



## **POINT 1**

Environmental scanning:  
Climate goals and initiatives  
for actors at different levels

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## The SPORTS Project

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Presentation by CTK



## Which goals concerning climate aspects have been formulated for actors at different levels?

*The project includes research of the following points:*

- UN's climate goals, focusing on the 2030 Agenda for Sustainable Development
- EU's climate goals
- Sweden's climate goals
- Climate goals of Gothenburg
- Climate goals of five international cities



# Climate goals of UN, EU, and Sweden



Goal 7 is about ensuring access to clean and affordable energy, which is key to the development of agriculture, business, communications, education, healthcare, and transportation. The lack of access to energy hinders economic and human development.



Goal 9 seeks to build resilient infrastructure, promote sustainable industrialization and foster innovation. Economies with a diversified industrial sector and strong infrastructure sustained less damage and are experiencing faster recovery. In 2021, global manufacturing rebounded from the pandemic, although the recovery remains incomplete and uneven. Higher-technology industries performed better and recovered faster, providing a strong example of how important technological innovation is to achieving Goal 9.



Goal 12 is about ensuring sustainable consumption and production patterns, which is key to sustain the livelihoods of current and future generations. Unsustainable patterns of consumption and production are root causes of the triple planetary crises of climate change, biodiversity loss and pollution. These crises, and related environmental degradation, threaten human well-being and achievement of the Sustainable Development Goals. Governments and all citizens should work together to improve resource efficiency, reduce waste and pollution, and shape a new circular economy.



To limit warming to 1.5° Celsius above pre-industrial levels, as set out in the Paris Agreement, global greenhouse gas emissions will need to peak before 2025. Then they must decline by 43 % by 2030 and to net zero by 2050. Countries are articulating climate action plans to cut emissions and adapt to climate impacts through nationally determined contributions. However, current national commitments are not sufficient to meet the 1.5°C target.



Goal 14 is about conserving and sustainably using the oceans, seas and marine resources. Healthy oceans and seas are essential to human existence and life on Earth. They cover 70 % of the planet and provide food, energy and water. The ocean absorbs around one quarter of the world's annual carbon dioxide (CO<sub>2</sub>) emissions, thereby mitigating climate change and alleviating its impacts.

## Five most important SDG:s

## Actions for the port of Gothenburg to contribute to each goal



Improvement in energy efficiency. Ensure access to affordable, reliable and modern energy services

Increase substantially the share of renewable energy in the energy mix

Facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

Increase the use of renewable energy solutions in its own operations, such as biofuels, hydrogen, solar and wind



Develop quality, reliable, sustainable and resilient infrastructure

Upgrade and improve the port to make it sustainable, with increased resource-use efficiency and greater adoption of clean technologies and industrial processes.

Use digitalization to improve the infrastructure and communication



Reduce unnecessary transportation

Reduce food losses along production and supply chains, including post-harvest losses

Environmentally sound management of chemicals and all wastes throughout their life cycle

Significantly reduce the release to air, water and soil in order to minimize adverse impacts on human health and the environment

Reduce waste generation through prevention, reduction, recycling and reuse

Adopt sustainable practices and to integrate sustainability information into the reporting cycle



Reduction of GHG emissions from ships, trucks, energy and storage facilities etc.

Using renewable fuels and green energy for all cargo handling equipment at the port as well as the transport to and from the port

Creating a fossil-free supply chain

Close collaboration with customers and partners, e.g. Tranzero Initiative

Investing in alternative fuels

Influencing and setting requirements for suppliers in the industry



Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

Minimize and address the impacts of ocean acidification. Have adequate waste reception services

Minimize the discharge sewage, oily waste/spill and chemicals. Also mitigate the risk of spread of invasive species when releasing ballast water

Influencing and setting requirements for suppliers



Three most important EU goals and initiatives

## Overseeing emissions

- **Monitoring**  
Companies shall monitor each of their ships CO<sub>2</sub> emissions, fuel consumption, distance travelled, time at sea, cargo carried per voyage and other parameters to gather annual data into an emissions report.
- **Emissions report**  
Gather annual data to the database THETIS MRV, which submits the data to the European Commission and to the ship's respective flag States a verified emissions report for each ship.

## European Green Deal

- **Capping maritime transport emissions**  
Creating a carbon price signal that foster the reduction of GHG emissions.
- **Boosting demand for marine renewable and low-carbon fuels**  
Maximum limit on greenhouse gas content of energy used by ships calling at European ports. Encouraging zero-emission technology at berth.
- **Boosting alternative fuel infrastructures**  
Mandatory targets for shore-side electricity supply at maritime and inland waterway ports.
- **Accelerating the supply of renewables in the EU**  
40% renewable energy sources in the overall mix by 2030. Focus on transport sector.

## Emissions Trading System

- **ETS for all large ships**  
Extending the scope of EU's Emission Trading System (ETS) to cover CO<sub>2</sub> emissions from large ships (>5000 gross tonnages), regardless of which flag they fly.  
  
Incentivizes a price signal for improvements in energy efficiency and low-carbon solutions.
- **Polluter pays principle**  
Include emissions from maritime transport in the EU ETS. Shipping companies are to pay for the previous year's reported emissions.



The three main parts of Sweden's climate goals and initiatives

## Reduction of GHG-emissions

The long-term target for Sweden is **zero net greenhouse gas emissions** by 2045 at the latest. After 2045 Sweden is to achieve negative net emissions.

- By 2020 emissions are to be **40%** lower than 1990
- By 2030 emissions are to be **63%** lower than 1990
- By 2040 emissions are to be **75%** lower than 1990

## Energy transition

The goal for the year 2040 is **100% renewable electricity production**.

By the year 2030, Sweden should achieve 50% more efficient energy use compared to 2005. The goal is expressed in terms of energy delivered in relation to gross domestic product (GDP).

## Environmental quality

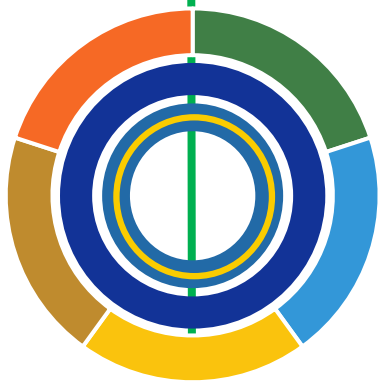
The generational goal, together with the 16 environmental objectives, is a promise to future generations of **clean air, healthy environments, and rich environmental experiences**. The four goals that are most relevant for the port of Gothenburg are:

- Limited Climate Impact
- Clean Air
- Balanced Seas and Vibrant Coastlines
- Well-Planned Built Environment

UN



## Paris Agreement



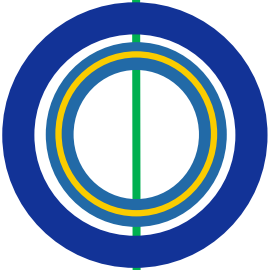
- By **2030** emissions are to be 40% lower than 1990
- By **2050** emissions are to reach net zero

EU



- Emissions from EU *Emissions Trading System* sectors are to be 62% lower than **2005**

## European Green Deal



- By **2030** emissions are to be 55% lower than 1990
- By **2050** emissions are to reach climate neutrality, stated in the *European Climate Law*

Sweden



- Zero net greenhouse gas emissions by latest **2045**. Negative net emissions after.



- The 16 environmental objectives

## National Environmental Quality Objectives



- By **2020** emissions are to be 40% lower than 1990
- By **2030** emissions are to be 63% lower than 1990
- By **2040** emissions are to be 75% lower than 1990



- 100 % renewable electricity production by **2040**

## Reduction of CO2 emissions

- Sweden's national environmental quality objectives and national targets establishes a clear strategy for reducing national CO2 emissions
- EU's emission cap under the *Emissions Trading System* creates incentives for shipping companies to reduce their CO2 emissions.
- UN's *Climate Action* goal provides a global framework for a worldwide reduction of CO2 emissions



## Renewable and alternative energy

- Sweden's goals feature quantifiable targets, such as achieving 100 % renewable electricity production by 2040
- The EU goals provide some specific guidance, emphasizing the need to accelerate the supply of renewable energy
- The UN goals primarily emphasize international efforts towards sustainable energy use, for example through goal 7, 9 and 13



## Sustainable port infrastructure

- Sweden's energy policy targets for more efficient energy use and electrification of port infrastructure
- EU's alternative fuel infrastructure enforces a green shore-side electricity supply to ships
- UN's Sustainable Development Goals 9 and 7 aim to make clean energy more accessible and endorses investments in sustainable infrastructure. Goal 14 targets the sustainable use of marine resources, technology and infrastructure.





# Gothenburg's climate goals

## Port of Gothenburg climate goals

## City of Gothenburg climate goals



### *Environmental goals*

- **2045:** Net Zero
- **2030:** Reduce CO2 by 80% (2020)
- **2030:** Introduction of a number of green shipping corridors

### *Initiatives/projects*

- Electric-powered cranes and machinery using fossil-free diesel or electricity
- Preparation of docks for supplying ships with shore power
- Fossil-free tugboat operations with synthetic diesel
- Up to 30% port fee discount for ships with good environmental index (CSI and ESI)
- Implementation of Port Activity App™ for time-efficient port calls and energy savings
- "Time Slot Gävle" queue system for eco-driving and emissions reduction
- Feasibility study for carbon dioxide management with potential to capture 110,000 tons of biogenic CO2 per year

### *Environmental goals*

- **2030:**
  - ▷ 7.6 % reduction of consumption-based emissions annually
  - ▷ Reduction of up to 1.1 tons of carbon dioxide equivalents annually
  - ▷ Reduction of emissions by 10.3 % annually
  - ▷ 90% reduction of greenhouse gas emissions and 25 % reduction in vehicle traffic (2017)
- **2025:** 100 % production of electricity using renewable energy

### *Initiatives/projects*

- Collaboration with Göteborg Energi AB for the production of electricity using renewable energy
- Initiatives for analyzing and assessing the city's purchasing, procurement, use and disposal of goods and services, and sustainable procurement
- Campaigns for using public transport, bicycles, e-scooters and reduce traffic on roads.
- Innovative collaboration with trade, industry and academia for developing technology to produce electricity using 100% renewable energy
- Driving the development of sustainable construction & circular economy around the city



# Five international cities



## Oslo, Norway

### Environmental goals

#### 2030:

- ▷ Reduce greenhouse gas emissions by 95% (1990)
- ▷ Total energy consumption reduced by 10% (2009)
- ▷ Vehicle traffic reduced by 1/3 (2015)
- ▷ All private cars on Oslo's roads will be emission-free
- ▷ All heavy transport will be emission-free or use sustainable renewable fuel
- ▷ Building and construction activities in Oslo will be emission-free
- ▷ Reduce food waste at the municipality of Oslo's own enterprises by 50%

**2028:** All public transport will be emission-free.

**2025:** All construction sites commissioned by the city of Oslo are to be zero emission.

### Initiatives/projects

#### Carbon Capture Facility

Under construction at the Klemetsrud waste incineration plant, which will capture 15% of Oslo's municipal emissions.

#### Promotion of Low-Emission Vehicles

Nearly 40% of heavy vehicles sold in Oslo in 2022 were electric or biogas vehicles, compared to 13% nationwide. Oslo offers toll exemptions for electric, hydrogen, and biogas vehicles.

#### Global Outreach

Through the C40 collaboration, 13 major cities, with assistance from Oslo, have worked on developing their own climate budgets. London became the second city after Oslo to present its climate budget in the fall of 2022. Climate budgets have now become an export from Oslo, as well as emissions-free construction sites.

## Copenhagen, Denmark

### Environmental goals

In **2009**, Copenhagen unveiled the **CPH 2025 Climate Plan** with the ambitious goal of becoming the world's first **carbon-neutral capital city by 2025**. The plan included four key pillars: energy consumption, energy production, green mobility, and city administration initiatives:

#### Energy Consumption

20% heat consumption reduction.  
20% electricity consumption reduction for commercial and service companies.  
10% electricity consumption reduction for households

#### Energy Production

Carbon-neutral district heating.  
Wind and biomass power generation surpassing Copenhagen's energy needs.  
Plastic separation system for waste.

#### Green Mobility

75% of journeys on foot, bike, or public transport.  
50% of work/education journeys by bike.  
Carbon neutrality of public transport.

#### City Administration

40% energy reduction in city administration buildings.  
Use of electricity, hydrogen, or biofuels for city administration vehicles.  
50% energy reduction for street lighting.

## Canberra, Australia

### Environmental goals

**2045:** Net Zero Emissions

**2040:** Zero-emission public transport system

**2030:** 80-90% of new vehicle sales to be zero emissions vehicles.

#### The plan to zero-emission public transport system:

1. Building the infrastructure we need
2. Procuring zero-emission buses
3. Partnering with the energy sector
4. New skills, protecting jobs and growing the economy
5. Increasing public transport use through better buses and a better service

### Initiatives/projects

#### From 2030

Prohibit the addition of new internal combustion engine vehicles to rideshare and taxi networks.

#### From 2035

There will be a phased-out approach to eliminate light internal combustion engine vehicles



## Wellington, New Zealand

### Environmental goals

- **2050:** Reduce the city's gross emissions to net zero
- **2030:** Reduce the city's gross emissions by 57%
- Support Wellington City in climate change adaptation

### Initiatives/projects

Provide clear information on what environmental action the government is taking and what citizens can do, encouraging action

### Transport

Investments in rapid transit and improving public transport and active transport

### Energy

Supporting electrification of the city and energy efficiency initiatives

### Numerous city-wide initiatives

E.g., sustainable food programs, collaboration with communities, and co-investing in environmental projects

Encouraging more stringent **climate policy** to drive transformational and behavioral change

### Resilience strategy:

Improving infrastructure, measuring emissions, and emissions breakdown strategy

## Amsterdam, The Netherlands

### Environmental goals

- **2050:**
  - ▷ Reduce the city's emissions by 95% (2017) and achieve net zero
  - ▷ Circular city, solar panels on all suitable roofs
  - ▷ Climate adaptable city
- **2040:**
  - ▷ Stop using natural gas
- **2030:**
  - ▷ Reduce the city's gross emissions by 55% (2017)
  - ▷ Emission-free city

### Initiatives/projects

Roadmap for climate neutral Amsterdam by 2050

### Transport

Investing in public transport and promoting electric vehicles

**Subsidies** for sustainable initiatives

### Renewable Energy

E.g., promoting wind and solar, and connecting more homes to heating networks

### Smart solutions

Heat networks and electrical grids



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