discharge channels has dramatically altered the size and island composition of many major lakes, including Saimaa and Päijänne. Small islands have been destroyed by ice and waves, and when lakes have become overgrown, their islands have naturally also been obliterated. Humans have drained many lakes or lowered their water levels, causing islands to emerge or fuse with the mainland.

Today, the number of our freshwater islands is 98,050. Almost 1,000 of them are islands on islands, located in lakes that are themselves on islands. Such lakes-on-islands number around 2,000. The total island shoreline in freshwater areas stretches over 43,496 kilometres, of which islands in rivers account for approximately 2,400 kilometres. Thus our freshwater areas just beat the marine areas in terms of both the number of islands and the length of shoreline. The same applies to the total area of islands: inland islands cover about 7,200 km<sup>2</sup> and sea islands 5,800 km<sup>2</sup>.



**The Finnish islands around 9,000 years ago.** The Baltic Sea was then the freshwater Ancylus Lake, with its runoff outlet on the western side of today's Lake Vänern in Sweden. The coastline was 60 metres above the current level in the south, and even over 200 metres in the Bay of Bothnia.

Source: Matti Tikkanen, University of Helsinki © National Land Survey of Finland 192/Mar/98



TIMO NIEMINEN

**Kelp is in decline** on the coastal areas of Finland. Many species rely on kelp as both a source of food and protection. Humans have also made good use of kelp as a food, a medicine, as fertilizer, and as dye.

## Islanders

After the last Ice Age, the first humans who set foot on the soil of what is now Finland found themselves on an island. We know this for certain, and we also know that the spot where they came ashore is now far inland. What happened to these pioneers?

Likely, they found the conditions too harsh and made a hasty retreat. Perhaps they only intended to be the first-ever summer residents on our islands: to catch a few seals and wonder at the midnight sun. Other pioneers did, however, follow and the first year-round dwellings were probably built some 8,000 years ago. The first person born and bred in Finland saw the light of day in a humble abode.

### Budding agriculture

A good 4,000 years ago, the southern and south-western coasts of Finland received their first large wave of immigration. Battle-Axe people who used pointed shaft-hole axes arrived across the sea from Estonia. They initiated a revolution in livelihoods: agriculture and cattle-raising began to exist side by side with hunting. The northern Finnic and southern Estonian peoples interacted energetically, which is evidenced today by the similarities between the two languages.

Evidence of animal husbandry dating back four millennia has been found on the southwestern island of Nagu. The climate had already cooled

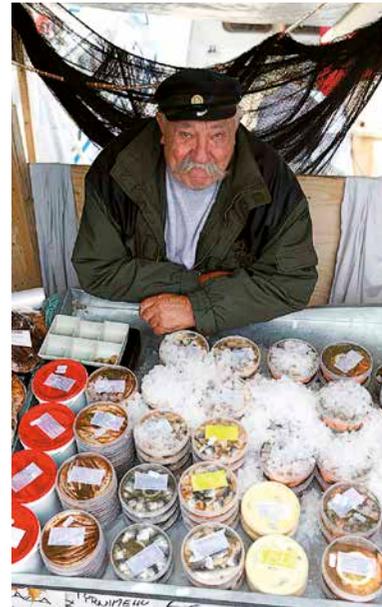
considerably from the Atlantic climatic optimum reached some 5,000 years ago. Despite the growing significance of agriculture, the sea was an importance source of food. More saline than today, it was rich in cod and other fish. Ringed seals (*Pusa hispida*), grey seals (*Halichoerus grypus*) and harbour seals (*Phoca vitulina*) were hunted, as were many waterfowls that provided down.

During the Bronze Age (c. 1000 BC), the Baltic Sea had become a major connector between those living on its islands and shores. Seafaring and trading were important forms of sustenance. In the Iron Age (500 BC – 1000 AD), settlements spread further out as the islands grew in area due to land uplift. Sheep grazed, even on the smallest islands.

Swedish settlements were gaining ground in the Archipelago Sea area in the 12<sup>th</sup> century. The second migration wave from Sweden in the late 13<sup>th</sup> century was connected with the great kingdom's aspirations for expansion to the east. This is when the coast and islands of eastern Uusimaa became settled firmly and extensively by a population focusing on cattle farming, fishing and cultivation.

### Wars and epidemics

The Black Death put an end to the flow of settlers from Sweden in the mid-14<sup>th</sup> century. The two centuries that followed did, however, see an



Baltic herring market has been held in Helsinki since 1743.

Nowadays part of the town of Parainen, Utö is the southernmost inhabited island in Finland. The island is currently home to around fifty permanent residents and has its own school and shop.



increase in island populations, only to be followed by a sudden plunge in the late 1500s. This may have been caused by a decrease in the catches of fish, but there were also wars and epidemics which – particularly in the early 18<sup>th</sup> century – cast a shadow over archipelago life.

The islands of the Gulf of Bothnia emerged from the sea later than our more southern islands, so it is pointless looking for signs of early settlement there. The first permanent settlers may have arrived on the current islands of Kvarken 1,000 years ago. Hailuoto was settled in the 12<sup>th</sup> century. Fishing and seal hunting remained more important means of livelihood in the Gulf of Bothnia than on the southern islands.

Our freshwater islands have been inhabited for thousands of years: hundreds of Stone Age dwellings have been found, for instance around Lake Saimaa. Elk and wild reindeer from the forests, beavers from the ponds and fish from the lakes were all important prey. In Lake Saimaa, the ringed seal was a treasured catch. Slash-and-burn farming probably started around the year 500 AD. Barley was the first crop to be farmed; the earliest signs of rye only date back to the 13<sup>th</sup> century.

### Rise and fall – and new rise – of the islands

Life in almost all of Finland's island areas grew stronger and more settled during the 19<sup>th</sup> century. Mid-century, the population of the Archipelago Sea began to spread onto the outer islands; almost 300 islands became populated over a few decades.

The golden age of peasant seafaring in the 19<sup>th</sup> century increased the wealth of many island areas, including Åland and Tammio. Ships sailing the Baltic and Atlantic were built and equipped on the islands. Gradually, sailing ships were supplanted by steamers. Finland's first lighthouse was built on the island of Utö in 1753, and the second one in Porkkala in 1800.

The economic boom and population growth continued in the archipelagos until the first decades of the 20<sup>th</sup> century. Life was bustling: many islands had their own churches with pastors, schools with teachers, and lots of shops and associations. Trade with Estonia flourished, fish was exported and agricultural products were imported. Fish and, for example, stone for use at construction sites were transported from the islands to St Petersburg. Stockholm was another major export destination for the southern and southwestern coast.



ANTERO AALTONEN

But the world was changing. The industrialising mainland began to attract the islanders, as was the case in all rural areas. Land traffic began to displace water transport and, despite developing road connections, islands became peripheral areas. The population began to fall. People migrated, first to America, then to mainland Finland or Sweden.

Migration accelerated after the Second World War. During the war, almost 100,000 people still lived on islands without a road or ferry connection. In 1970, the figure was 30,000 and today it is only 10,000. The construction of bridges does account for a great proportion of this; the islands didn't disappear but merely continued their existence with permanent road connections.

There is another perspective to the population trend: more people live on islands today than ever before, because the number of part-time residents has seen a significant increase. Improved data connections and telecommuting are enabling the growth of island living, as a result of which our islands are enjoying new growth. Thousands of new islands have also become populated by part-time islanders.



JYRKI SAHINJALA / VASTAVALO

**The Church of Merimasku** was built during the 1720s. It is one of the oldest wooden churches in Finland. Merimasku became part of the municipality of Naantali, Western Finland, in early 2009.

**Sheep take good care of the landscape** of the archipelago. Sheep farming in Finland is showing signs of recovery after many years of hardship. An adult sheep eats between seven and ten kilos of vegetation every day.



JARI LAURIKKO / TURUN SANOMAT

**In Rymättylä**, which is nowadays part of the municipality of Naantali, early potatoes have even been planted in mid-March. The majority of Finnish potatoes are produced in the archipelago region of Finland Proper.

## Traditional and new industries side by side

Island life continues to be bustling and diverse in Finland. Statistics show that the economic structure of islands clearly diverges from the national average. The share of primary production is clearly above the national average, whereas the number of jobs in secondary production is below the national average.

The service industry employs almost half of our island population, but even this figure is below the national average. The share of private services has grown although retail trade concentration has reduced the number of special stores in municipal centres and the number of village shops in island areas.

Over the years, the Finnish Government has granted special subsidies to several municipalities belonging to the island system. Support provided to structural change areas, EU programme funding and archipelago increments in central government transfers to local government have helped municipalities to create new jobs by facilitating the investment, product development, marketing and employment projects of businesses. Funding from the EU's Interreg and Leader programmes and funding for the fishing industry have been important to island municipalities. EU funding will continue in the new programme period 2014-2020.

### Agriculture

Agriculture and forestry account for some 15% of the jobs in island and part-island municipalities, while the corresponding national rate is less than 5%. Islands enjoy the benefit of a strong image of

purity and reliability, which can be utilised in marketing local specialities. The growth season is also longer in the southwestern archipelago than in the rest of the country.

The number of farms has seen a significant decrease in all island areas. In the middle of last century, almost every house had one or two cows, but now farms are a rarity even on big islands.

On some islands farming is still an important source of livelihood. In 2016 there were still a total of 900 farms and horticulture enterprises in the eight archipelago municipalities, with the largest numbers in Pargas (211), Malax (188) and Kemiön-saari (177). On the island of Salavainen in Velkua, a nationally valuable landscape area, there were three farms with a total of about 250 heads of dairy or beef cattle in 2016. Meat is sold directly even to the Helsinki region.

Farming is still a major source of livelihood on the islands of Kimitoön and Malax which have vast field areas. Part-island municipality Närpes produces almost two thirds of the tomatoes and one third of the cucumbers produced in Finland. The first early potatoes from Rymättylä, Naantali are among the most long-awaited summer produce and a sign that summer has finally arrived. The herring often served with new potatoes also came from Rymättylä for two decades. This is no longer the case as Boyfood's Rymättylä-based operations were terminated in 2014 after the company had been acquired by Felix Abba.

Modern farming favours fairly large units that can only be established on the biggest islands

as fields are small and fragmented. Specialised farming is therefore a prime asset. Farming has decreased on the smaller and outer islands, although new forms, including sheep farming, have emerged on a smaller scale.

Some of Finland's almost one thousand fur farms are located in island municipalities, particularly in Ostrobothnia. Fur farms are major consumers of Baltic herring fished for animal feed.

Common sea-buckthorn (*Hippophae rhamnoides*) is also grown on the coastal areas of Ostrobothnia and Satakunta. The berries provide various health benefits. Hailuoto and Manamansalo, large islands in northern Finland, still produce large amounts of lichen that is mainly exported to Germany.

### Fishing industry

In 2016 there were about 1,500 registered commercial fishers in the marine areas, while about 850 fishers practiced their trade in freshwater areas. Most of the fishing takes place in the island or part-island municipalities. In the marine areas the top fishing municipalities are Korsholm, Uusikaupunki and Malax, while in freshwater areas the city of Savonlinna ranks the highest.

There are fish farms in at least half of the municipalities belonging to the island system. Juvenile fish are also produced inland, but the majority of edible fish production takes place in Åland, the Turku Archipelago and other sea areas. Major fish farms for producing edible fish can be found in Kustavi, Taivassalo and Houtskär.

Natural Resources Institute Finland has fish research and aquaculture plants in several locations, such as Enonkoski and Tervo, a pioneer municipality in fish farming. The number of fish farming companies has decreased, but production volumes have increased. Imported Norwegian salmon, increasingly strict environmental requirements and profitability challenges add stress to fish farming.

Fish market events organised around the country provide fishers and entrepreneurs with the opportunity to perform small-scale fish processing and direct marketing. Approximately 50 events are organised annually and they attract a total of half a million fish- and archipelago-lovers. The largest events on the coast are held in Helsinki, Turku, Rauma, Vaasa and Kotka. Inland, the biggest events take place in Tampere, Lahti, Kuopio and Joensuu. Important smaller events include the archipelago market of Pyhtää, the whitefish

market of Hailuoto and the vendace market of Vuonislahti in Lieksa.

Of Finland's regions, the fishing industry is most important in Varsinais-Suomi. Approximately 70% of all the Baltic herring caught using a fyke net comes from the Archipelago Sea. The northern part of the Archipelago Sea is one of Finland's most important areas for catching traditional commercial fish species. Fish processing, fishing and aquaculture employ around 500 people in Varsinais-Suomi. There are approximately 50 fish processing companies in the region.

Recreational fishing is an important part of the island culture. Each year about 1.6 million people find recreation in fishing activities in our waters, representing about a third of the total catch, almost 90% in freshwater areas. Almost a third is caught by nets, but the most common gear is still rod and line. The annual crayfish catch is about 2.5 million.

**In terms of its tonnage, the Baltic herring is the most important fish to the Finnish economy.** Baltic herring are mostly caught using trawlers in the Sea of Bothnia.





**Marko Nikula carves wooden boats** in Littoinen, in the municipality of Lieto, Western Finland. Finland can proudly boast top-level expertise in boat building. The sector has many enterprises, and exports account for more than two thirds of revenue.



JUSSI LOPPERI / KYMIEN SANOMAT

**Uudenkaupungin Työvene builds boats and vessels** for Finnish and foreign authorities and companies. In 2014, the company completed an oil recovery and commuter vessel for the Kotka–Pyhtää route.

### Manufacturing

The structural change of Finnish manufacturing has tested many Finnish municipalities in the 2000s. This also applies to many island municipalities, such as Kimitoön, Pargas, Raseborg, Kotka and Savonlinna.

In Southeast Finland, Kotka has suffered the worst unemployment rate. The reasons for Kotka's difficult situation include the structural change of the wood processing industry and difficulties in Russian trade. The challenges affecting manufacturing have also had a major impact on the economy of Raseborg, Savonlinna and many other island municipalities.

Dalsbruk, the old industrial centre of Kimitoön, has lost many jobs in recent years. In 2012 the steel company FNsteel closed down its big rolling mill. In 2014 Abloy almost halved the number of employees at the Björkboda factory and in 2017 the factory was closed down. Some of the large buildings previously occupied by the steel mill are now being used by other companies.

Limestone has been quarried in Pargas at least since the 17<sup>th</sup> century. The current mining company, Nordkalk, manufactures limestone-based products for various industries including the construction, fertilising and food industry. The com-



TULIKIVI

**Tulikivi and Nunnanlahden Uuni** refine soapstone for the Finnish and global market in part-island municipality Juuka. Juuka is also home to Suomen Kivikeskus, a centre that develops the use of stone and hosts various exhibitions.

pany has had to resort to temporary lay-offs from time to time, but the 70-hectare open-pit mine continues to produce limestone.

Many sawmills were originally established on islands to ensure good access to waterways. This enabled the flexible transport of both logs and sawn timber. Lohikoski in Sulkava and Lamposaari in Lappeenranta are two good examples of former sawmill locations close to waterways. There also used to be a pulp mill and a sawmill on the island of Halla in Kotka. The island area of Ruokolahti is home to Stora Enso's large Kaukopää pulp and paper mills.

Boat manufacturing is naturally one of the most traditional industries in island areas. Approximately 5,000 Terhi boats are annually manufactured in Ähtäri and Rymättylä, Naantali. Some subcontractors also work in Savonlinna. Bella-veneet Oy - Bella Boats is the leading manufacturer of fibreglass motorboats in the Nordic countries. It has production plants in Kuopio and Larsmo. Botnia Marin, a boat company dating back decades, produces Targa boats in ten different sizes in Malax and Nykarleby. Marsund boats are produced on the island of Pellinki in Porvoo. Boat building is practised in many of the island municipalities by the Gulf of Bothnia and Swan yachts are in fact world famous. Puuvenekeskus builds boats in Kotka, and traditional Finnish long rowing boats, known as church boats, and racing shells are manufactured in Sulkava.

Boat maintenance, repair and storage businesses serving boat owners can be found everywhere in island areas, both on the coast and inland. The dry dock of Suomenlinna, managed by a private association called Viaporin telakka ry, repairs and provides winter storage services for traditional ships and boats. Laitaatsilta Marina operates in the historical dock area of Savonlinna and repairs and provides maintenance services for lake vessels and boats.

Rapala VMC Corporation, the global market leader in fishing lures, was originally established by fisherman Lauri Rapala in Asikkala, Finland in the 1930s. The company exports its products to 140 countries. Oy Lindeman Ab is located on the island of Replot in Korsholm. The company manufactures synthetic fish nets for the Finnish market and for export, and has been in business for over one hundred years.

Several small and medium-sized food industry enterprises also operate in island areas. Coastal city Uusikaupunki is a strong centre for fish pro-

cessing. Inland, Kesälahti in Kitee is also known for its fish products. Korsholm, Vaala and Sulkava have small independent cheese dairies that primarily produce specialty cheeses. Berries are also processed in many island municipalities.

Vineyards popular among tourists can be found in several island locations, including Pargas, Vaajasalo in Kuopio, Lohjansaari, and Kalkkinen in Asikkala. Suomenlinna and the island of Rosala in Kimitoön have their own breweries.

Pargas-based LM-Instruments is part of the Planmeca Group, a global leader in the production of dental equipment. Bistro-Tuote Oy manufactures kitchen and bathroom fittings on the island of Rymättylä in Naantali and Tetrimäki manufactures Eliel Saarinen's Art Nouveau furniture on the island of Soisalo in Kuopio.



PEKKA HOIVANEN

**The Vaala cheesery** was granted the Strongest in Finland certificate in 2011. Vaala produces bread cheese in keeping with the traditional method of the Kainuu region.



KUUSAMON UUSTIN

**Are the fish biting?** Kuusamon Uustin Ltd. is the largest metal spoon bait factory in Finland.



KOISTINEN KANTELE

**Koistinen Kantele** in Rääkkylä has been manufacturing traditional Finnish instruments, kanteles, for over fifty years. Master kantele maker, Otto Koistinen, crafted his first kantele while on the shore of Pielinen Lake in 1957.



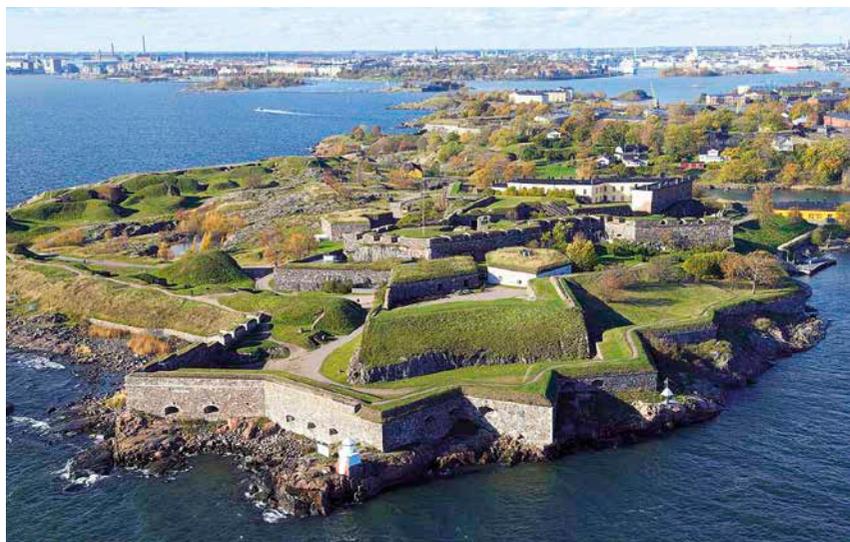
ANTERO AALTONEN

**During the summer**, one can take a boat from Vuosaari island in Helsinki to Kaunissaari island in Sipoo. The island is part of Greater Helsinki. Finland's only "boat shop" also travels to the island in the summer months.



THE FINNISH DEFENCE FORCES

**The Finnish navy safeguards the security** of Finnish waters, supports other agencies, and participates in international crisis management measures.



THE GOVERNING BODY OF SUOMENLINNA

**Suomenlinna in Helsinki houses six museums.** The Ehrensvärd Museum, the War Museum's Manege, the submarine Vesikko, the Toy Museum, and the Customs Museum are only open during the summer season. The main museum of the fortress is located in the Suomenlinna Centre and is open throughout the year.

## Services

State functions, such as island traffic, public safety, and environmental services, are still important employers in island areas. The same naturally applies to municipal services. However, the number of State jobs, in particular, has decreased significantly in the last couple of decades. This has had the greatest impact on islands with no permanent road connection.

The educational institutions of the Finnish Defence Forces are the largest educational institutions located on islands. The Naval Academy is located on the island of Suomenlinna and the National Defence University on the island of Santahamina in Helsinki. Military training is provided in various island areas in units and training areas of the Defence Forces and the Border Guard.

The College of Fisheries and Environment of the Livia College provides basic and further studies in Pargas. The University of Turku has some functions on the island of Själö (Seili) in Pargas. The buildings and various areas of Suomenlinna are maintained by the Governing Body of Suomenlinna and provide venues for meetings and events in the capital.

The Korpoström Archipelago Centre, situated by the sea in Pargas, provides venues for conferences and research events. The centre also includes a hotel.

Päijännetalo in Asikkala houses the Museum of Finnish Recreational Fishing, offices and venues for exhibitions and meetings. An annual island concert is organised at the Kassu Halonen Art House on the island of Manamansalo in Vaala.

Suomenlinna in Helsinki houses six museums and Seurasaari is home to Finland's largest open-air museum. Helsinki Zoo on the island of Korkeasaari is populated by 150 different species and the island of Harakka houses a nature and art centre. The City of Espoo is currently constructing an impressive archipelago museum on the island of Pentala, the venue of the annual Pentala Archipelago Days.

Locations with an archipelago, fishing or boat museum include Kaunissaari in Pyhtää, Tammio in Hamina, Vartsala in Kustavi, Rönnäs in Pernå, Näsby in Houtskär, Riihisaari in Savonlinna, Kerimäki, Åminne in Malax, Granösund in Korsholm, Kalajoki, Merikarvia, Bosund in Larsmo, Maxmo in Vörå, Kaskinen, Märingsgrund in Närpes and Öja in Kokkola. The extensive Pielinen Museum with an impressive section on log floating can be found in Lieksa.

The Maritime Museum of Finland in Kotka and Forum Marinum in Turku are the best-known mar-

itime museums in Finland. Many other museums also comprehensively present the history of island life and the livelihoods related to Finland's sea areas and bodies of water. In 2014, the National Museum of Finland organised an exhibition that showcased the summer holidays of Emperor Alexander III of Russia and Finland and his family that were spent in the Finnish archipelago in the late 19<sup>th</sup> century. Part-time island resident Tove Jansson was celebrated at special exhibitions held at Ateneum, Helsinki and Art Factory, Porvoo in 2014. Tove Jansson's cottage on the island of Klovharun in Pellinki, Porvoo is open to the public at limited times. Moominworld in Naantali is an internationally significant tourist destination.

The art centre of Poju Zabłudowicz, including a residence and exhibition spaces on the island of Sarvisalo in Loviisa, has brought the work of world-leading artists to the Finnish archipelago and given the area a boost of positive publicity. Zabłudowicz Collection collects and exhibits modern art in London, New York and Sarvisalo, but the location in Sarvisalo is only open to the public one day a year.

Many companies, organisations and municipalities own island premises that are used for hosting events and providing recreational facilities for employees. These premises are usually very popular and have good occupancy rates. Recreational islands belonging to major cities include Ruissalo, Vepsä and Maisaari in Turku, Viikinsaari in Tampere, Pihlajasaari in Helsinki, Fagerö in Sibbo and Iso Vasikkasaari in Espoo.

The impressive stone and wood churches found in island municipalities are open to the public in summer and available for enjoying a peaceful moment. The churches also provide intimate surroundings for getting married. Well-known churches include the wooden Pyhämaa Church of Sacrification from the 17th century, Västanfjärd, Nötö and Särkisalo churches from the 18th century and the Haapasaari, Jurmo, Kallankari (Kalajoki), Luhanka and Tankar (Kokkola) churches from the 19<sup>th</sup> century. Inland, one of the most impressive cemeteries in Finland is Mäntysaari, located in Kouvola in the middle of the island of Vuohijärvi. Many parishes organise camps at camping centres located on islands.

Assembly halls owned by youth associations, fishing associations, local farmers' associations, workers' associations, hunters' associations and village associations are often found on islands. When properly maintained, they provide venues for various events. Some islands have open air dance pavilions that are still in use.

Island shops, kiosks, cafes and restaurants can mainly be found on islands that attract holiday home owners and tourists, particularly in summer. These include Utö, Jurmo, Aspö, Nötö, Vänö, Iniö and Norrskata in Pargas, Velkuanmaa and Teersalo in Naantali, Skäldö and Bromarv in Raaseborg, Barösund in Ingå, Pellinki and Emäsalo in Porvoo, Sarvisalo in Lovisa, Kaunissaari in Pyhtää, Haapasaari in Kotka, Bergö in Malax, Replot in Korsholm, Ihamaniemi in Enonkoski, Lohikoski in Sulkava and Suuri Jänkäsalo in Taipalsaari. Such services are common on islands with fortresses and lighthouses, islands used by the marine guard and, of course, the largest islands, which are also important for tourism.

Many island schools have been closed, but schools providing education to year-classes 1–6 and even some schools providing education to year-classes 7–9 can still be found on islands. In 2014, islands with schools included Hailuoto, Replot, Bergö, Pyhämaa, Reposaari, Velkua, Utö, Iniö, Houtskär, Korpo, Nagu, Rosala, Särkisalo, Suomenlinna, Santahamina and Tiutinen. There is also a school in Lohikoski, the island part of Sulkava that can only be reached by cable ferry.

Active residents of the Hitis-Rosala islands established a private service home called Solglimten in 2003. The municipality of Kimitoön purchases services from the home that provides

### Turned into tourist attractions

Site type	Name	Location
Lighthouse	Bengtskär	Kimitoön
	Gustafsvärn	Hanko
	Isokari	Kustavi
	Jussarö	Raseborg
	Kylmäpihlaja	Rauma
	Marjaniemi	Hailuoto
	Märket	Hammarland
	Russarö	Hanko
	Sälgrund	Kaskinen
	Säppi	Luvia
	Söderskär	Sibbo
	Tankar	Kokkola
	Ulkokalla	Kalajoki
	Utö	Pargas
	Valassaaret	Korsholm
	Pilot station	Boistö
Laupunen		Kustavi
Ouraluoto		Merikarvia
Rönnskär		Malax
Sälgrund		Kaskinen
Coastguard station	Fagerholm	Pargas
	Gåshällan	Korsholm
	Mickelsörarna	Vörå
	Valassaaret	Korsholm
Fortress	Isosaari	Helsinki
	Kirkonmaa	Kotka
	Kuusajaskari	Rauma
	Rankki	Kotka
	Sommarö	Korsholm
	Örö	Kimitoön

Sites formerly owned by the Finnish Maritime Administration or the Defence Forces that have been taken or are to be taken into tourism and recreational use.



ANTERO AALTONEN

**The development of tourism and recreational services** is critically important to the future of our islands. A wide range of seafood can be enjoyed by visitors to the Pyhtää island markets.

the elderly with the opportunity to continue living on their home island. In Salo, thanks to active residents on the island, a new Särkisalo service home was opened in the premises of a former service home for the elderly, which now comprises a daycare centre, library, facilities for the young and meetings, services for the elderly, healthcare services and adult education services.

#### Tourist sites

The service industry already employs almost half of our island population, so the development of tourism and recreational services is a critical issue for the future of our islands. Although the situation is challenging, islands are attractive tourist destinations. Entrepreneurial training, intensified marketing efforts and networking all play a key role. It would be particularly important to extend the tourism season: the islands have a lot to offer at any time of the year.

#### There are around 50 spa centres in Finland.

The Kasnäs Archipelago Spa was opened in Kemiönsaari in 2005. Kasnäs offers a variety of leisure activities, including the Blåmusslan (*Blue Muscle*) Nature Centre.

Accommodation and catering businesses, a business life serving them and activity services form the backbone of island and water tourism. Busy and versatile waterborne traffic has created business on islands both directly and indirectly. A total of 4-5 million passengers travel on lake boats and coasters every year.

Islands with old fortresses and lighthouses and pilot and marine guard stations have become popular tourism destinations. Bengtskär, close to the open sea, attracts as many as 15,000 visitors every year. Islands that used to belong to the Defence Forces such as Öro, Kirkonmaa and Rankki, Valisaari-Kuninkaansaari, Lonna and Isoaari now attract visitors in large numbers. More than one million people a year visit Finland's largest military fortress island Suomenlinna, and Svartholm also represents the same old culture.

National parks, recreation areas, conservation areas, historical sites and nature centres managed by Metsähallitus attracted about 1.6 million visitors in 2016. The employment effect of the national parks and State-owned hiking areas alone is about 900 jobs.

Spas can be found in approximately one third of the municipalities. The Savonlinna, Naantali and Haikko spas are the best-known, whereas more recent spas include the Kasnäs spa in Kimitoön and the Koli spa in Lieksa.

Russians form the biggest tourist group in Finland, and some Finnish tourist resorts, particularly in the island municipalities of Eastern Finland, have in fact been acquired by Russians. Such resorts include Sirius Sport Resort in Pyhtää, Holiday Center Kukkapää in Sulkava and holiday centre Saariston Lomakeskus in Mossala, Pargas.



SAARISTOKYLPYLÄ KASNÄS

President of the Republic of Finland, Sauli Niinistö, and Mrs Jenni Haukio visiting the Savonlinna Opera Festival in July 2013.



OFFICE OF THE PRESIDENT OF THE REPUBLIC OF FINLAND



HARRI NUURMINEN

**An icebreaker cruise.** This too is part of archipelago culture and is of particular interest to foreign visitors.

## What is island culture?

Rising tourism is increasing demand for a genuine island culture. The culture of our islands and waters consists of history, tradition, nature and the environment. Culture is all the things that islanders do and appreciate; it encompasses architecture, food, clothes, language, thoughts, beliefs... Fortunately, it is impossible to precisely define island culture.

Many of Finland's most popular tourist attractions are on islands. Every year, 1.6 million tourists visit Åland. The Korkeasaari island housing Helsinki Zoo attracts almost one million people and the 'Moomin islands' in Naantali almost 300,000 visitors every year.

Built on a tiny islet off Savonlinna in the 15<sup>th</sup> century, Olavinlinna draws some 150,000 visitors a year, half of them during the annual Opera Festival. Manamansalo in Lake Oulujärvi is slightly further

away from the crowds, but still attracts 60,000 visitors every year.

Our islands boast many buildings and structures that cannot be found elsewhere in Finland. These include lighthouses, pilot posts, historical navigation marks and also our underwater heritage. Military history is strongly present on sea islands, as they house many old fortresses and other interesting sites.

The first impressions visitors have of an island usually relate to the village community spread around a harbour. One's eye may be caught by a lighthouse on a rock, an old windmill or the harmonious beauty of rows of red wooden houses. The lifestyle and sparse living of the islands have helped to preserve old settlements more commonly than elsewhere. In freshwater areas the villages are often located toward the island's interior, so the visitor may not have such a strong sense of human habitation and activity as by the seaside.

Our sea and freshwater areas boast plenty of prehistoric remains: stone labyrinths, rock paintings, ancient settlements and harbours. Island culture features extensively in literature, fine arts, drama, music, song and film. Waters have a strong presence in the Finnish national epic, the Kalevala, and composer Jean Sibelius was also inspired by them.

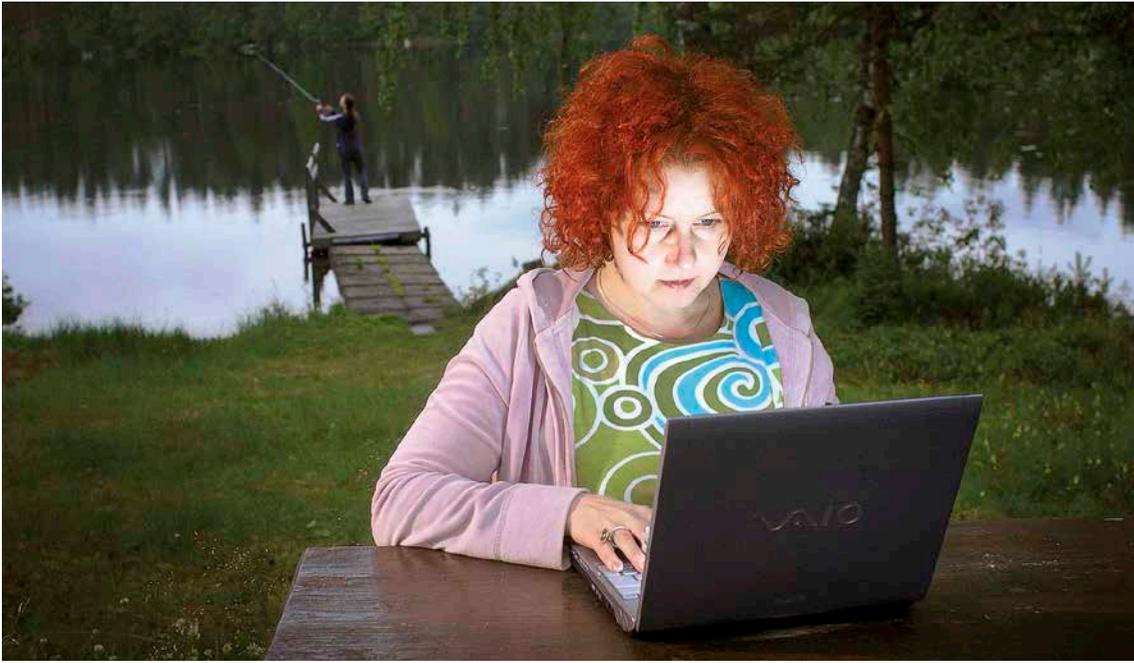
The cultural heritage of our freshwater areas and islands is kept alive by timber floating museums, loggers' games, old canals, fishing ports and fish markets, as well as marinas and old steamboats. By the seaside, the number of volunteers participating in the painstaking task of building and restoring traditional sailing ships is a tell-tale sign of love for the old archipelago culture.

The living culture of our islands and waters is upheld by permanent and holiday residents, boaters, professional and recreational fishers, tourists and many others. Despite the strong tradition, it is also important to build a new culture on the basis of the old heritage; this has been achieved in many of the fine cultural events organised on the Finnish islands in the summer months.



DALSBRUKS DRAGSFELSKLUBB

**The Baltic Jazz Festival** is a large annual event on the Kimito Islands. The Dalsbruk's Accordion Club has been a driving force behind the event.



PETRI ASIKAINEN / GORILLA

According to estimates, almost half a million Finns work in professions suited to working from home or remotely. Efforts have been made in many of the archipelago and island communities to improve the opportunities for remote work in a second home.

## Almost 70 years of island policy

The Island Policy is the oldest systematic regional policy in Finland. In March 1949, the Government set up a committee to investigate living conditions on the islands and to make development proposals. This was mainly due to the problems faced by the fishing industry. The committee drew up a total of five reports. Based on these the Finnish Government appointed a committee on 6 November 1958 to prepare “matters concerning the economic and social conditions and other special circumstances in the archipelago”. This can be considered as the first Island Committee, even if it was not officially known by this name until 1961.

In February 1976 the Committee gave a res-

olution on the preparation of the Island Development Act. The working group set up for this was chaired by Jan-Magnus Jansson and the vice-chair was Jacob Söderman. The act entered into force in June 1981. In the Island Development Act, the concept of ‘island’ covers sea and freshwater islands without permanent road access, as well as other islands and mainland regions with otherwise insular conditions. The Act obliges the State and municipalities to safeguard the development of islands by providing support in diverse political areas, especially in developing sources of livelihood, maintaining state employment, funding basic services and building transport and other

The annual archipelago seminar was held in Jyväskylä in 2016. The seminar is arranged by the Island Committee in cooperation with the various regional and municipal authorities of the archipelago area.



infrastructure. The islands' nature and environment must also be protected.

In early 2016, Finland had eight island municipalities and 40 part-island municipalities. The decree concerning these is in force until the end of 2019.

The island municipalities are Enonkoski, Hailuoto, Kimitoön, Kustavi, Malax, Pargas, Puumala and Sulkava.

The part-island municipalities are Asikkala, Espoo, Helsinki, Hirvensalmi, Ingå, Joutsa, Juuka, Jyväskylä, Kaarina, Kirkkonummi, Kitee, Kivijärvi, Korsholm, Kotka, Kuhmoinen, Kuopio, Larsmo, Lieksa, Liperi, Loviisa, Luhanka, Mikkeli, Naantali, Närpes, Parikkala, Pori, Porvoo, Pyhtää, Raseborg, Ruokolahti, Rääkkylä, Salo, Savonlinna, Sibbo, Taipalsaari, Taivassalo, Tervo, Uusikaupunki, Vaala and Vörå.

Five of the island municipalities are on the seashore and three are inland, while the part-island municipalities are distributed rather evenly. Before the current wave of municipal mergers, there were 13 island municipalities, but the number fell due to amalgamations, particularly in southwestern Finland. The part-island municipalities contain 18 cities, Helsinki being the largest.

The old Island Committee's final report in 1957 emphasised the significance of a geographically widespread policy on coastal and water areas. This has remained the approach in the Government's islands projects and decisions-in-principle in the 1990s and beyond.

The Island Committee is a permanent statutory advisory body that operates in connection with the Ministry of Agriculture and Forestry. The Com-

mittee participates in the development of island areas jointly with municipalities, regions, State authorities and other parties.

The work of the Committee is guided by the National Archipelago Programme for 2017–2019 "Islands, seas, lakes, rivers and the coastal zone as regional development factors". The five priority areas for the programme are:

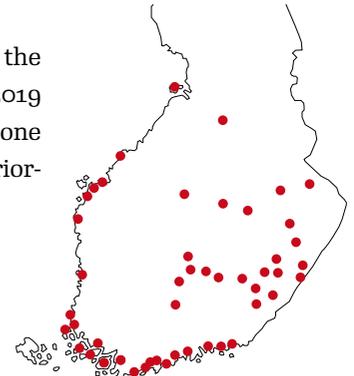
- Municipal, country and regional policy
- Business and employment
- Permanent and recreational residence
- Transport and telecommunications
- Environment, nature and culture

The Island Committee prepares reports on the implementation of the programme on a regular basis.

### Successes and regrets

The islands policy has produced results. Commuter vessels, ferries, cable ferries, hydrocopters, private roads, public roads and bridges have been put in place for island traffic. Some businesses have received higher subsidies from the State and the EU than their mainland counterparts. The provision of municipalities' statutory basic public services has been facilitated by archipelago increments in central government transfers to local government.

Electrification spread swiftly in the archipelagos in the 1950s and 60s, and phone lines were laid around the same time with support from the State. Finland's government is committed to bringing today's fast data communications out to the islands. Many archipelagos have national parks and conservation areas, which form treas-



Island and part-island municipalities.





TOMI MUURKONEN

The Finnish Border Guard is responsible for maritime rescue work. Assistance is given to people in distress at sea, missing people are searched for, and ambulance transport provided. The island rescue points have provided year-round safety for generations of island residents and holiday-makers alike.



JARI KOSTET

The Sea Bridge road ferry traverses the approximately 8 kilometre stretch between the mainland and Halluoto. The ferry can carry more than 50 cars.

ure-troves of the ecosystem and are essential for tourism. Landowners receive appropriate compensation for this.

Nationwide island development projects have focused on promoting tourism, fishing, small-scale processing and telecommuting. Island municipalities aim to enhance their image as tourist destinations and permanent residence areas, sometimes with shared marketing campaigns. The number of recreational residences has been increased with research and development projects aiming for more flexible town planning and exceptional permit policies, building and repairing holiday homes, and utilising summer residents' purchasing power and competence.

The number of State jobs in the archipelagos remained high and even grew between the 1950s and 70s; since then, it has fallen, proving a challenge to the fulfilment of the Island Development Act.

Pilot stations have been closed down by the Maritime Administration, coastguard stations by the Border Guard, and the coastal artillery and some Navy units by the Defence Forces, mainly due to technological advances. Ferries have been replaced by bridges, reducing the number of transport-related jobs. Since the 1980s, the Tax Administration, the Employment Administration, the Police and local Government agencies have cut their staff in island municipalities. Meanwhile, Post Office operations have been privatised.

### International context

Finland's accession to the European Union in 1995 had an impact on the country's island policy. Fishing and agriculture, which are crucial in the archipelagos, and to an extent also regional politics, are now led from Brussels. In regional policies, the number of islands is not a criterion for the EU's structural fund agenda. In practice, however, island-based regions have often been granted a better status than their socioeconomic figures might have entitled them to. A fairly good level of EU funding has been provided, which is important for the islands. This is in line with the European Charter of Fundamental Social Rights, which recognises the fact that insular regions have special characteristics that must be addressed.

The island policy is also linked to the EU's policies on the use and maintenance of coastal and maritime areas. The Island Committee maintains contact with other European island regions, for instance through the Conference of Peripheral Maritime Regions.

# The most enthusiastic holiday home owners in the world?



How close to water do Finns live? This, too, has been studied. The average Finn lives 2.7 kilometres from the nearest lake or river. In Pohjois-Savo, the distance is only 1.2 kilometres. The inhabitants of Uusimaa and Ostrobothnia have the longest distance to fresh water, but even there it is only 4 kilometres.

The seashore is on average 58 kilometres away. On Åland, the sea is 1.3 kilometres away, whereas the inhabitants of Uusimaa are almost 7 kilometres away and the inhabitants of Varsinais-Suomi 9 kilometres away from the seashore. In this aspect, Pohjois-Savo is the statistical loser: the sea is on average 209 kilometres away.

It seems, however, that Finns cannot live close enough to water. At least this is the conclusion one could draw from the fact that Finns have over half a million holiday homes and that more than four out of five of these secondary residences are located by water. People annually spend 7.5 billion euros on holiday home living, and the majority of this spending takes place in island municipalities or municipalities with water and island areas.

What are the reasons for this holiday home madness?

## Some hundred years of holiday home history

Thousands of years ago, our ancestors used to have shelters for hunting and fishing. However, holiday homes for spending leisurely time did not

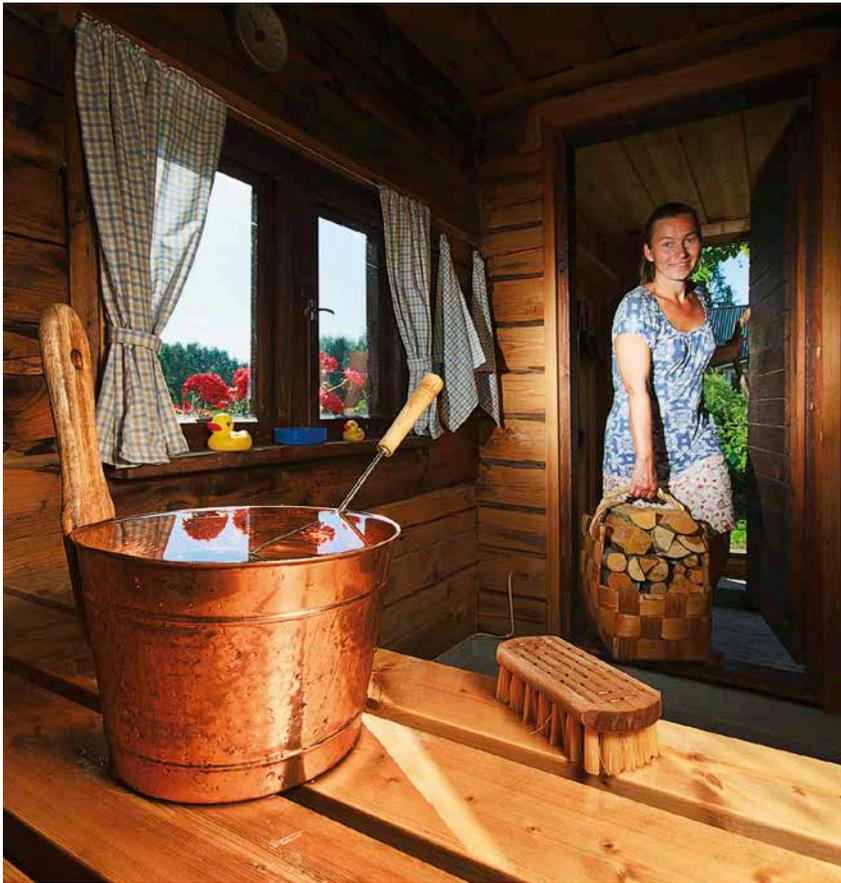
exist until the late 19<sup>th</sup> century when wealthy city dwellers first began building beautiful summer villas in the countryside. Many villas were built near coastal towns and in Terijoki on the Karelian Isthmus. Inland, villas were common in municipalities such as Tuusula, Asikkala, Sysmä and Punkaharju.

The locations of the first villa communities were affected by steamboat routes and railway lines. Even if the summer house was reached by train, the vicinity of water was important since water-related pastimes were an essential part of the summer life of these wealthy pioneers.

During the first two decades of Finland's independence, having a holiday home became more common and was no longer only for the upper class. As many as 15,000 holiday homes were built during this time. Luxurious decorating decreased and holiday homes began to resemble the single-family houses of suburban regions. Some large companies constructed entire holiday villages for their employees. Allotment gardens also arrived in Finland in these decades, Germany being the main source of inspiration.

Spending time at a holiday home became a national pastime in the 1960s and the number of summer cottages exceeded the 100,000 limit in 1962. Families increasingly often had their own car, the road network improved, summer holidays became longer and wages also grew slightly. This meant that holiday homes could be located further away from population centres and shore-

**Are even young Finns in love with the traditional summer cottage?** Perhaps the answer can be found under water or even online?



PETRI JAUHAINEN / VASTAVALO

The vast majority of saunas in Finnish summer cottages are wood-burning. In total, there are around 3.2 million saunas in Finland. Traditional smoke saunas are becoming more popular – estimates suggest there are now more than 30,000 smoke saunas in Finland.

line plots became increasingly popular. Legislation did not significantly limit building on shores and shoreline areas before the year 1969.

Spending time at holiday homes can be seen as a counter reaction to the structural change of the countryside and the accelerating urbanisation. Although people needed to live in towns and cities to make a living, they did not want to forget the landscapes of their childhood. Many summer cot-

tages were built on land belonging to a farm the cottage owner had grown up on or a plot bought from relatives for a moderate price. New holiday homes were small and modestly equipped. Only one in ten holiday homes had electricity in the 1960s. Prefabricated holiday homes also came on the market.

The growth in the number of holiday homes saw a minor downturn in the 1970s, but then accelerated again. Modifying old buildings and taking them into holiday use was particularly popular in the 1980s. Many small farms and crofts used to house evacuees after the evacuation of Finnish Karelia had been deserted and could be acquired for a moderate price. People were now more willing to buy holiday homes that were further away from water.

In the 2000s, stricter building regulations, the scarcity of suitable plots and a significant increase in prices have curbed the construction of new holiday homes. As a new phenomenon, many secondary residences have been built near holiday resorts. This has been a particularly clear trend in the ski resorts of Northern Finland. These holiday homes are better equipped and larger than the average holiday home in Finland and many of the owners live far away: the average distance from holiday home to home is approximately 400 kilometres in Ruka, approximately 600 kilometres in Levi and almost 800 kilometres in Saariselkä.

During the hundred years that holiday homes have existed in Finland, the name used to describe them has changed several times. Wealthy people called their holiday homes villas, but by the 1960s, most people talked about going to their summer cottage or simply to the cottage. Today, the most common terms are 'secondary residence', 'holiday home' and 'second home'.

### Pull factors

What is it that attracts people to holiday home living? Every year, Finland provides a stage for approximately two million slightly different holiday home experiences. Researchers have, however, tried to determine the essential elements related to life at holiday homes.

Based on the most popular locations for summer cottages, one of these elements is water. The shorelines of lakes relatively close to densely built-up areas and approximately one third of Finland's coastal areas are full of holiday homes. Summer cottages can also be found on almost 20,000 islands with no road connection.

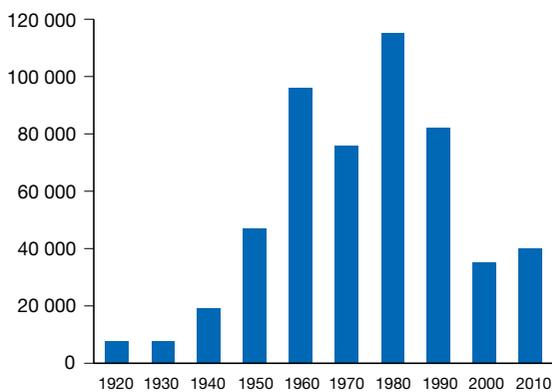


PETRI JAUHAINEN / VASTAVALO

Around 40% and 55% of the adult population in Finland enjoy picking wild mushrooms and berries respectively. Women are more active in these pastimes than men, and older people are keener than youngsters.



Many summer cottages have been handed down from one generation to another. Summer cottage exteriors have remained unchanged for decades.



**The construction of holiday homes in Finland in different decades.** Three out of four of today's holiday homes have been constructed between 1960 and 2000. The figure also includes an estimate for the 2010s.

As mentioned, holiday resorts have become important pull factors in the 2000s. The younger generation, in particular, enjoys having the opportunity to relax while enjoying their favourite activities. The resorts also offer visitors a lively social scene.

Nevertheless, many holiday homes are still located in isolated areas in the countryside, far from houses in year-round use. The centre of the village or municipality is often merely passed on the way to the holiday home and visited when groceries or services are needed. Increasingly, holiday home owners also want to have an active role in

the local community and many municipalities and village communities encourage this development.

According to researcher Kati Pitkänen, holiday home landscapes have amalgamated with our conceptions of the Finnish national landscape and symbols. Thus, these landscapes represent a timeless Finnishness, an ideal landscape and a past golden age. Holiday homes can be seen to emphasise and deepen Finns' relationship with nature. The quirky little habits related to our holiday home lifestyle reflect the characteristics associated with Finnishness. The most beautiful landscape in the world opens from the terrace of a Finn's lakeside or seaside sauna on a summer evening.

Pitkänen says that the idea of this ideal landscape affects how Finns see foreign second home ownership in Finland. Foreigners have been allowed to buy properties in Finland without a special permit since the year 2000. Foreign ownership is seen as a threat because it challenges the Finnishness of spending time at a holiday home. The Finnish media and holiday home owners have nervously monitored how well foreigners will adopt the unwritten rules of Finnish holiday home life and its landscapes, and Finns have not been very eager to welcome the foreigners' culture and traditions.



HARRI NURMINEN

**Crayfish are a late summer delicacy** for summer cottage visitors. The signal crayfish (*Pacifastacus leniusculus*) was introduced to Finland from North America in the 1960s following the spread of crayfish plague, which had devastated the native European population. This giant-clawed newcomer has all but ousted the native river crayfish, aside from in the northern-most rivers of Finland.



ANTERO AALTONEN

**The temperature of lakes** in Southern Finland can remain below 20 degrees Celsius for almost the entire summer. Many summer cottages offer a chance for a dip in a hot tub.

#### **Holiday home activities**

In the first villas, organising parties and socialising with the neighbours were an essential part of holiday home life. Many villas had a garden, but freedom from responsibilities and care-free holidaymaking were more important than gardening. After Finland had gained its independence, society became more middle-class and people would go to the sauna, fish, swim and go berry-picking at their more modest cottages. Sunbathing also became more popular as of the 1920s. Previously, people had avoided becoming tanned.

In the 1960s, the number of people spending time at summer cottages doubled. The recreational use of waters and other nature-related pastimes continued to interest people, and people were more actively in contact with the locals than



**Raking fallen leaves** is effective and useful exercise.

before: milk was bought from local farmhouses and sometimes the cottage owners would even participate in hay-making. Having one's own garden and vegetable patch at the cottage was no longer seen as positively as before.

In today's holiday home life, researchers differentiate between beneficial and recreational activities. Beneficial activities are seen as a creative pastime, but they can also turn the holiday home into an exhaustive project: earth is moved, stone walls built and a new construction project planned for each summer.

Recreational activities include traditional nature-related pastimes, such as swimming, rowing, canoeing and going for walks. People want to experience the aesthetic environment surrounding them, even if this requires some effort. Motor sports and various gadgets are also part of holiday life to many people.

Since cottage life cherishes traditions, does it also emphasise traditional gender roles? Do men participate in activities outside and women inside the cottage? According to researchers, there is some evidence to support this theory.



JORMA JÄNSEN / VASTAVALO

**Although many holiday homes** are now almost as well equipped as primary homes, leading a simple life and cherishing a country lifestyle are still important to many cottage owners.

Although the holiday home environment is very familiar to its residents, minor changes always add something new to the experience: unusual weather or coming across a wild animal are enough to create change and provide a topic to be discussed on the first coffee break on Monday morning.

### Environmental impacts

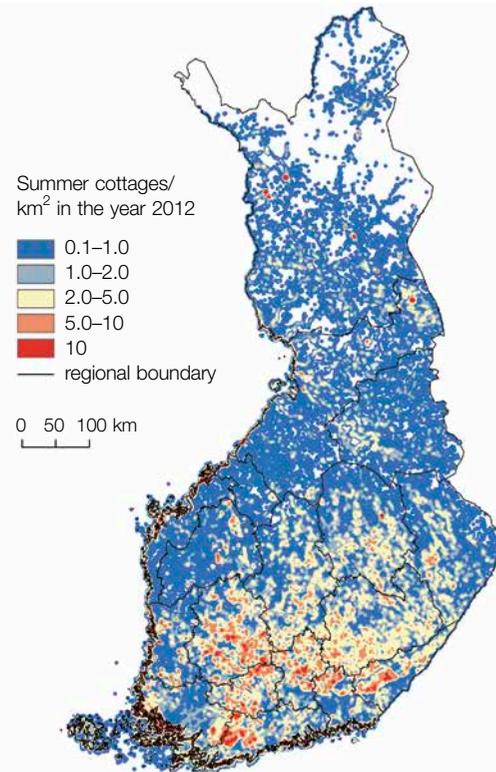
Every holiday home has an impact on local natural conditions, such as water quality, coastal ecology and landscapes. Some of these impacts are intentional and desirable: people want to dredge shores and add sand, cut down fir trees and move soil. Some of the impacts are a result of wastewater emissions, and the most meticulous researchers say that even the smoke from saunas is an environmental problem.

All holiday home owners naturally want the local environment to remain as unpolluted as possible and the legislator has stretched out a helping hand to protect the environment. However, some feel that legislation is too strict. Holiday homes are no longer a major source of discharges into waterways: they account for less than 1% of phosphorus and nitrogen discharges into waters, and the figure will continue to decrease in the future.

Travel to and from holiday homes amounts to 7% of all car traffic in Finland. The average holiday home owner annually spends approximately EUR 2,000 on fuel. This amount covers the fuel used in cars, boats, motor-driven equipment and off-road vehicles.

Nine out of ten holiday homes have electricity. Some holiday home owners have installed solar panels, but ground source heat pumps (GSHP) and wind power stations are still rare. Insulating holiday homes for winter use has been popular, but heating costs still increase in winter.

Holiday home life also benefits the environment. The number of forest birds may increase, and birds that build their nests into a hole in a tree like the old trees often found on holiday home plots. Many people also put up nestboxes for birds. Spending time at a holiday home provides a great environmental education for many Finns, with positive effects on attitudes toward environmental protection and a simple, natural lifestyle. From the viewpoint of sustainable social development, these recreational residences constitute a key form of urban-rural interaction, promoting the maintenance of a vital and diverse countryside.



### The locations of Finnish holiday homes in 2012.

The number of holiday homes was first calculated in 250-metre grid squares. Then the density of holiday homes was determined within a distance of 3 kilometres from the centre of each grid square. The coast of Finland, from the Russian border to the bottom of the Bay of Bothnia, is almost continuously lined with holiday homes. There are also many holiday homes in the southern part of the Lake District and in the lake-rich western Uusimaa. In the inland areas of Northern Finland, holiday home density is the greatest near ski resorts.

Finnish Environment Institute, summer cottage data, VTJ/VRK 4/2013, regional boundary: Karttakeskus Ltd., license L4659.

## The most enthusiastic holiday home owners in the world?

Is spending time at a holiday home such a Finnish phenomenon as we tend to believe? If there were as many holiday homes per person in the world as there are in Finland, the number would be over half a billion. However, the actual number is only around 20 million.

We do not have to look far for the countries with the most holiday homes: Sweden has around 650,000 and Norway around 450,000 recreational residences. Norway's holiday home density is slightly greater than Finland's – and a world record at that. Denmark's number of holiday homes, 220,000, seems huge with regard to the area of the country, but in proportion to the population, it is less than half of the number of holiday homes Finns have.

Americans have some four million holiday homes. In proportion to the population, this means that Finland has almost six times as many secondary resi-

dences as the US. Holiday home density varies significantly from state to state.

An international study reveals that life at holiday homes has many similarities in different countries. Having a cabin by a lake is the ideal in Sweden, Canada and many states in the US.

In the State of Michigan, for instance, there are 230,000 holiday homes of which 80% are located by a lake. More than half of the holiday homes in Michigan are fit for winter habitation. Winters in Michigan are harsher but significantly shorter than in Finland.

A holiday home owner from Michigan spends almost 90 days a year at his or her holiday home and as many as half of all holiday home owners are over the age of 60. They are also rather wealthy: holiday home owners in Michigan use four times as much money on improving and repairing their property than Finnish holiday home owners.

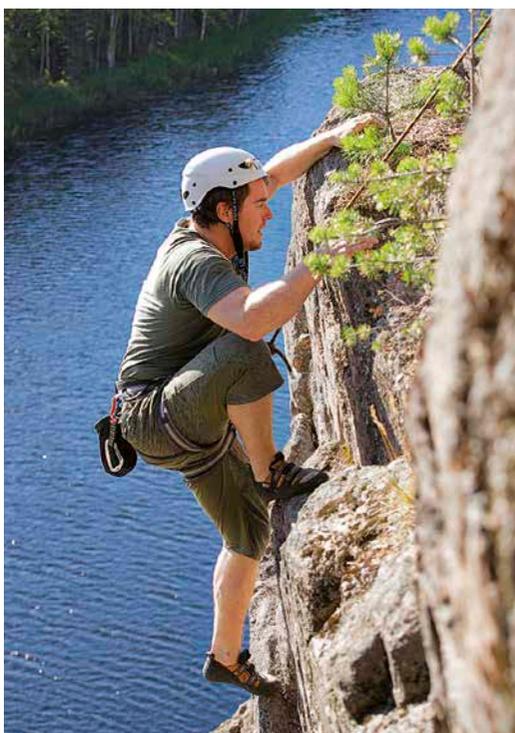


Deploying gillnets has even become a motorised pastime for some summer cottage owners – an outboard motor is used in the summer, a snowmobile in the winter.



**Koli National Park** was established in 1991. The mountain rising more than 250 metres above Pielinen was a popular tourist destination as early as the end of the 19th century. Many consider the view from the top to be the most beautiful landscape scene in Finland.

## Island and water areas provide employment and recreation



ANTERO AALTONEN

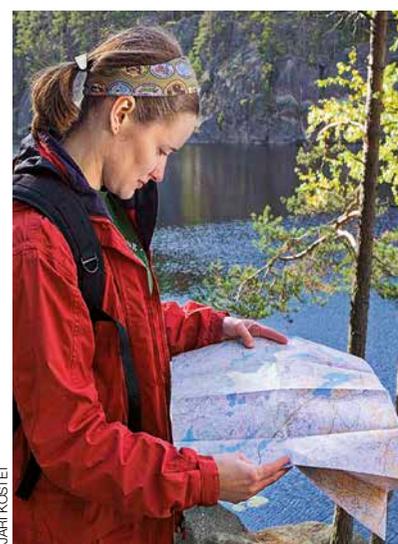
The Olhavanvuori hill in the Repovesi National Park is the most popular rock climbing site in Finland. The rock face rises almost 50 metres above the surface of the lake below.

Finland does not have a single national park totally lacking in waters or islands. Some national parks have been specifically established to protect islands and waters. The ten parks with the greatest number of islands cover around 3,000 islands and islets and numerous bodies of water.

Many conservation, hiking and recreational areas are important infrastructures to municipalities comprising islands and waters. These areas and national parks employed an estimated 2,500 persons in 2016. Their total income effect was about EUR 250 million and they attracted a total of 6.6 million visitors.

### Versatile lake habitats

**Linnansaari National Park**, located at Haukivesi in Lake Saimaa, was established in 1956. It is some 40 kilometres long and 10 kilometres wide. There are more than 130 islands with an area exceeding one hectare, as well as hundreds of smaller ones, but the park is still dominated by vast open waters. It is home to more than fifty extremely endangered Saimaa ringed seals (*Pusa hispida saimensis*), and its osprey (*Pandion haliaetus*) population is one of the densest in Finland. On the main island of Linnansaari you can learn about traditional landscape management, a restored croft and slash-and-burn farming. There are also many nature trails and 20 moorings for visitors arriving by boat. In winter, visitors can test the park's 30-kilometre tour skating route.



JARI KOSTET

**The Nuuksio National Park** is located only 30 kilometres from the centre of Helsinki. The Park's wilderness-like atmosphere can be easily enjoyed by anyone visiting the Finnish capital.

Linnansaari National Park annually attracts some 30,000 visitors and its employment impact amounts to 25 person-years. In summer, there is a boat service between the national park and the villages of Oravi and Rantasalmi, located in the island area of Savonlinna. Information on the park is available at Linnansaari Visitor Centre Oskari in Rantasalmi and Saimaa Nature Exhibition and Information Point Nestori in Savonlinna.

There is also another national park in Lake Saimaa: **Kolovesi National Park** was established in 1990. Although it only has forty islands, these include two of the largest islands in our national parks: Vaajasalo (1,210 ha) and Mäntysalo (740 ha). The park is characterised by long and narrow fjord-like inlets penetrating deep into the interiors of the main islands. The most majestic of granite rock faces rise almost vertically to heights of up to 40 metres, and plunge equally deep underwater. Commonly found species of fish are vendace (*Coregonus albula*), smelt (*Osmerus eperlanus*), perch (*Perca fluviatilis*), burbot (*Lota lota*), whitefish (*Coregonus lavaretus*) and ide (*Leuciscus idus*). Rarer species include brown trout (*Salmo trutta m. lacustris*), Arctic char (*Salvelinus alpinus*) and the spiky and bony fourhorn sculpin (*Myoxocephalus quadricornis*), a relict of the Ice Age.

Kolovesi National Park annually attracts slightly less than 15,000 visitors and its employment impact is 11 person-years. In summer, information on the park is available at the Kolovesi Nature Information Hut in the centre of Enonkoski. In addition to Enonkoski, the park covers areas of Savonlinna and Heinävesi.

Established in 1993, **Päijänne National Park** comprises around fifty undeveloped islands and islets, as well as parts of inhabited islands. The heart of the park is Kelvene, an esker island 8 kilometres long and 50–800 metres wide. Its special features include long sandy beaches and sheltered lagoons. Rocky banks and terraces on the sides of the esker bear witness to ancient water levels.

This park annually attracts around 15,000 visitors and its employment impact amounts to 5 person-years. In summer, there is a transport service from the Padasjoki boat harbour and from Vääksy in Asikkala. Information on the park is available at Päijännetalo in Asikkala.

The most recent addition to Finland's lake-rich national parks is the **Southern Konnevesi National Park**. The park was established in 2014 and it covers 1,500 hectares of shoreline areas and islands. Konnevesi is the clear-watered central lake of the Rautalampi waterway and its shores are steep and rocky. Kalajanvuori Hill, a hill located on the eastern side of the lake, rises 211 metres above sea level. Although the landscape may seem rather rugged, lush groves and forests with small-leaved lime trees can be found in the area.

**Koli National Park** mainly spreads over the island area of Lieksa. The view from Ukko-Koli Hill to Lake Pielinen is one of the most famous national landscapes in Finland. Lake Herajärvi, a biggish lake, is also part of the national park.

Visitor Centre Ukko provides information on Koli's geology and the area's flora and fauna. Finland's only inland waterway car ferry operates between Koli and Lieksa every summer. In winter, Finland's longest public ice road goes over Lake Pielinen. In summer, visitors can work as shepherds in the park. It is also possible to participate in slashing and burning used to preserve the traditional landscape. The park annually attracts around 200,000 visitors and its employment impact amounts to almost 200 person-years.



JUHA TASKINEN

The **Saimaa ringed seal** is the emblem of nature conservation in Finland. The Linnansaari and Kolovesi National Parks are the favoured habitats of this exceptionally endangered species. Climate change poses a real threat to the Saimaa ringed seal. If there is poor snow cover, the mother seal is unable to make a nest in snowdrifts. Pups easily perish out on the open ice.



JARI KOSTIET

**Metsähallitus – the Finnish forestry commission** – is responsible for the maintenance of all kinds of recreational rest stops. One in four Finns hikes at least 10 kilometres a year, and one in ten goes on an overnight hiking trip.

**Nuukio National Park** is located in the lake-rich area of part-island municipality Espoo, and it has become extremely popular in a short period of time. The park annually attracts around 350,000 visitors and its employment impact is 23 person-years. Nuukio comprises 80 small lakes and ponds and there are regular buses to the park from the centres of Espoo and Helsinki. Finnish Nature Centre Haltia provides information on Nuukio and other Finnish national parks. Nuukio National Park is popular among foreign hikers.



### Maritime national parks

The oldest of Finland's maritime national parks is the **Eastern Gulf of Finland National Park**, opened in 1982. It covers areas located in the towns of Kotka and Hamina and the municipality of Virolahti. The park's 20 forested islands and around 200 islets total 800 hectares in area. The largest island is Ulko-Tammio. The park is an important breeding area for seals, and it is also rich in sea birds. Besides natural attractions, the park has military monuments, including a fortress, a torpedo boat station and a WWII military cave.

The island villages of Kaunissaari, Haapasaari and Tammio are close by. The park annually attracts some 15,000 visitors and its employment impact amounts to 6 person-years. Information on the park is available at the Kotka Maretarium and at the Haapasaari and Kaunissaari Nature Information Huts. These islands can be reached by commuter vessel around the year.

Established in 1989, the **Ekenäs Archipelago National Park** covers a total of 52,000 hectares of sea, containing almost 500 islands and islets. The largest island, Älgö (700 ha), is also the largest in all of our maritime parks. The park extends from the inner archipelago to the open sea, which means that the flora and fauna vary considerably. Several glo-lakes that have separated from the sea, and fladas that are still undergoing separation provide valuable nesting and resting grounds for birds.

The park annually attracts some 50,000 visitors and its employment impact amounts to 28 person-years. The most famous attractions include the Rödjan House and Nature Information Hut and the Jussarö fortress island. Visitors can seek information from the Ekenäs Visitor Centre built in an old salt storehouse.

**The Archipelago Sea National Park** is located in the outer archipelago in the municipalities of Kimitoön and Pargas. The park has around 1,000 islands and islets. The landscape above sea level is characterised by outer islands with low trees, lush inner islands, glaciated rock and numerous islands of sand and pebbles (Jurmo, Sandskär, Sandö) belonging to the third Sal-

pausselkä lateral moraine. Its underwater landscape is rather spectacular with clear lines of depressions and ruptures as well as the Gullkrona sunken valley.

The park has the richest biodiversity in the entire country. Approximately one tenth of the land area is managed to preserve old pasturage and wooded meadows. The park and its neighbouring areas form the Archipelago Sea Biosphere Reserve that belongs to the UNESCO network and which has a permanent population of 1,200. There are only two such reserves in Finland (the other is Patvinsuo in North Karelia).

**The Bothnian Sea National Park** (75,000 visitors, 26 person-years) spans the outer archipelagos of Eurajoki, Kustavi, Luvia, Merikarvia, Pori, Pyhärinta, Rauma and Uusikaupunki. A total of 98% of the park is under water and it has three lighthouses: Isokari, Kylmäpihlaja and Säppi. Information on the park is available at the Ark Nature Centre in Pori.

Located off the coasts of Kemi and Tornio, **the Bothnian Bay National Park** (9,000 visitors, 2 person-years) comprises around forty islands and islets. Most of them are in groups separated from each other

**Nature centres** provide a wide range of activities and points of interest, including many AV presentations that offer unique insight into our nation's wildlife. Located in the Nuuksio National Park, near Espoo in southern Finland, Haltia – The Finnish Nature Centre opened to visitors in 2013.

**Birdwatching** is fast-becoming one of the most popular forms of nature tourism in many countries. It is estimated that around 25 million Europeans make a hobby out of birdwatching.



by vast open seas. Visitors can observe the constantly changing sea environment created by land uplift, as well as traditional fishing bases and landscapes. Across the Swedish border is Haparanda National Park.

#### Other attractions

The **Kvarken Archipelago Nature Reserve** (350,000 visitors, 195 person-years), Finland's only natural UNESCO world heritage site, spreads over the municipalities of Korsholm, Malax, Vörå, Vaasa and Korsnäs. The area comprises 6,500 islands, and even the highest of them only rises approximately 20 metres above sea level. Particularly impressive are the washboard moraine fields shaped by the Ice Age. Land uplift is very strong here, with new islands rising, bays turning into lakes and boat channels becoming shallower, even within one generation.

### Island nature

Finnish sea islands are a veritable paradise for researchers. They are young and undergo constant growth and change. Land uplift is still pulling new islands from the sea. An islet born on the open sea often remains almost without vegetation for some three centuries, until it has risen high enough to provide a habitat for a few grasses, rushes and other herbaceous plants rooted in rock crevices.

As the island grows in height, seaweed washed in by waves is deposited in crevices and depressions. Increasing in density, the root layer binds composting matter underneath. This creates a miniature meadow with blooming plants including sea mayweed (*Tripleurospermum maritimum* ssp. *maritimum*), chives (*Allium schoenoprasum*) or biting stonecrop (*Sedum acre*). Purple loosestrife (*Lythrum salicaria*), yellow loosestrife (*Lysimachia vulgaris*) and meadowsweet (*Filipendula ulmaria*) thrive in damp depressions. These depressions can also become swampy and plants such as crowberry (*Empetrum nigrum*), bog bilberry (*Vaccinium uliginosum*), marsh cinquefoil (*Comarum palustre*) and even cloudberry (*Rubus chamaemorus*) can rise from the mossy ground. The first immigrant trees are prostrate junipers, followed by rowans and twisted and knotted pines. Spruces carpet vast depressed areas.

Insects are the first representatives of the animal kingdom to arrive, although by no means voluntarily but blown in by winds. With more and more areas available for shelter, feeding and reproduction, insect diversity increases. Larger winged creatures also appear relatively early: gulls, waterfowl and wading birds efficiently fertilise the islets. The majority of island birdlife is only present in summer. The nesting populations of barnacle geese (*Branta leucopsis*), white-tailed eagles (*Haliaeetus albicilla*) and great cormorants (*Phalacrocorax carbo*) have grown significantly in the 2000s and some believe that the populations are now excessive. In contrast, the populations of common eiders (*Somateria mollissima*) and lesser black-backed gulls (*Larus fuscus*) have declined as a result of environmental pressures. The number of migratory birds passing through the area and hurrying to the Arctic exceeds the number of birds nesting in the archipelago. In the best days in May, flocks of thousands of birds can fly through the Finnish archipelago. Hundreds of thousands of long-tailed ducks (*Clangula hyemalis*) and common scoters (*Melanitta nigra*) can be counted in the Gulf of Finland in one evening. The daily counts for barnacle geese and brent geese (*Branta bernicla*) can also reach five-digit numbers.

The **Ruunaa Hiking Area** (85,000 visitors, 45 person-years) in Lieksa is an important State hiking area rich in waters. The Lieksanjoki river traverses the hiking area and boasts six rapids with a total drop of almost 16 metres. The rapids are suitable for rafting, canoeing and riding a dinghy. The area has 12 log lean-tos and 20 cabins that are available for rent. Visitors with physical disabilities have also been taken into consideration.

The centre of the **Oulujärvi Hiking Area** (40,000 visitors, 14 person-years), located in part-island municipality Vaala, is the island of Manamansalo. Information on this hiking area is available at the camping ground of Manamansalo that is particularly popular among caravanners.



SEPPO KERÄNEN

**The number of white-tailed sea eagles** declined alarmingly in Finland during the 1970s. Today, almost 500 hundred sea eagle chicks a year are born. Nest areas are no longer confined to coastal areas.

Among the first mammal invaders are voles, which can at times decimate a young island's vegetation. An island is a harsh environment for many species: reproduction is difficult and habitats are destroyed by storms and ice. It takes persistence and luck to survive. The largest mammals, such as elks, enjoy spending time on large, forested inland and sea islands, sometimes even attracting bears in their wake.

The larger an island grows, the greater its number of species and their genetic diversity. Often only around ten species of vascular plants can be found on small islands, while medium ones may have fifty and reasonably large ones over one hundred.

Not enough time has passed for endemic species to evolve on Finland's sea islands, as they have on other islands worldwide. The migration of our islands from the outer sea to the bosom of our inner archipelago, finally to merge with the mainland, has been too fast for the evolution of new species. A level of microevolution has, however, taken place: our sea islands have forty-odd species of vascular plants whose features differ clearly from those of their inland ancestors.

The homes of some of these subspecies are apparent in their scientific names: the common bird's foot trefoil native to Åland (*Lotus corniculatus* var. *alandicus*), the field mugwort of the Bay of Bothnia (*Artemisia campestris* ssp. *bottnica*) and the hair-grass of the Gulf of Bothnia (*Deschampsia bottnica*).

## Underwater Finland

Finland consists of an area covering 423,000 square kilometres of the Earth. Over one fourth of this area, around 28%, is water. When the Finnish Exclusive Economic Zone is taken into account, the total area of Finland's sea areas is 84,900 km<sup>2</sup>. Freshwater areas account for 34,000 km<sup>2</sup>. In total, the underwater areas of Finland cover a considerably larger area than our thirteen smallest regions put together.

Our knowledge of underwater areas has significantly increased in recent years. One of the main contributors has been the Finnish Inventory Programme for the Underwater Marine Environment (VELMU). Researchers have also studied the underwater world of our inland waters.

### Depressions, hills, cobble deposits and sand fields

The fragmented nature of our ancient bedrock is particularly obvious in the Gulf of Finland and the Finnish Archipelago Sea where depressions and mounds alternate. The Salpausselkä ridges that continue underwater and the canyons of crushed zones add to the versatility of the seabed. Thousands of islands also rise from the sea.

In the Bothnian Sea, the bedrock is covered by sedimentary rocks that even out the seabed, particularly in open sea areas. The mean depth of the Bothnian Sea is slightly over 60 metres. The deepest point is 293 metres below sea level and located in Swedish waters.

In Kvarken, the water depth is mainly below 25 metres. Boulder-rich moraine formations cover the seabed and also pierce the water. In the inner archipelago, there is more land than water and the water exchange to the open sea is weak.



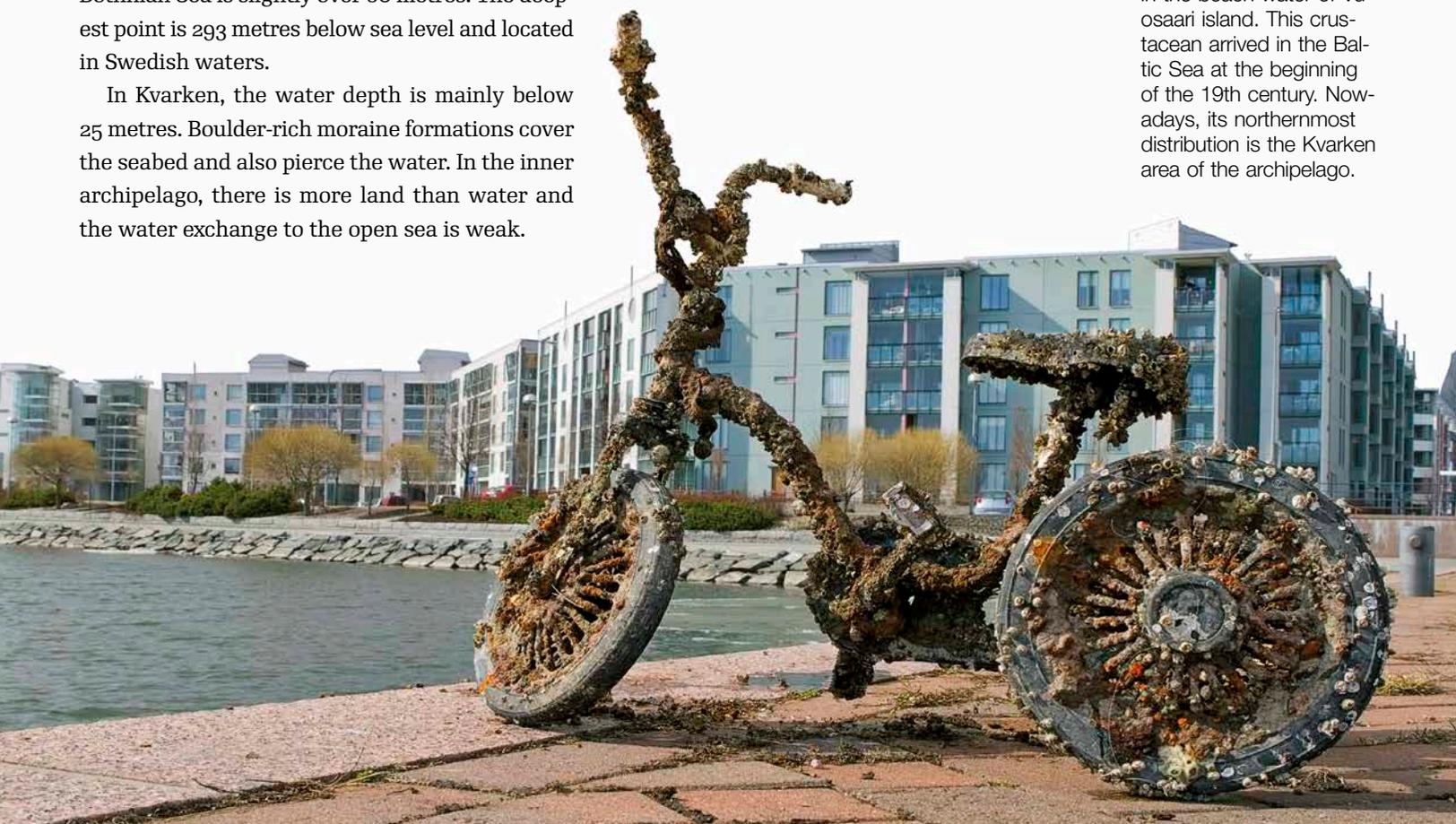
On the coast of the Bay of Bothnia, the sea deepens slowly and islands are low and far away from each other. The outer archipelago mainly consists of moraine, boulders, rocks and gravel. There are vast fields of sand on the seabed that sometimes form constantly changing islands.

### Diverse but threatened marine environment

The ecosystem of the Baltic Sea includes seawater, brackish water and freshwater species. Key species, such as bladderwrack (*Fucus vesiculosus*), specific aquatic plants and blue mussels (*Mytilus*

**Maintaining a rich and diverse aquaculture** is important both above and below the surface of the water. A healthy underwater ecosystem not only improves the recreational value of the waterways but also creates the necessary preconditions for enterprise development and growth in the archipelago region.

**A barnacle makes its home** on a bicycle that has been submerged for at least a couple of years in the beach water of Vuosaari island. This crustacean arrived in the Baltic Sea at the beginning of the 19th century. Nowadays, its northernmost distribution is the Kvarken area of the archipelago.



*trossulus x edulis*) form communities that all other species are dependent on. A significant decline in the population of just one of these key species can affect the entire ecosystem.

Detailed research has been performed in the Ingå archipelago in the western part of the Gulf of Finland. According to the research results, 37% of the seabed was bedrock, 22% was moraine and 17% was gyttja clay. Blue mussels and bay barnacles covered almost all hard surfaces down to 20 metres in depth. In the shallowest areas, the seaweeds *Furcellaria lumbricalis* and *Cladophora rupestris* could be found, but only one or two poor specimens of bladderwrack were spotted.

Many phenomena threaten the biodiversity of underwater ecosystems, including eutrophication, harmful substances and climate change. Overfishing and invasive species can change the structure of the food web. Shoreline building, the construction of harbours and wind farms, the extraction of gravel, and dredging change the environment irreversibly. Ship traffic, boating and the recreational use of sea areas can also cause stress to the marine environment.

#### A long history of lake-bottom research

Lake Pyhäjärvi in Tampere was the first Finnish lake to be depth-mapped in 1856. Poet and geographer Aaro Hellaakoski published a fairly accurate depth map of Lake Saimaa in 1920. For a long time, progress was slow and sounding points were difficult to pinpoint accurately on a map.

Finland has six lakes whose greatest depth exceeds 80 metres. They are Päijänne (95 m), Inari (92 m), Suvasvesi (90 m), Saimaa (86 m), Toisvesi and Pääjärvi in Lammi (85 m). According to divers, there is a small depression in Ristiselkä, Päijänne where the greatest depth is 104 metres. Wouldn't it be great if Finland had one lake that was over 100 metres deep!

Sludge continuously accumulates on the bottom of the basins. It consists of sediments from the catchment area of the lake and residues of the lake's organisms. The sludge preserves some of these residues and they can remain unchanged for thousands of years. This means that the bottom sediments of lakes record our history, each thin layer representing the events of one year.

The retting of flax and other fibre plants was the first major source of eutrophication in Finland, but in large lakes it did not have a significant effect on water quality. The sediments of Lake Saimaa have recorded events such as the lowering of the



HARRI NURMINEN

level of the lake in connection with the Höytiäinen flood disaster in 1859. The spike in caesium levels caused by the Chernobyl disaster in 1986 is also securely documented in the sediments.

#### Clear and turbid waters

The visibility depth of Finnish lakes and coastal waters has been measured for decades. It mainly depends on the amount of humus, clay and algae found in the water. At best, visibility depth can be over ten metres, but 2.5 metres is enough for a water area to be classified as excellent. In turbid waters clouded by humus, visibility depth can be less than half a metre.

In the majority of the Baltic Sea, visibility depth was significantly decreased during the last century. In the coastal waters of Finland, visibility depth typically decreased from 8–9 metres to 4–5 metres. In the Gulf of Finland, this negative development seems to have stalled, but it is continuing in the Bothnian Sea and the Bay of Bothnia. One of the main reasons for this is probably the load from river waters that is partially due to human activities.

Our inland freshwaters are often naturally coloured yellowy brown by humus, but a high iron content can also turn water brown. Visibility depth varies according to the season; it is usually at its worst when algae production is at its peak level and when runoff water is very turbid.

Two thirds of Finland's 50 largest lakes have a visibility depth of 1.5–3 metres. Of these large lakes, only Inari, Suontee, Pyhäjärvi in Kitee, Puruvesi and Juojärvi have a visibility depth of over 5 metres. Some smaller lakes are, however, clearer than this. These lakes include Valkiajärvi in Kitee, Sonnanen in Heinola and Simijärvi in Raseborg.

**The freshwater pearl mussel** (*Margaritifera margaritifera*) can grow up to 15 cm long. It is an especially endangered species. It became the first protected invertebrate in Finland in 1955. The freshwater pearl mussel can live to be 200 years old.



KUSTAVIN KIRJALLISUUSYHDISTYS

The spun works of artisan Toive Lehtinen can be seen throughout the island landscape of Kustavi. The programme of the Volter Kilpi Literature Week held on the island of Kustavi includes handicrafts, theatre productions, concerts, and excursions to Volter Kilpi's sceneries on land and at sea. The main focus of the event remains, however, literature in and about nature.

## Islands and writers

Ahosaari, the island where Eino Leino wrote many of his poems, is one of the four hundred islands of Kukkia. The largest island, Evinsalo, is half a kilometre away and the mainland about one kilometre away.

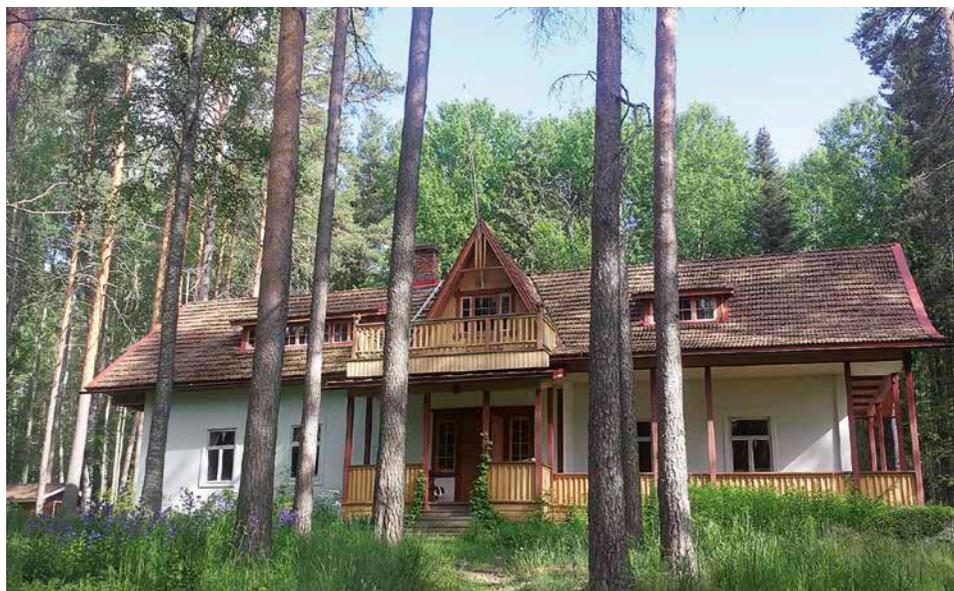
Islands and islanders appear in the works of many Finnish authors and many authors have also lived or spent holidays on the islands. Although Väinö Linna was not one of these authors, he too was attracted by islands since he wrote: "I placed islands in Lake Kortejärvi although there aren't any in the lake in real life, but I thought that they made the landscape more beautiful, so it was my attempt to slightly improve the scenery."

Although the most important landscape in *Under the North Star* is the Finnish mire, a lake is also mentioned more than ten times. Linna used Lake Kortejärvi in Urjala as a source of inspiration.

Eino Leino arrived in Kukkia as a summer guest in July 1914. His hosts Sulo and Hella Wuolijoki had a villa on the island of Ahosaari. Leino translated Dante and wrote *Elämän koreus*, one of his poetry anthologies. It included poems such as *Paista päivä!* ('Shine, Sun!') and *Pilvinen päivä* ('Cloudy day'). There were both clouds and sunshine in Eino Leino's life, and one of the reasons he came to Ahosaari was to rest and get away from the hectic social life he led in Helsinki.

### Otto Manninen, the poet of Puulavesi

Rämiäinen is an island of over 200 hectares located in Lake Puulavesi, on the southwestern side of Simpiänselkä, the biggest open area of the lake. The island is characterised by a deep bay, a pond and several rocky hills. Otto Manninen and Anni Swan built a summer house by Kotavuori, one of these hills, in the early 1910s. Puulavesi was a familiar lake to Manninen since he was originally from Hokankylä in Kangasniemi.



Authors Otto Manninen and Anni Swan made their summer home on the island of Rämiäinen on Lake Puulavesi.

The young Anni Swan first came to the island in July 1905: "...to Rämiiäinen. What an ugly name! But all the lush and more beautiful was the island we rowed our boat to."

Manninen's first poetry anthology was also published in the summer of 1905. He was thorough in polishing his poems, but left a lot to the reader to interpret. Manninen was most prolific as a translator, and his translations included works by Homer, Goethe and Molière.

The birth of *Nocturne*, Eino Leino's famous poem describing the atmosphere of a summer's night, is also linked to the landscapes of Puulavesi, but not to the island of Rämiiäinen. Leino enjoyed the hospitality of the Manninen family at their home during several summers and could see Puulavesi from the window of his upstairs room. *Nocturne* was published in the summer of 1903.

### The sea leaves its mark

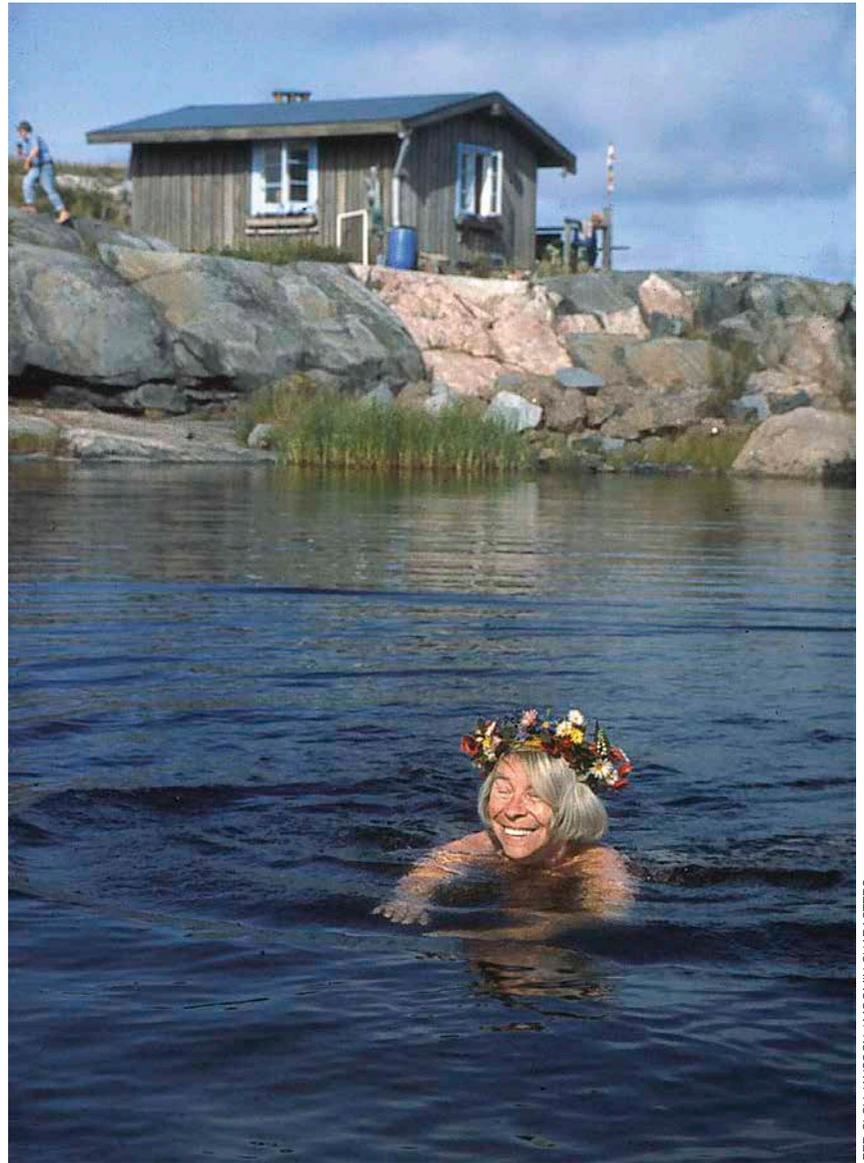
Our sea islands and island life have been depicted in numerous literary works. Many of the early writers lived in the archipelago because of their work. One of these writers was Elis Selin who worked as a priest in Hitis. In his works, the sea is a symbol of freedom, taking action, and courage, but he also describes the trials of everyday life.

Of individual decades, the 1970s is an interesting decade in island literature. Perhaps it is not a coincidence that there was a major structural change taking place in the Finnish archipelago in the 1970s. Benedict Zilliacus published *Utöar* in 1974. The book presents the life of people living on the islands of the Archipelago Sea. The illustrations were made by Henrik Tikkanen.

Anni Blomqvist was a novelist from Åland whose book *Tie Myrskyluodolle* was published the same year. The original Swedish version, *Vägen till Stormskäret*, had been published in 1968. It was part of Blomqvist's Stormskärs-Maja series that comprised five books and described the life of islander girl Maja in the 19<sup>th</sup> century.

Ulla-Leena Lundberg, another author from Åland, published *Kökar*, a book about her island of birth, in 1976. Lundberg has set her novels in different corners of the world, but often returned to the islands familiar to her. This was also the case in 2012 when she won the Finlandia prize for her novel *Is*.

Internationally, Finland's most famous island writer is Tove Jansson. Having spent almost all the summers of her childhood and youth on islands, she was familiar with island life. Her mother's fam-



PEER GLOV JANSOON / MOOMIN CHARACTERS

ily had a villa in the Stockholm archipelago and her father's family spent holidays on an island in the Gulf of Finland. This is where Jansson drew her very first Moomin figure on the door of the outhouse. The reason for drawing the figure was that she had had a fight with her brother Lasse and wanted to draw the "ugliest creature imaginable".

Later on in her life, Jansson spent a lot of time on the island of Klovharun in Pellinki, off the coast of Porvoo.

The majority of Finnish authors who have depicted life on our sea islands have been Swedish-speaking Finns. The most famous exception is probably Volter Kilpi whose novel *Alastalon salissa* was published in 1933. The novel contains over 900 pages written using a stream of consciousness technique and it gives an account of the events of a six-hour period. The novel is part of a trilogy located in Kustavi. The other parts of the trilogy are *Pitäjän pienempiä*, a collection of short stories, and novel *Kirkolle*.

**Tove Jansson** spent more than thirty summers on the island of Klovharun in Pellinki, off the coast of Porvoo.



The **Åland summer** is a hugely popular cultural event, with the number of attendees exceeding the permanent population of the region.

## Finnish island records

**Märket islet** is a small uninhabited skerry in the north of the Sea of Åland famed for its lighthouse. The skerry measures approximately 350 metres by 150 metres and bisected by the border between Finland and Sweden.

**Largest sea island:** Mainland Åland (685 km<sup>2</sup>).

**Largest lake island:** Soisalo (1,638 km<sup>2</sup>). The second-largest lake island in the world, only beaten by Manitoulin Island in Lake Huron (2,766 km<sup>2</sup>).

**Largest river island:** Kiettare in Kokemäenjoki river (18 km<sup>2</sup>).

**Westernmost island:** Märket (Hammarland), 19° 08' 02". Also the westernmost point of Finland.

**Easternmost island:** An unnamed island in Lake Virmajärvi (Ilomantsi), 31° 35' 20". Also the easternmost point of Finland.

**Southernmost island:** Bogskär (Kökar), 59° 30' 10". Also the southernmost point of Finland.

**Northernmost island:** An unnamed island in Tenojoki river, west of Nuorgam, 70° 04' 06". Only 2.5 km south of the northernmost point of Finland.

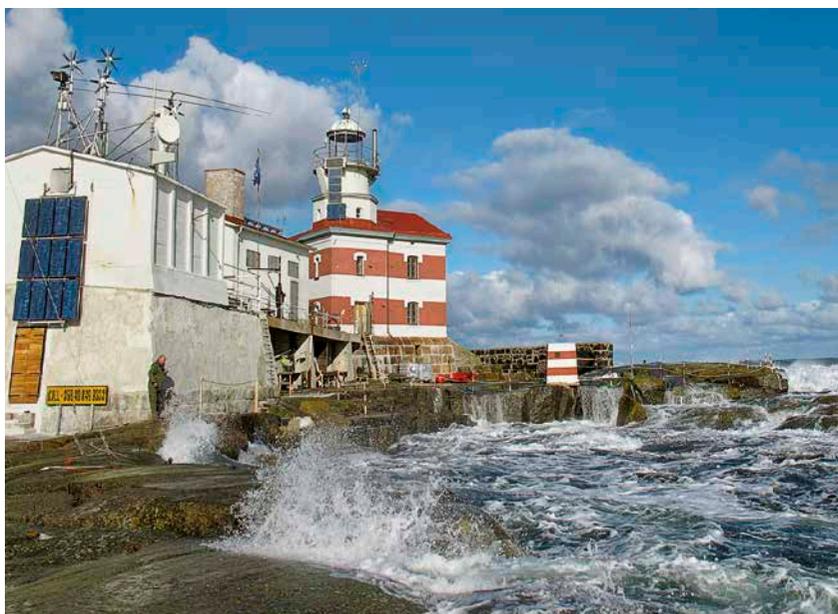
**Island at the highest altitude:** One small island can be found at an altitude higher than one thousand metres. It is located on the fells of northwest Finland in a pond in the upper reaches of the river Urtaajoki 1,025 metres above sea level.

**Largest lake on an island:** Kulkemus on Partalansaari, 583 ha. Kulkemus has almost twenty islands, the largest of which is Ukonsaari (12 ha).

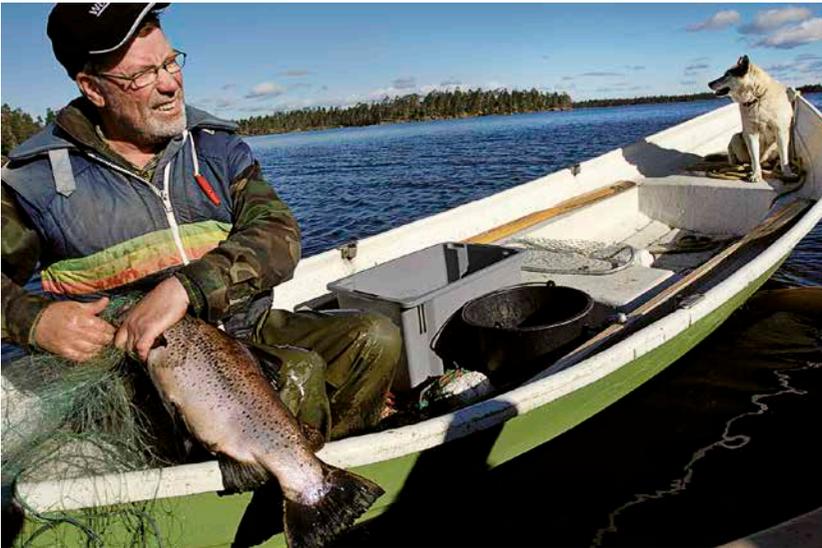
**Largest island in a lake on an island:** There is a 76-hectare island called Halolansaari in Lake Saamajärvi on the island of Soisalo. The island has no lakes; no Finnish islands in lakes on islands are known to have lakes.

**Largest river on an island:** The Vaahtovanjoki river on Soisalo island covers 118 km<sup>2</sup> with 45 lakes that contain around 50 islands. The entire island of Soisalo has over 700 lakes with some 200 islands on them.

**Highest-rising island:** The highest peak of Mahlatti, the largest island in Lake Inari, rises 136 metres above the lake's surface. Paalasmaa, the largest island in



PEKKA VAISÄNEN / THE FINNISH LIGHTHOUSE SOCIETY



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**Lake Inari is the third-largest water body** in Finland (Aanaarjávri in the Inari Sámi language). It has a surface area of 1,084 km<sup>2</sup> and is home to 3,318 islands. The lake contains plenty of salmonoid fish, including salmon, trout, Arctic char, lake trout, whitefish, vendace, and European grayling. Nowadays, the majority of the fish are released from fish stocks.

**The straits around Savonlinna** are the fastest flowing waters in Greater Saimaa. This was well-known by those who built the Olavinlinna castle in the 15th century. The site was easy to defend even in winter, as the encircling waters never completely froze.

Lake Pielinen, loses by five metres, and Judinsalo in Lake Päijänne by nine metres. Orrdalsklint, the highest point of mainland Åland, is 129 metres above sea level, making Åland the third highest island in Finland.

The tallest island in the Baltic Sea is Sweden's 236-metre tall Mjältön in the Höga Kusten area. Lounatkorkea of Hogland rises to 176 metres.

**Most island-rich lake:** If Great Saimaa is regarded as one lake, it boasts a grand total of 17,216 islands. Lake Inari has 3,318, Päijänne 1,886. Saimaa is the most island-rich lake in the world; Lake of the Woods on the US/Canadian border has 14,742 islands. Vänern, the largest lake in Sweden, has 12,285.

**Most populated island:** Mainland Åland with 21,600 inhabitants. The next two are urban islands in Helsinki: Lauttasaari with 19,600 and Laajasalo with 16,500. Soisalo has a population of approx. 10,400 – a little more than Kotkansaari, which forms the centre of the town of Kotka.

**Most populated island without a permanent road connection:** After Mainland Åland, the top of the league is fairly even: Hailuoto 986, Storlandet (Nagu) 866 and Suomenlinna 753.

**Largest uninhabited island:** Mahlatti in Lake Inari, 21 km<sup>2</sup>.



ANTERO JÄRVINEN

**All of Finland's "mountain lakes"** can be found in the Käsivarsi Wilderness Area in Lapland. Lake Riimajärvi sits at 677 metres above sea level. The legendary "Urtashotelli" wilderness hut is situated on the lake's edge.

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