Make USE / Ruralized

Diploma Program 2022
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Content

Abstract

This diploma is trying to find ways to work with the topics of depopulation and climate change in hopes of finding ways of solving some issues in Sollefteå. A town with a shrinking number of people and many vacant buildings. The question has come to my mind; how the future towns in rural areas are to look in the future.

As an investigation, my project aims to see how a ruralisation of Sollefteå would look like, basicly shrinking the town through the mounting down of empty fassilities, in this way opening up for a new use of unwanted land with a low market value.

The architecture in this project lies in creating a material chain for reusing materials and creating a “new” urban composting center (material storage & maker space) on the edge of town; to collect the building mass in efficient ways, reuse it or makes new structures from it. How can the human interaction with reusable materials manifest in a fysical form, is there a way of getting people to reuse and utilize local materials instead of bying new? Could this actually be a way of getting new-commers to town and let them be apart of a more rural life.

Crisis

/´kraisis/

Noun

1. A time of intense difficulty or danger.
2. A time of great disagreement, confusion, or suffering.
3. A time when a difficult or important decision must be made.

Uncertainty

/an´se:t(e)nti/

Noun

Epistemic situations involving imperfect or unknown information. It applies to predictions of future events, to physical measurements that are already made, or to the unknown.

Resilience

/ri`ziliens/

Noun

Resilience is coterminous with flexibility, and stresses the ability of individuals, households or groups to adapt to disturbances and survive.

Negotiation

/nigeuti´eiti(e)n/

Noun

A negotiation is a strategic discussion that resolves an issue in a way that both parties find acceptable. In a negotiation, each party tries to persuade the other to agree with his or her point of view.

Why

Climate Change

/`klaimet tjein(d)ʒ/

Noun

A change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

Society

/se`saiiti/

Noun

1. The aggregate of people living together in a more or less ordered community.
2. An organization or club formed for a particular purpose or activity.

Reliance

/ri`laiens/

Noun

The condition of depending on something or someone:
- She said that there is too much reliance on meat in our diet.

Future

/fyü-cher/

Noun

The future is the period of time that will come after the present, or the things that will happen then.

Control

con·trol

Noun

1: To order, limit, or rule something, or someone's actions or behaviour.
2: To reduce the incidence or severity of especially to innocuous levels.

(The expression is connected to reducing risk and keeping a stable influx, like the river flow of Ångermanälven or forestry industry).

Ecology

ecol · o· gy

Noun

The relationships between the air, land, water, animals, plants, etc., usually of a particular area, or the scientific study of this.

(Ecological structures are often seen upon as cyclic and based on a holistic network of events. Events that humans often should interfere with).

Decay

de· cay

Noun

1: To fall into ruin.
2: To decrease usually gradually in size, quantity, activity, or force.
3: To decline in health, strength, or vigor 4: to undergo decomposition.

(In other ways natures way adding matter in to the ecology.)

Change

chānj

Verb

changed, changing

1. to make different in some particular : alter
2. to make radically different : transform
3. to make a shift from one to another
4. to undergo a modification of

Acceptance

ac·cep·tance

Noun

the action of consenting to receive or undertake something offered.
the process or fact of being received as adequate, valid, or suitable.

(to accept something means that you have given your consent to receive or undertake (something offered)

Reaction

re·ac·tion |

Noun

1. a behaviour, feeling or an action that is a direct result of something else:

2. Something done, felt, or thought in response to a situation or event.

Climate Change

We are overworking our planet; due to our global economy, we have managed to create a lifestyle disease that gives us cheap products, that last for a short while, before we throw it away. The products are often made of plastics; after use, alot end up in nature polluting for hundreds of years.

Pollution, de-forestation, pestisides and monocultures has created a huge loss of biodiversity. Between 1970 and 2010, the planet has lost 52 percent of its biodiversity and the loss is getting bigger each day. Just by our lifestyles we are creating the 6th mass extinction on earth.

Gaia is waking up and extreme weather has increased in the world these last decade. Three years ago we had an extremely dry and hot spring/summer in the nordic countries. Due to the Swedish Forrests management, the forrests don't hold as much moist as before. These connections created one of the biggest forrest fires in Swedish history, destroying 25 000 hectar forrest.

Globally we are using up the capacity of 1.75 earths and in 2050 we are predicted to double our demand of food. Sweden is right now using 4,2 earths and our emmissions are constantly growing.

We are burning up the house we live in

How to deal with changes

In order to know what to do with our situation we must know why and how we got to this point. In my essay I wrote about how societies/cultures take form and how they differ from each other, writing about the following:

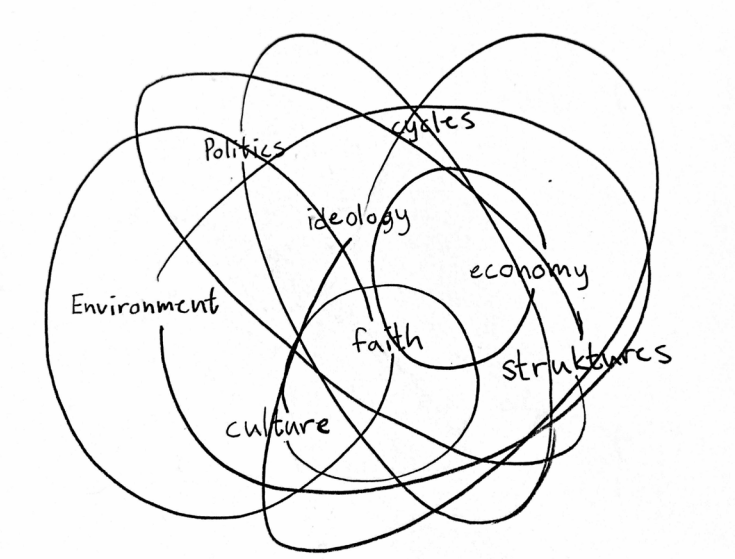
In the 60`s, Clifford Geertz wrote a book called ”Agricultural Involution”, where he broadened the spectrum of societies. He declared that humans have an ecology of its own and that the causality of different societies are caused by an intricate network of social and environmental cycles.

In 1975, Vayada and McCoy developed new models on how and why some societies are successful and what mechanisms are used. They found two main systems:

1. Stabile systems work in stabile climate with constant input of resources.
Example: todays western stabile system is using 1,75 Earths

2. Resilient systems work in unstable climate with differing inputs.
Example: Dyak longhouses. Locally based, low carbon footprint

“Ecological systems that have survived are ‘those that have evolved tactics to keep the domain of stability, or resilience, broad enough to absorb the consequences of change.’” (Vayda and McCay 1975: 299)



The concept of resilience

For Vayda and McCoy (1975) resilience could be measured in 3 main ways:

1. Generalist vs. specialist strategies .
2. Uncertainty and surprise.
3. Adaptation ability and a low degree of centralization.

These ways of seeing gave me some key answers on defining how a society can deal with a future that is more uncertain.

One definition of a resilient society goes as follows:

1. Generalists.
2. Prepared for uncertain times.
3. A flexibility to change strategies and a low degree of centralization.

”Resilience, in this sense, is coterminous with flexibility, and stresses the ability of individuals, households or groups to adapt to disturbances and survive” (McCay 1981; Lamson 1986).

The farmers in norrland lived a much more general life in the past, working the fertile land by the river in the summer, taking the cattle to the mountains, whilst in the wintertime working in the forests.

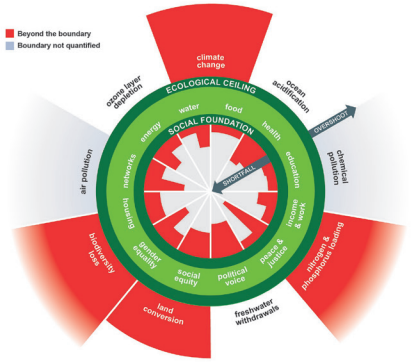
Growth, Economy and Waste

My project aims for *Sustainable degrowth*, a concept which is trying to downscale production and consumption that increases human well-being and enhances ecological conditions and equity on the planet. It calls for a future where societies live within their ecological means, doing this with local economies and more equally distributed resources through new forms of democratic institutions. Such societies will no longer have to "grow or die." Material accumulation will no longer hold a prime position in the population's cultural imaginary.

During the Covid-19 outbreak the town of Amsterdam have announced that they are planning to launch a new way of working with economics toward their inhabitants. To stop chasing BNP and use economics more as a tool to be guided by the *Doughnut model*. For a long time politicians in Sweden have been claiming that the more BNP we have the better the people have it, which is not really the case any more. Since the 80's the BNP in Sweden has risen, but life standards has fallen. People are less safe, more stressed and feel that they have less control of their lives.

The built environment has a big influence on our economy and peoples life in general. The building sector produces allot of waste, it stands for 50 % of all extracted resources and in Europe it stands for 35 % of the collective waste. The manufacturing of construction products is estimated to stand for 5-12 % of the national greenhouse emission and bigger material efficiency and reuse of materials could lower these emissions by 80 %.

Degrowth

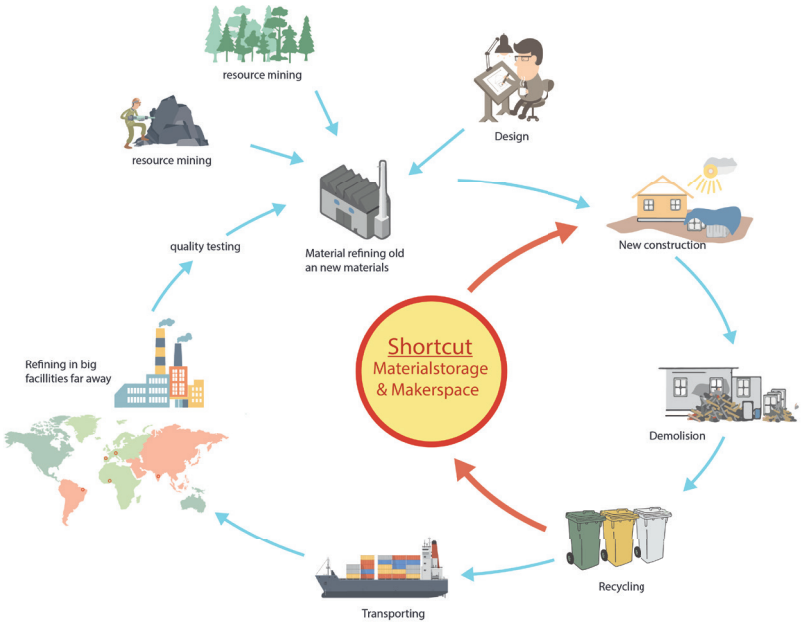


Doughnut principals

Construction material storage

Complex supplychains of the modern world

The research of how building materials are recycled and reused; I have realised that the gap between the dismanteling of material and the new consumer is to big. The steel that they are recycling in Bergen goes to germany to be melted down and many construction companys dont recycle more than they acually have to and many nice ineriors get riped out and cant be used again as they were intended. In recent years many new attempts and rules have been taken bu govenments to ensure that construction companys recucle most of their materials. But new problems problems arise when they start dismanteling buildings made in the 70 and onwards becuse the growing use of composite materials. Companys is struggeling to find it profitable to engage in these questions. To me this is a good example that we need to find new ways of incresing accessability. Local material storages can be used as a solution as they will come faster back to the user. this can also connect to my essay about how ressilient communities are often more local and general



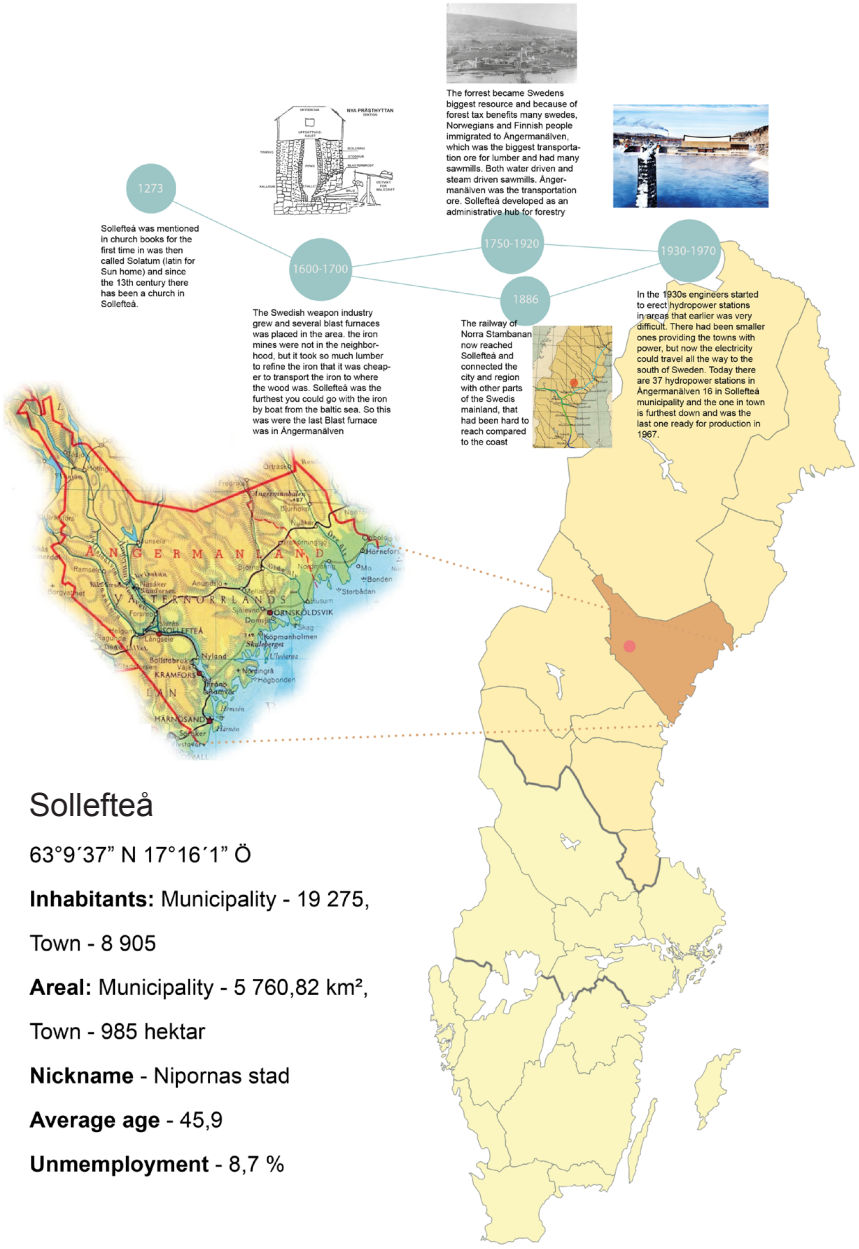
Sollefteå

The last port of civilisation

Sollefteå´s existence as a town is a consequence of the location in the landscape. The resource of wood was everywhere in mainland Norrland, but transportation was in the beginning handled by the river. Sollefteå is situated where the bigger cargo boats in the 17th century couldn't get further because of the altitude of the river. This location became the endpoint of the supply chain and made Sollefteå the last town by Ångermanälven (river). Further up the river, small farming communities have emerged connected to the social services that Sollefteå distributed. Today the mainland of Norrland is threatened by extinction. Some years ago the government of Sweden decided to shut down the maternity ward in Sollefteå. Now you have to drive 4 hours if you want to get to the nearest hospital for delivering your baby. Sollefteå has for a long time served as a node in the Swedish forrest industry but automatons of jobs, education other places, lack of visions. Sollefteå is now shrinking, the Swedish state is doing what it can to centralize Norrland to its coastal cities, making it much harder to live in the villages and towns in the mainland.

The Swedish government is asking: Why should Sollefteå exist?

Sollefteå is asking: How can we exist?



Sollefteå

63°9´37" N 17°16´1" Ö

Inhabitants: Municipality - 19 275,

Town - 8 905

Areal: Municipality - 5 760,82 km²,

Town - 985 hektar

Nickname - Nipornas stad

Average age - 45,9

Unmemployment - 8,7 %

The river that runs through Sollefteå, Ångermansälven

Depopulation & Empty houses

Sollefteå (Ångermanland) is a town and municipality much like its siblings in inland Norrland, suffering from depopulation. The area has been populated since the last ice age, thanks to the fertile soil in the valleys and a rich hunting scene. In the 50's and 60's, a big number of people moved here because of the military and hydro power construction. This led to apartment blocks, culture houses and new infrastructure, but since the building boom the population in the municipality has shrinked from 36 000 to 19 000 inhabitants. The majority of the inhabitants are in the older spectrum. Industry, offices, apartments, old farms have been left to their own destiny. Market prices are so low that people don't want to sell houses, even if they don't want them. Many of the buildings built 80 years ago have a lack of context in the valleys of Sollefteå, and can not serve their original purpose anymore. They were meant for a town of service.

Sollefteå town center was drastically rebuilt in the 60's. The town was planned with offices and civic services, apartment blocks with the highest standard of comfort and central heating and in the middle of town a big hotel for business trips. Because of the fact that forest industry and hydropower industry have become so mechanized and the military has shut down, the town is struggling with its identity. The world have changed, depopulation is a global phenomenon driven by geo politics, urbanization, loss of industry jobs, internet shopping.

Around 200 000 buildings
in sweden is abandoned

Who has been living here and why

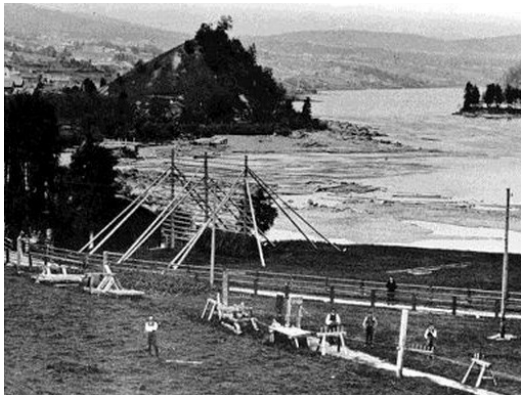
I have placed the inhabitational history of Sollefteå in 3 main eras to understand why Sollefteå exists. And after this I will start to speculate in the future of the town.

1st era: 6000 bc.-600 ad. (Primitive)
The river is the reason for this site to be inhabited in the first place. The stone carvings in Näsåker shows prosperous hunter and gathering culture with a ritual center by the river.

2nd era: 600-1950s (Agrarian)
The soil of old sea bottom became a place for full time farmers. They continued fishing and hunting. In the later stage the river became the infrastructural ore to the forrest, The forrest was the inexhaustible resource that man could use as building materials, melt iron with and later on, make a bunch of products from.

3rd era:1950s-2020s (Modern)
The forests were sold to cooperations, and the river got dammed up by other cooperations. The resources became owned, and the corporation and economy needed people to be there and take care of them. They built houses, hospitals and culture houses for a steady future. Because of mechanizations, the state and corporations don't need people to be living there any longer, the production of goods had moved to the cities by the coast of Sweden and the municipality of Sollefteå became an old and expensive burden for the state.


Stone carvings (Näsåker)


Big structure for drying hay


Hydro powerplant and railway. Important infrastructure for sweden

The Era of Making USE

A Speculation about the future of Sollefteå and other small industrial towns:

What's interesting with Sollefteå´s position in the world is that in the shadow of its industrial control over its resources, there is an opportunity for freedom, ecology and sustainability in the built environment. Because of the fact that land values are so low in Sollefteå, buildings could be more valuable as scraps, than they are as buildings. This creates an opportunity to rebuild Sollefteå.

It is time that Sollefteå finds it's place in the new landscape of abandoned buildings, and start to position them as a municipality. I would like to see these buildings in and around Sollefteå town, as resources and not as burdens, and if we would mount some of them down, many new possibilities can arise.

Jurgen Bay(B. 1965)

Sollefteå Transformation hub:

After reflecting upon my research, I have decided that Sollefteå is in need of a Transformation hub for residents and newcomers to use. The hub lies on the outskirts of the town center and is based on the existing structure of an old workshop that has been converted into a supermarket, that will move to the main road next year. With the connection to the railway for goods, and close to the main road, which connects Sollefteå to its surroundings, this place can serve as a meeting spot in the new and smaller town, whilst at the same time having access to the heavy infrastructure that is needed to transport materials to and from the site.

Because the construction cycle is so big and complicated, the building is trying to serve as a shortcut and connector, which makes it easier for the population of Sollefteå to reuse and modify materials. The building includes a material sorting area and material storage for demolished and modified materials. The building also serves as a maker-space and a library of things, for reusing materials and products that worked fine, and doesn't need to be thrown away or lost in the big cycles of waste management. In that way materials can be released to smaller projects. Todays big scale production of houses and products require loads of testing of materials and assurance of the materials durability. This hub will get around some of these issues and let the users feel, smell and evaluate the materials on site. Like a sieve, the materials will be separated, crushed and cleaned into new objects that can be used by the people of Sollefteå. The site is divided into a working area, communal workshops, and a more public material library, clubhouse and a DIY Park for making and fixing things

Doors will become tables, old lumber walls, transform into a chicken house, windows can be reused for greenhouses, and roof tiles can be collected in the inner room. In the club house lectures and workshops can be held about living more sustainable and how to reuse of materials, and the DIY park can be a place for events, fixing things, barbecuing, or building a tiny house. The goal is that this transformation hub also can attract new people who wants to live in a more sustainable way and create a new future for themselves. This will in a sense be a integration zone where locals and new-comers meet

Model picture

Urban scale / Ruralization

In town I found many vacant old civic buildings that would work fine as reusable building materials and took the liberty of speculating on how the town would look like if they were removed. I firstly removed the most urgent 12 buildings and asphalt, and then created a future scenario of a fully degrown/regrown town with new use for the plots. After demounting and recycling they will develop organically after need and want of the inhabitants in the town, as long as the users follows the rules of degrowth. If nobody uses the land; trees, animals and microorganisms will take our place. In this way a ruralization of the townscape is happening and a path towards a different future can occur.

Collage; After

Collage; Before

Literature

Articles:

J. Davidson-Hunt and Fikret Berkes. 2000, Environment and Society through the Lens of Resilience: Toward a Human-in-Ecosystem Perspective, Natural Resources Institute, University of Manitoba

C Helliwell 1993, Good Walls Make Bad Neighbors, Australian National University

Mona Lilja & Stellan Vinthagen. 2018, Dispersed resistance: unpacking the spectrum and properties of glaring and everyday resistance. Department of Sociology and Work Science, University of Gothenburg

Books:

Azby Brown 2010, Just Enough, Kodansha USA
Po Tidholm 2012, Norrand, tegpublishing Sverige
Sollefteå 800 år

Webb:

https://www.atl.nu/ledare/vad-gor-vi-om-maten-tar-slut/

https://www.landlantbruk.se/lantbruk/nya-klimatets-viktigaste-utmaningar-och-mojligheter/

https://fof.se/tidning/2000/6/artikel/norrland-far-skanskt-klimat

Lecture:

Thomas Hahn: Stockholm ressilience center

Reports:

Kvalitet hos byggnadsmaterial i cirkulära flöden (Pierre Landel, Kaisa Svennberg)

European commission: actionplan for circular economy 11/3/2020

RISE Rapport 2017:55

Contributions

In Sollefteå:

Petra hennrikson: Town integrator & guide

Gunilla Rudehill: former city architecht

Matti heino: City planner

Maria Söderlund: Building regulations

Malin Grandin: City archive

Leif Åhgren: Resident

Tutors:

APP: Anders Rubing
DAV: Marco Cassagrande

Proofreading:

Idunn Blom Krossøy

CV

Axel Högberg
Sweden
29 years

(Semi) Relevant information
Have been volunteering in 3 different ecological and permacultural farms for in total 3 months

Attended a 7 day survival course arranged by Svenska Överlevnadssällskapet

Education

History of Idéas A - Stockholm University	30 p
Trä/Möbelhantverk - Grebbestad Folkhögskola	60 p
Bergen Arkitekthøgskole	240p
(Erasmus) Kungliga Tekniska Högskolan	60 p

Mastercources 2018-2019

Fall 2018 ”Halls Behind Halls”
KTH, Stockholm, teacher: Peter Lynch
studio focusing on constructions i wood and new ways of looking at the material wood

Spring 2019 ”A Place Called Home”
KTH, Stockholm, teacher: Rumi Kubokaw & Ori Mero
Focusing on complex social and political issues in the neighborhood of Neve Shaanan in Tel aviv, Israel. What is home for a refugee?

Fall 2019 ”Ocean Explorations”
BAS, Bergen, teacher: Nancy Couling Vibeke Jensen
a mission of figuring out what we as architects have to do with the ocean. When most of the land have been exploited by companies and states, their eyes have turned to the sea to find new resources. The ocean is getting urbanized quickly