

# OUR HABITABILITY

SUSTAINABLE DEVELOPMENT OF KÖKAR

**2020-2030 (2050)**





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## INTRODUCTION

Sustainability is a concept used by the UN, nations, regions and governments. What does it mean for a small community out at sea? What makes an island sustainable?

Kökar is an island far out in the Åland archipelago. We are 232 people living in seven villages, with a school (grades 1-9), general store, post office with bank, bakery, hotel, restaurants, church and maritime surveillance station. Our business community is diverse. Many of us are sailors, some are farmers, some work for the municipality and others work remotely. There are three guest harbors - almost one in each latitude - and 248 holiday homes.

Large bays with hundreds of islets and skerries spread out around Kökar. There are ferries from Finland and the Åland mainland several times a day. We have been living here for three thousand years. During the Middle Ages there was a monastery here, today the St. Olof pilgrimage route goes through our archipelago. Bird watchers come for the rich bird life. Thirty thousand people visit Kökar every year for its nature, culture, history, music, food and welcoming people.

We are an independent municipality with a board, committees, council, municipal director, municipal office and officials. We rule ourselves in many respects, a safe, free and beautiful micro-community in the Swedish-speaking, self-governing, demilitarized province of Åland - which itself is a part of Finland.

## **Are we a sustainable society?**

That question has occupied us or two years. We have been talking to each other, Googling, reading, listening, chatting and arguing.

130 people actively participated in the work, mostly permanent Kökar residents. The work included a large number of meetings, lectures, workshops, sub-projects and committee and board sessions. We called in experts from universities, colleges and companies. Gifted students from KTH, Linköping University, Jyväskylä, Barcelona and Texas had Kökar as their study object. The plan has been adopted by the municipal board and council as a basis for the sustainability development of Kökar.

## **The habitability concept**

Halfway through the project we arrived to the concept of habitability. We who live here believe that what determines whether we are a sustainable society, or not, is whether Kökar is a habitable island. If those who were born and raised here want to stay or move back, if new families move here, if there are children in school, if there is work, housing, connections, service and security, then we are habitable. Kökar should be habitable all year round, with a mixed population of all ages, genders, origins and opinions. Our habitability is the most important and physical part of our long-term sustainability. If we are not habitable we are not resilient and will become obsolete and depopulated.

This spring, Finnish President Tarja Halonen said to a group of students "Sustainability is like a house with 17 doors: whatever door you choose, you enter the same house." She referred to the UN's 17 sustainability goals. We who live on Kökar choose to enter through a door marked "Habitability".

We asked those who were born here, those who have moved here and those who have moved away: what makes us habitable? The work was realized through several consultation rounds in the spring and summer of 2020. Citizens, businessmen, politicians and external experts developed indicators, evaluation scales and objectives for our resilience with a view to the year 2030.

## **Indicators, vision and timeline**

Life on Earth can be more or less hard. Some people think islands are very livable and we have tried to describe this in 7 areas with 40 indicators each evaluated on a scale of 4 steps. Our findings are illustrated in a polar diagram as a summary form of our habitability as of today. It is followed by our vision and is then expressed in a timeline. We present actions and measures proposed to compensate for our weak areas and strengthen the strong areas. These are measures that we can take ourselves - to develop our habitability.







## PROSPEROUS PEOPLE

As children, young people, adults and seniors, good health and good health care, both preventive and in case of illness, is essential. We need meaningful work that takes advantage of and refines our inherent abilities, thus enabling us to support ourselves and contribute to our well-being. Island communities top the list of places in the world where people enjoy meaningful and longer lives such as Ikaria Greece, Okinawa Japan and Sardinia Italy.

### Current situation

The population of Kökar is the third healthiest nationally according to the Finnish Institute for Health and Welfare. Our health services receive good marks except for dental care simply because there is no dentist on Kökar. Elderly care receives very good marks from residents because the staff-to-resident ratio is high, the staff's competence is excellent and everyone knows each other well – clients and staff.

In a survey conducted in the autumn of 2019 88% of our residents answered that they enjoy Kökar and 75% believe that "Here it feels safe". When asked how they feel on a scale from 0 to 10, the average response is 8.1. Kökar residents who are under 50 report values between 5.0 and 9.7, over age 50 they are spread between 1 and 10. There are those who do not feel very well and those who feel that they feel excellent. There is also a big difference depending on whether people are at work

or on holiday, physically and mentally well, and by the season of the year. Nine people reported they feel lonely.

110 Kökar residents work as professionals, of which 44 are in the public service, 24 in the transport industry (mostly sailors), 9 in the construction industry, 5 in trade and hotels, 5 in small industry and 11 who are sole proprietors. 85% of these professionals work on location on Kökar.

"If God is love, he loves the Islanders, with their foxy ways, their wolfish grins and their cloven hooves, their sheep's clothing and their borrowed feathers, their rabbit paws and tiger hearts. Rapid shifts and dodges, all of God's spirited creation embodied in them in sparks and flashes. Snouts and paws, fur and scales, whistles and calls. A smile spreading over all of it, quickly gone, rapidly returning. Beyond categorizing and moralising."

Ulla-Lena Lundberg, "Ice" 2012



## TRUST AND PARTICIPATION

If we are safe and protected from violence and poverty we can feel confident and participate in the development of our society. If power, influence and resources are equal, open and equitably distributed, without corruption, we can believe in the political system and want to vote in general elections. A habitable society lets us be who we are or want to be as long as we do not harm anyone else. We have what we need and can manage.

### Current situation

Åland is demilitarized. There are no weapons of war or soldiers here. Being a small island far out to sea provides good protection against theft and violence. The number of crimes on Kökar is only a quarter of that in Mariehamn and crime on Åland is much lower than in mainland Finland. Kökar residents do not need to lock their doors. There is a large sense of security and trust between people.

It feels safe that there is a maritime surveillance station here that can also partly act as a police force. The local fire brigade is very effective as is the rescue service's helicopters - even in bad weather.

Turnout in the 2019 elections rose on Kökar and was second highest in Åland (after Vårdö), mainly due to the fact that women voted diligently. The European elections also engaged people of the archipelago with 60% having voted.

There are twenty active associations on Kökar including; Martha, hunting groups, fishing groups, the voluntary fire brigade, a singing choir, a fiddle team, youth associations, Kökar Kultur, Kökar

Form, an artists residence, theater group and local community association but we have no local political parties.

According to the Finnish Institute for Health and Welfare 12% of households on Kökar are at risk of poverty. When you ask the Kökar residents directly there are still more who find it sometimes a challenge to get their personal finances balanced. This is partly because there are too few full-time jobs, partly because the tax rate is high on Kökar, and partially because the state tax in Finland has been raised but not people's pensions.



## CLEAN WATER

The sea is simultaneously a route, a source of income and an obstacle when you live on an island far out in an archipelago. The water we use to drink, wash ourselves and our gear, flush and irrigate, becomes sewage that in the worst case pollutes and our waterbodies and bays.



### Nuläge

Kökar is located in the Archipelago Sea between mainland Åland and the Finnish mainland. This huge body of water - 180 cubic kilometers - surrounds Kökar with large bays and varying depths. Generally it is a shallow sea whose average depth is only 18 m. Three deep valleys lead water from the Gulf of Finland in the south through the Archipelago Sea and north to the Bothnian Sea. The Baltic Sea is strongly exposed to eutrophication that stems from human activity which effects Kökar in many ways including as the hateful algae bloom in high summer.

In the center of our largest island is a naturally formed lake that holds 1.6 million cubic meters of fresh water. It gives us all the water we need (17,500 m<sup>3</sup> per year) and can suffice for many more. Recently we replaced imported plastic bottled water with water from our own lake that is carbonated for preservation and taste and packaged in glass bottles (glass is one of the world's most recyclable materials).

Two municipal sewage treatment plants purify 85 of our 123 households' wastewater. Of the independent households 11 are connected to smaller treatment plants while 27 have their own sludge separation with infiltration. The 248 holiday homes have individual systems of varying quality. Overall their systems are good but not perfect, yet.

We clean Kökar's beaches every year and find 50-280 pieces of plastic per 100 meters. Micro-plastics from cosmetics, paints, synthetic clothing and car tires are a growing concern.

## ECOSYSTEM IN BALANCE

An ecosystem is a defined area with an environment where everything interacts. Ecosystems can be small or large like our mouth, our body, a creek, an alder grove, the whole of Kökar or our entire planet.

The ecosystems in and around Kökar include microorganisms, fungi, plants, animals and us humans. The low salinity of the Baltic Sea makes our sea low in species diversity and many live at the limit of their tolerances. It is therefore extra important that biology is in balance. Light, rain, temperatures, winds, pH and skies are also parts of the ecosystem. Starry skies are endangered with cities emitting so much light that 99% of the population in Western Europe can no longer see the Milky Way - but you can see this beauty on Kökar.

### Current situation

We get less fish in our nets. The situation for perch, pike, flounder, cod and herring is bad and catches have decreased by about a third in the last twenty years. We no longer have anyone fishing professionally, not even part-time, and interest in household fishing has also decreased. While this happens Danish giant trawlers catch almost a thousand times as much herring in the sea north of Åland as all of Stockholm County's commercial fishermen combined. Overfishing must be stopped.

Seabirds generally decrease even if scoter, goldeneye and merganser have increased. The Eiders are seriously threatened. We do protect important ecosystems in many ways including birdwatcher

engagement and Kökar's Baltic Wings bird project. We restored fish spawning grounds and fish spawning grounds but believe there are too many cormorants, eagles and seals who's populations should be managed to keep our ecosystems in balance.

The fresh water we use becomes wastewater and is treated in two municipal treatment plants which emit 171 and 102 kg nitrogen and 3 kg and 2 kg phosphorus each year, respectively. Other emissions of phosphorus are 70 kg each year. Emissions of carbon dioxide were 3,022 tonnes in 2018 of which 81% came from inter-island ferries.

The algal bloom is a great curse and came in 2020 earlier than ever.



## ATTRACTIVENESS

Being attractive is crucial for habitability. This includes how we are seen, how we are perceived and how we really are. This is about housing, frequent ferry connections, a well-organized kindergarten, school and elderly care and a well-stocked store with reasonable prices for food, fuel, building materials and services. There must be tangible benefits, in addition to well-being, trust, water, ecosystems, energy and work.

### Current situation

We live close to nature with tranquility, starry skies and each other but at a distance from dentists, shopping malls and airports. Kökar is well known with a strong brand and over half a million hits on Google. Kökar municipality's website [www.kokar.ax](http://www.kokar.ax) has over ten thousand visitors a year.

The time to travel between Kökar and a city with more extensive service (Mariehamn or Åbo) is over 3 hours by car and ferry, one way. Comparing this with uninterrupted land travel at a speed of 70 km/h for 3 hours would cover over 200 km. Our actual travel distance is 50 km while our "experienced" distance is far greater. This reinforces the impression that Kökar is a remote place and increases attraction for many visitors - but not for all of us who live here. For a person without a car, the travel time between Kökar and Åbo ranges from 4 to 6 hours. There is public transport on Kökar that matches the ferry's arrivals and departures.

Kökar invested in the construction of rental housing to make it easier for people to relocate here and enter into our society. We

have a unique moving-in team who actively meet everyone showing interest in living here and after arrival helping continued integration. We offer free daycare for 4 months to newcomers. Right now there is a shortage of vacant housing but we are building new homes.

232 people register Kökar as their permanent address, of which about 170 live here all year round. When we include our holiday home visitors and summer tourism boom many more people stay on the island. This is most clearly understood by counting in "person days".

Category	No of persons	Days on Kökar/year	Sum of days on Kökar/year
Residents	170	365	62 050
	60	100	6 000
Summer houses 248 st x 2,3 p	570	60	34 200
Visitors	32 000	1,5	48 000
Sum			150 250

The yearly sum of "person days" spent on Kökar is 150.250. Averaging this evenly over the 365 days of a year corresponds to a permanent population of 412 people. But residence is unevenly distributed over the year. On a winter day we can be 170

individuals and yet on a summer day almost 10 times more. This puts an uneven load on infrastructure such as water, public transport, mail and delivery, healthcare and internet services. Combustible waste rises from 2 containers in January to 16 in July and sewage from 2 m<sup>3</sup> per day at our low season to 36 m<sup>3</sup> per day in high season.

Services on Kökar are good in relation to the small size of our community. We have a kind kindergarten, a grade-school with an incredibly good student-to-teacher ratio, competent teachers and students who succeed when they go on to vocational schools and high schools. We also enjoy an excellent nursing home, post office with banking service, library, district health nurse, regular doctor's visit, ambulance helicopter, restaurant, hotel, guesthouse, guest harbors and cafés. In 2018 we came together and raised our own money to build a new general store. It is well-stocked, open every day of the year and even sells white goods. The store receives top marks from customers even though some prices are higher than in Mariehamn.

We lack large sporting events, a cinema, a car workshop and a hairdresser - but on the other hand, many residents enjoy these reasons to visit Mariehamn once or twice a month.

Our rich cultural history ranges from the Bronze Age to the Middle Ages to the pre-industrial peasant life of fishing, sailing, hunting and agriculture, through two world wars and the arrival of motorboats, tractors, electrification, car ferries and on to today's internet. Kökar is well described in literature, art, photography and



music as displayed in our museum and at our cultural locations. We host many events such as the Franciscan Festival, Kökar Week, concerts, the festival KÖKART, ceramics workshops, metal forging courses and theater and art exhibitions.

Nature is an important part of our attraction, the hills, the birds, the sea, the rich greenery of summer and the icy landscape of winter.



# RENEWABLE ENERGY

Islands often consume more than the normal amount of energy. They are often supported by a mainland with umbilical cords in the form of a bridge, tunnel, ferry and submarine cable. The longer the distance to the mainland the more fossil fuels an island consumes. Switching to renewable energy can take place gradually, step by step, both with old well-proven technologies and with new technology.

## Current situation

Kökar consumes 14,950 MWh of energy each year consisting of diesel for ferries 49%, other diesel 11%, electricity 20%, petrol 8%, biomass (wood) 8% and heating oil 4%. That is 63,600 kWh per person each year. The average Finn consumes 16,000 kWh a year - but does not have to take a five hour ferry trip to get to and from the dentist.

We have a 1.5 MW power cable to the Åland mainland and a 500 kW wind turbine that has produced more than 24 million kWh since the start of 1997. This is renewable energy produced on Åland and has covered a third of our electricity needs.

We also have 30 kW of small-scale wind power, 49 kW of solar panels and 6 geothermal heat pumps that locally produce renewable energy.

We have an energy group within Kökar which, with the help of the EU and Åland government financed project Coast4us, secured our position as one of 26 pilot islands in the EU program

”Clean Energy for EU islands”. The Åland company Flexens has developed a comprehensive energy solution for Kökar and applied for funding from three different EU programs.



## LOCAL ECONOMY

The local economic capacity of our small community, on our small island, is impressive. Local economic analysis includes the island's purchasing power, the value of entrepreneurship and tax base, and looks at transfers between the state, the province and the municipality. Responsibility for waste management and recycling is within the local economy.

### Current situation

Price levels are lower on Kõkar than in Mariehamn when it comes to housing, rents, apples, pizzas and construction services. Local production helps these be more affordable. Kõkar has higher prices in items such as milk, potatoes and cheese. Petrol is more expensive as well as gravel and outside services. This is due to their long transports.

We have a large number of companies per capita. There is significant variety in our business types including construction companies, hotels and restaurants, bakeries, country stores, small service companies that operate remotely, and seven farmers. Tourism is an important industry with 9,000 boat nights, 18,000 overnight stays and 4,500 day visitors each year. Visitors contribute 42 euros each day to our economy and private boat visitors even more at 62 euros each day. Annually this creates 1.9 million euros in revenue. For each Kõkar resident tourism brings in more than 8,000 euros each year.

Our 227 economic producers include individual employees, pensioners, entrepreneurs, firms and businesses on Kõkar. Combined they earn 6.3 million euros each year and contribute 1.1 million in

tax. Our goal of being a resilient society and less vulnerable in crisis is supported by the diversity of our business types and the broad knowledge of our many professionals. We skillfully raised half a million euros in EU grants for the development of our guest harbors, for a hiking pilgrimage route through the archipelago and for the development of bird watching. Grants to associations are also significant. In total, the EU contributes about 2,000 euros per inhabitant each year. This is almost as much as the central Åland government tax distribution system, including archipelago supplements.

The municipal income tax rate on Kõkar is 19.75%, the second highest on Åland. There is a significant loan burden that arose as we invested in elderly care homes, rental housing and the renovation of the school. Right now the municipal economy is stable and we are repaying our loans diligently. Our large investments reflect our commitment and faith in the future. In 2019 our accounts were in the negative after depreciation. For the years 2020 and 2021 we have budgeted for and predict a probable deficit if the Åland government tax distribution system is not updated. Our long-term strategy for our municipality's finances is secure.

We collect 218 kg of combustible waste each year per resident of which 42% is recycled. For comparison, waste levels on Åland average 270 kg and on mainland Finland 344 kg. Our good community performance in this area is supported by high resident engagement. We do not buy things unnecessarily, do not throw things away unnecessarily, we do not litter and recycle through a flexible and well-functioning waste management system.

# INDICATORS

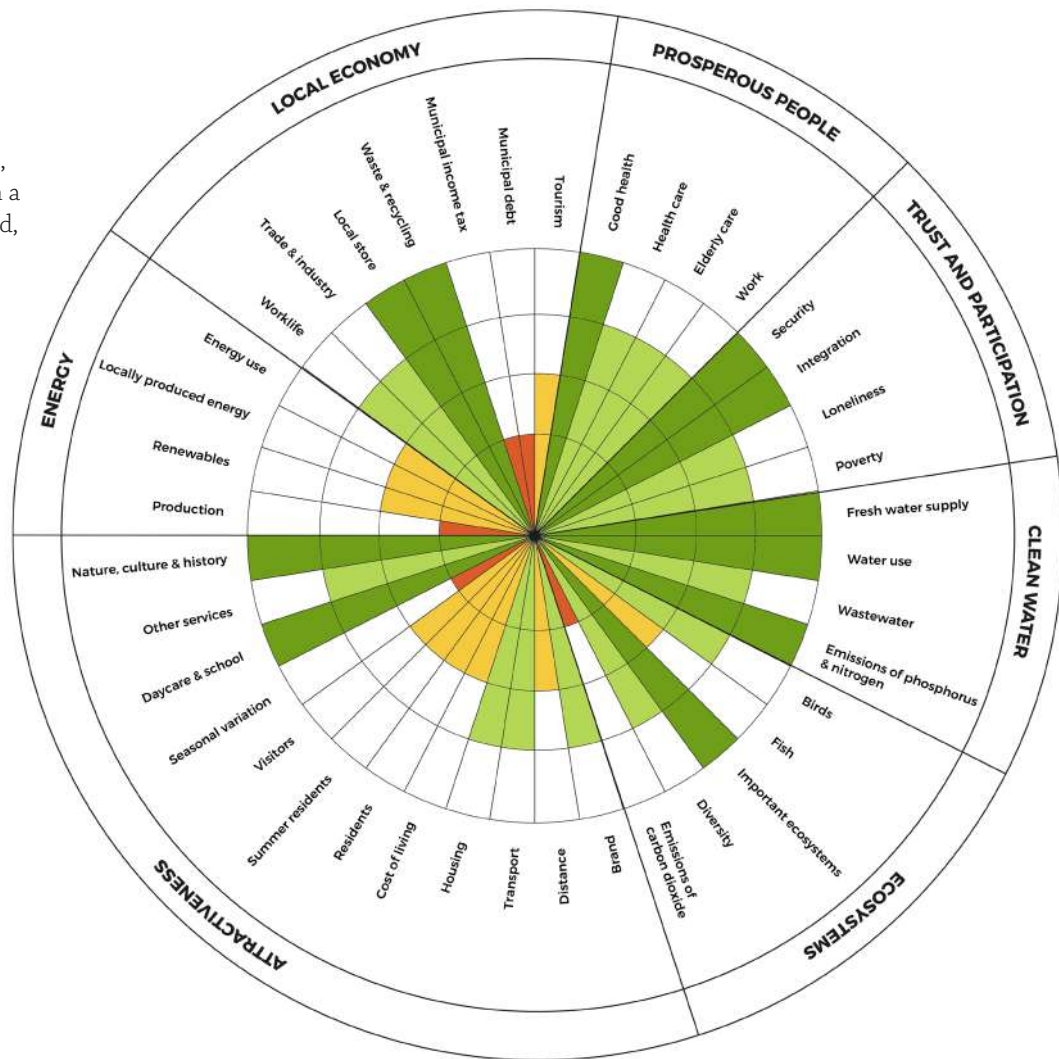
Our habitability includes the 7 areas we have presented on the previous pages. For each area we have developed indicators, to be able to measure how habitable we are.

PROSPEROUS PEOPLE	TRUST AND PARTICIPATION	CLEAN WATER	ECOSYSTEMS	ATTRACTIVENESS	ENERGY	LOCAL ECONOMY
Good health	Security	Fresh water supply	Birds	Brand	Production	Worklife
Health care	Integration	Water use	Fish	Distance	Renewables	Trade & industry
Elderly care	Loneliness	Wastewater	Important ecosystems	Transport	Locally produced energy	Local store
Work	Poverty	Emissions of phosphorus & nitrogen	Diversity	Housing	Energy use	Waste & recycling
			Emissions of carbon dioxide	Price level		Municipal income tax
				Residents		Municipal debt
				Summer residents		Tourism
				Visitors		
				Seasonal variation		
				Daycare & school		
				Other services		
				Nature, culture & history		

We assessed our present performance, indicator by indicator, scoring each on a scale of 1 to 4 with 4:Excellent, 3:Good, 2:Bad and 1:Critical.

This illustrated polar diagram shows the situation on Kökar in October 2020.

- 1 Critical
- 2 Bad
- 3 Good
- 4 Excellent



## Do we have a common vision?

Many of us thought and discussed about what Kökar should be in the future, 10 or 30 years from now. 130 people walked around in this house of sustainability. We pondered, wrote, spoke to and discussed with each other. We have found common ground and shared values.

Like all people, we have ideas, dreams and desires about the future - about what life should be like. We are a micro-community of 232 individuals. The vision for our shared future lives must be put into words and described clearly if we are to believe in this vision and work towards realization of our goals. Of course the future will not be exactly what we want and believe. But we will work to steer our course in the right direction - together.





# KÖKAR IN 2030

Kökar is free, fun and safe to live - a lovely place on earth.

Our society grows by about five people each year thanks to good jobs and housing (for rent and to buy). Jobs creation comes with the development of interlinked tourism, more Åland government employees registered and working on Kökar and teleworking increasing after the Corona pandemic. This ongoing tragedy teaches us that we do not have to live in a city to work in that city when we create effective remote workplace services.

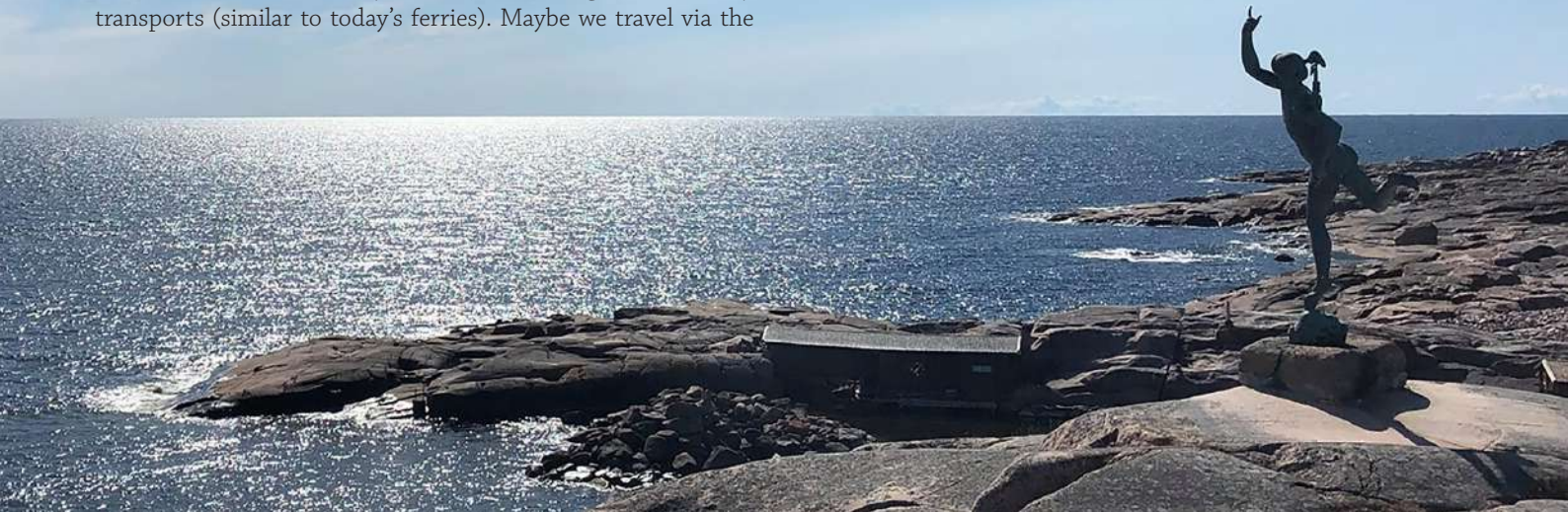
Kökar has independently and in collaboration with other archipelago municipalities stimulated immigration, entrepreneurship, new housing construction and joint development of archipelago schools. We have a new art museum. We have faster smaller ferries supported by less frequent sailings of slow heavy transports (similar to today's ferries). Maybe we travel via the

Föglö islands and a tunnel to mainland Åland, maybe not.

Ecosystems remain fragile. As the condition of the Baltic Sea slowly improves algal blooms decrease. We have a certified facility to produce local meat, we cultivate more land, we harvest forests and sea reeds and the landscape has become more open and diverse. We consume almost as much energy as 2020 but now it is based on renewable sources.

No wars, no new pandemics and no severe recessions have impacted us.

Kökar is free, fun and safe to live - a lovely place on earth.







## WHAT NEEDS TO BE DONE?

If we want those who were born and raised here to stay, those who have left to now return, new families to move here, if we want children in all grades in the school, if we want Kökar to be a vibrant community all year with a diverse population of all ages, genders, origins and opinions – we must take a close and critical look at our habitability.

We need to manage and refine our strengths and we need to reduce our weaknesses.

"When you meet the Kökar people, take plenty of time. They want to talk to strangers. But remember, you are in a place where God did not create urgency and where the now rampant disease of stress has not yet taken hold. Do not run to the tick of the clock when you are on Kökar."

Elis Fogde, Hufvudstadsbladet 27.7.1963, quoted in «Gammel-Kökar's mat-mode-miljö», a collection of clippings by Margareta Jorpes-Friman 1984

### Strengths

An important part regards our young people. There should be more activities, more opportunities and there is a need for a youth leader. It should be fun to be young on Kökar.

Our school will eventually be integrated with other schools in the archipelago, both digitally and physically. It can provide advantages and disadvantages for students. If they have to travel more, we must ensure that trips are not a waste of time.

The Corona pandemic is a threat - right now. It also creates an opportunity for change as many have now learned to work and meet at a distance. This makes it easier to work remotely on Kökar - although we remain a remote island.

Our wastewater treatment plants need to be improved. We must see equal participation in voting by men (who currently do not vote often) and women. And we must remain aware of the fact that the Finnish Institute for Health and Welfare reports that 12% of households in Kökar are at risk of poverty. When we ask Kökar residents directly they talk about the challenge to get their private finances balanced. Factors contributing to this include not enough full-time jobs, a high tax rate, the increasing state tax in Finland but pension payouts remaining fixed.

## Mixed

We produce much emissions. There are gas emissions of carbon dioxide of which 80% comes from the ferries we need to get to and from Kökar. Emissions also include the release of nutrients mostly imported in the food that we and our animals eat and which is released through our wastewater runoff and sewers.

A local abattoir facility to produce meat for sale in our shops would be a very good investment. Deer, cormorant and seal populations need responsible management. A common compost is an idea that has been put forward.

Our island has a great variation in number of people living here throughout the year (see page 12). We generally have too few permanent residents (of all ages), too few holiday homes and too few off-season visitors. Ongoing and proposed development measures include more housing, more resources for the moving-in team with a comprehensive moving-in package with focused benefits for families with children, a reduced tax rate in the first years of residence, a move-to-Kökar campaign abroad and the return of central Åland government employee jobs to Kökar.

We are creating a new art museum and we have plans for a world war museum.

We have a great community store, we handle waste and recycling well and our we have a strong business community with several well-run companies. We have a high debt load taken on during the recent investments in housing and care for the elderly which led to an increased municipal income tax. We see weaker than expected performance in our tourism sector. We have invested to

attract hikers, bird watchers and more boaters with the refurbishment of our guest harbours. We want to connect these investments in an Archipelago interlink.

To settle more remote workers on Kökar attractive facilities and services are needed.

## Weak parts

We use a lot of energy per person and a large part of this energy is not renewable instead being produced from fossil fuels.

Financing for this project comes from the EU and central Åland government project Coast4us. We have formed a focused Energy task force and succeeded in becoming one of 26 pilot islands in the EU initiative «Clean Energy for EU islands». Together with the Åland energy company Flexens we have developed an energy solution for Kökar. It forms the basis for funding applications we have made to three different EU programs.

We propose to replace the school's oil fired heating boiler with an innovative hybrid system that burns local wood chips and sea reeds. This works in line with increased solar panels and wind power. We then connect all micro-producers of energy into a common system where we buy and sell locally produced energy to each other. This can be effectively accomplished step by step.

We will promote the installation of more privately owned solar panels and heat pumps, install 500 kW of wind power in 2024 and gradually reach 100 kW of solar generation by 2026.

Kökar is a suitable location for testing new technologies such as self-driving electric vehicles.

Fast smaller ferries would reduce our energy consumption significantly. In combination with a reduced frequency of sailings for traditional freight and car ferries we can more efficiently connect Kõkar to mainland Åland. The Flexens company recognizes our potential to become a test area for hydrogen ferries on our Kõkar to Galtby route. This would also include hydrogen production on Kõkar.

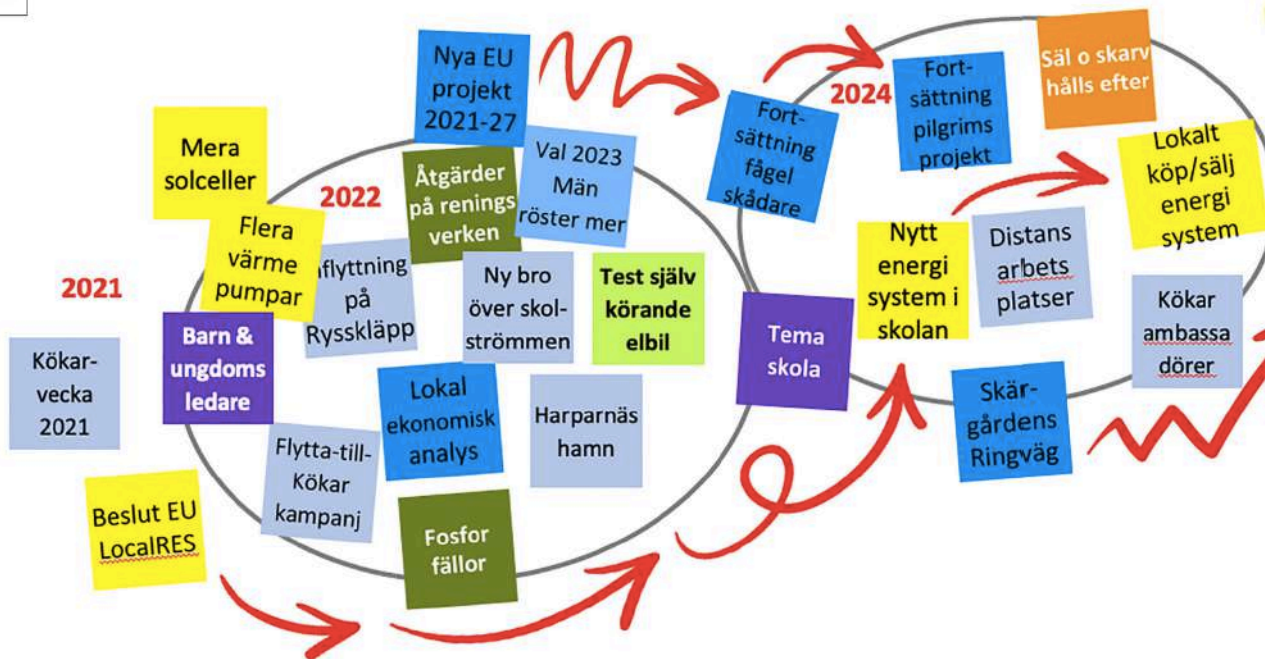
### **Development**

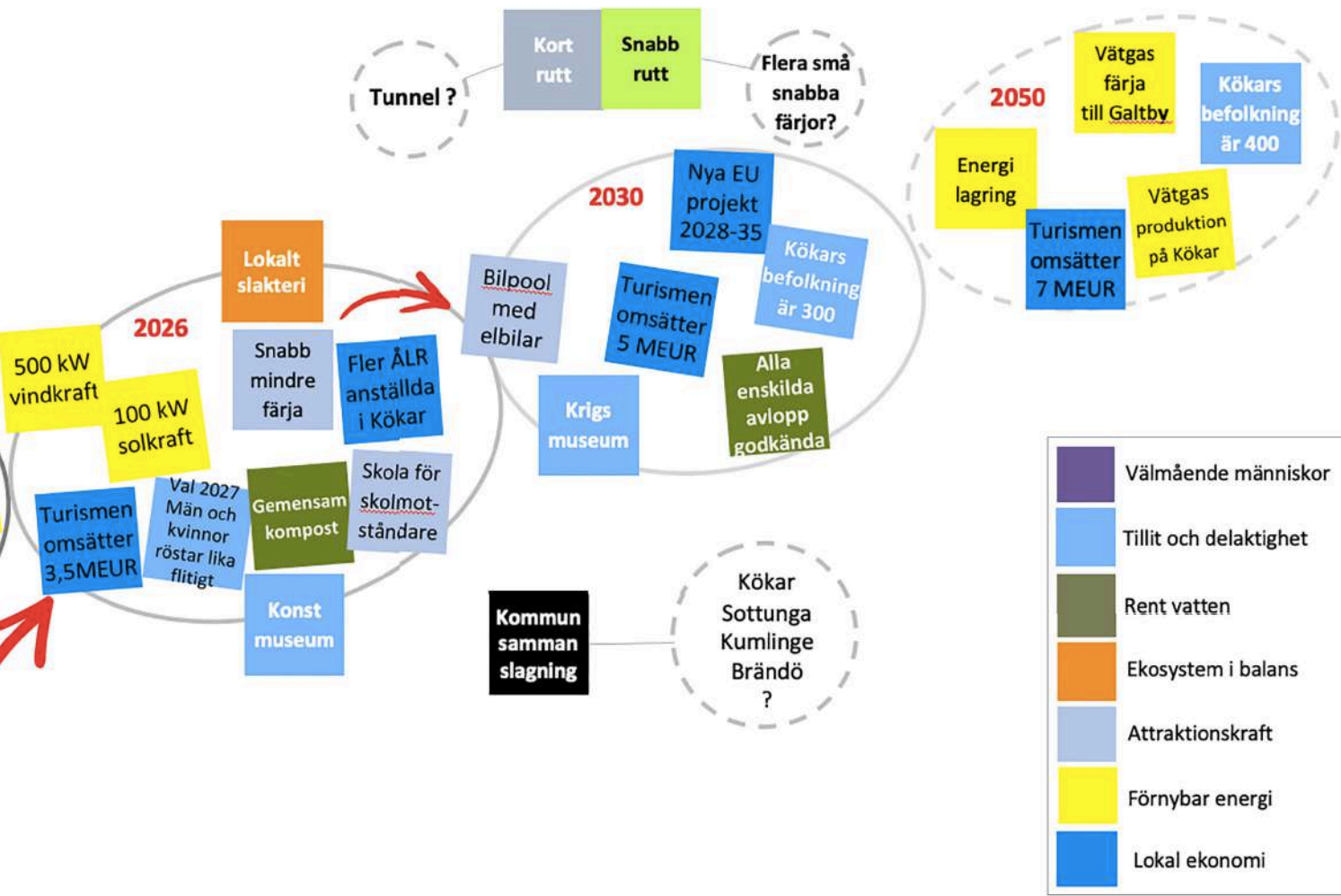
During a common workshop, we put our future plans into one large picture (not translated to English), see next page.





# DEVELOPMENT





## REFERENCES

Häger, Anna: En studie av vatten och avlopp på Kökar, Linköpings universitet/KTH 10.8.2019

Nynäs, Emma: Kökar avfallskartläggning och -planering, MISE 30.8.2019

af Petersens, Ebba och Granath, Maja: Avloppskartläggning och planering – Kökar, WRS rapport 24.10.2020

Pleijel, Christian: Hur man läser av en ö, Mariehamn 2014

PoY Remote Team/KTH: Design of an Integrated Hydrogen-based Storage System on Kökar Island, 1.6.2020

Schalin, Berndt: Idébok, Flexens 7.10.2019

Sved, Ann-Christine: Hållbar utveckling i en liten skärgårdskommun - En fallstudie av Kökar kommun, Svenska Handelshögskolan 2019

Sved, Ann-Christine: Rapport om hur Kökarborna besvarade frågeformuläret om livet på Kökar, 16.9.2019

Sved, Ann-Christine: Rapport om krisberedskap på Kökar, 11.10.2019

Sved, Ann-Christine: Indikatorförslag för Kökars bobarhetsplan, 30.6.2020

Sööderholm, Jonas: En lämplig energisamfundstyp på Kökar, 12.2.2020

Tunón, Håkan och Kvarnström, Marie: Lokala perspektiv på havs- och kustplanering, SLU 27.8.2019

Vainio, Tuukka och Nordlund, Edvard: Agenda för förnybar energiövergång, Flexens 26.6.2020

Vainio, Tuukka och Nordlund, Edvard: Agenda for Clean Energy Transition, Flexens 3.7.2020



Thank you to all our Kökar residents - women and men, young and old, natives and immigrants - who contributed their thoughts about our habitability. Thank you to the politicians, committees and boards who created indicators and goals. Thanks to the farmers, hunters, fishermen, entrepreneurs, artists and school children who shared their perspectives on these issues. Thanks to students, researchers and officials who analyzed topics of waste, sewage, energy, crisis preparedness and municipal finances. Thanks to Ann-Christine Sved for diligent work with the indicators. Thank you Michael Taevs for the English translation. Thanks to Nina Lindfors, Daniela Hellström, Inessa Witting and Tove Jansson for their photos and to the persons in the pictures for providing their release. And thanks to the Åland Provincial Government and the EU who provided the means to make the plan concrete, useful, unique and inspiring.

Siv Relander, Gun Lindblom and Christian Pleijel, who managed the project.

Kökar is safe, free and fun to live - a beautiful place on earth.

[www.kokar.ax](http://www.kokar.ax)



European Union  
European Regional  
Development Fund



Ålands  
landskapsregering