In 2018 Turku tightened its carbon neutrality targets significantly. The Turku City Council approved an ambitious Sustainable Energy and Climate Action Plan with a goal to reach carbon neutrality by the year 2029. This means an emissions reduction of 80 % from the level of 1990 and compensating for the remaining emissions. Two years after, where is Turku now on this pathway?

I am delighted to say that we are on the planned pathway in cutting emissions. As a city we have already **cut our emissions by half from the year 1990.**

This has happened by investing into:

- renewable energy production
- low-carbon transport system
- sustainable urban development
- circular economy transition
- strengthening carbon sinks

..just to mention few areas. And at the same time our economy has been growing steadily and these investments have created new jobs, which helped us being resilient to the COVID-19 crisis that affected us too during this spring. In Turku we see this crisis as a change to further redesign our economy in line with our climate targets.

The city of Turku has a very ambitious climate plan to be a carbon-neutral by the year 2029, but our climate ambition is not stopping here. After 2029 we will be climate positive area. This means that we will be storing more carbon than emitting.

(Example how to reach climate positivity)

This will be achieved by protecting existing carbon sinks in the city. In addition, we want to make sure in Turku that the emissions that cannot be avoided are compensated for.

Currently in the city of Turku we are working on creating a local compensation model that increases the amount of local carbon sinks.

We started developing a local compensation model where we want to combine:

- Carbon sinks of City of Turku (for example forests owned by the city)
- private landowners carbon sinks, so that private persons can take part too and benefit economically
- also to include projects that develop new technologies in storing carbon or projects that have other benefits such as improving the biodiversity
- and including also research into carbon sequestration innovations

By combining these previous fields we want to create a carbon business model where regional companies, stakeholders and communities can take part either by selling or buying local compensation or creating new innovations in storing carbon.

Again I would like to emphasize that cutting emissions is our priority, and only those emissions that cannot be avoided, should be compensated. This is a critical point and ambition we are consistently sharing with local stakeholders.

Thank you for the interesting example regarded to the climate positivity target. Currently, the city is working with ICLEI and local stakeholders to develop a Circular Turku roadmap. Can you please describe how the circular economy supports climate action in Turku?

We cannot reach carbon neutrality if we are not also resource wise. This means that the city is waste-free, emission-free and uses natural resources in a sustainable way. To reach these ambitious goals, we need to have circular economy transition that includes everyone in the city.

How we make and use products, and how we produce food generates almost half of the emissions in our current economic system. This is because the production of goods and infrastructures generates emissions all along the value chain. Circular economy is an efficient tool to address these hidden emissions because it targets the design of products and aims at reducing resource extraction.

Turku is the first city linking the circular economy to its climate plan to help address greenhouse gas emissions in a systemic manner and beyond its jurisdictional boundaries. **Circular economy helps us in reaching carbon neutrality and resource wisdom through 3 different pathways.**

1. **Firstly,** we have **supported** private sector circular economy **initiatives and innovations** to generate new business models that reduce demand for resource extraction. Industrial symbiosis is such new business model where companies can work together to identify synergies in production and create products from each other's untapped resources. Industrial symbiosis helps **to close resource loops across value chains.**

   ➔ **Example:** As part of the Clean Turku Initiative, In Smart Chemistry Park in Turku region various companies reuse industrial waste streams of each other, which companies can access from the surrounding industrial zone.
   ➔ **Example:** Topinpuisto Circular Park is creating new innovative ways to refine textile waste into new raw material.

2. **Secondly,** we have created **new clean sources of energy from waste.**

   ➔ **Example:** Turku region's waste water treatment plant Kakola recovers energy from sludge and extracts thermal energy from the wastewater to produce heat for district heating for 15.000 households

3. **Thirdly,** circular economy is an effective way of **protecting natural carbon sinks**. By preventing waste and pollutants to enter ecosystems, the circular economy protects their ability to act as carbon sinks.

   ➔ **Example:** Kakola waste water treatment plant nutrients cycling activities have decreased nutrient pollution in the surrounding marine area. Nutrients recovery practices have led to an 83 percent decrease in phosphorus load in the Turku marine area.

These circular economy pathways that I just mentioned, are linked to infrastructures and services that the city is able to directly influence or support. However, changes in consumption patterns and lifestyles are also crucial in order to reach our climate targets.

In Finland, the challenge is that lifestyles carbon footprints will have to become about 10 times smaller by 2050 to meet the climate targets. And for this we need to involve everyone in the city to implement climate friendly lifestyle.

This is why in the future we will focus more on involving local businesses, stakeholders, citizens and communities in climate action and circular economy work. We believe that that everyone should be engaged in creating a climate-neutral Turku.

So as a last point I would like to give you a heads 'up for an international campaign that the city of Turku will launch at ICLEI's Daring Cities 2020 virtual meeting in this autumn. "The 1.5 degree livestyles" campaign will encourage residents to consider the climate impacts of their lifestyles and to share the best ways to live more sustainably. Our campaign vision is to produce innovative and empowering climate communications material through creativity for the global climate community.