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FINLAND**

**Greener Together: China-Nordic Dialogue on Carbon Neutrality**



# **HOW EUROPEAN POLICIES ON CARBON EMISSIONS AND RELATED ACTIONS SHAPE AND INFLUENCE HEADQUARTER STRATEGIES**

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# Explaining the European Approach

**Green Deal?**

**Fit For 55?**

**Twin Transition?**

**Climate vs. Carbon  
Neutrality?**

**NextGenerationEU?**

**Horizon  
Europe?**



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**EUROPEAN GREEN DEAL AND FIT FOR 55**

**DIGITAL AND TWIN TRANSITIONS**

**EXAMPLE: CLIMATE NEUTRAL FINLAND**

**NEXTGENERATIONEU AND HORIZON EUROPE**

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**NEXTGENERATIONEU AND HORIZON EUROPE**

- ❑ The EU has pledged to achieve **climate neutrality by 2050**, delivering on its commitments under the international Paris Agreement.
- ❑ The **European Green Deal** is the EU's strategy for reaching its 2050 climate goal.
- ❑ The European Green Deal is a package of **policy initiatives**, which aims to set the EU on the path to a green transition, with the ultimate goal of reaching climate neutrality by 2050.
- ❑ It supports the transformation of the EU into a **fair and prosperous society** with a **modern and competitive economy**.
- ❑ The European Green Deal was launched by the Commission in **December 2019** and the European Council noted it during its December meeting.



Brussels, 11.12.2019  
COM(2019) 640 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN  
ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE  
REGIONS

The European Green Deal

# EUROPEAN GREEN DEAL

20  
50

# Climate Neutrality vs. Carbon Neutrality

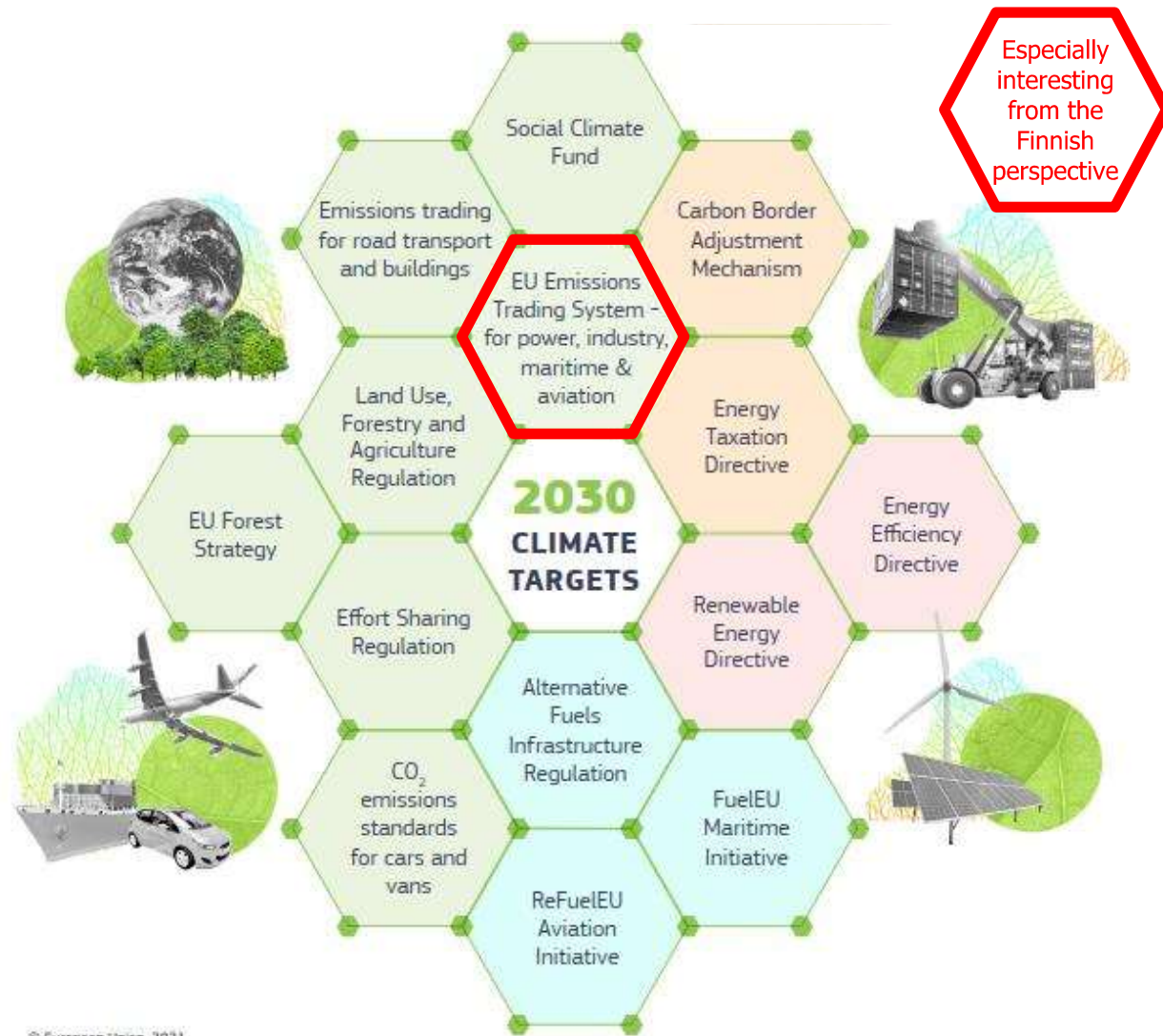
- ❑ **Climate neutrality** refers to the idea of achieving net zero greenhouse gas emissions – **not only carbon dioxide** – by balancing those emissions, so they are equal (or less than) the emissions that get removed through the planet's natural absorption.
- ❑ A **carbon dioxide equivalent** or **CO2 equivalent**, abbreviated as **CO2-eq**, is a metric measure used to compare the emissions from various greenhouse gases (such as carbon dioxide, methane and nitrous oxide, as well as hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride) on the basis of their **global-warming potential (GWP)** by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.



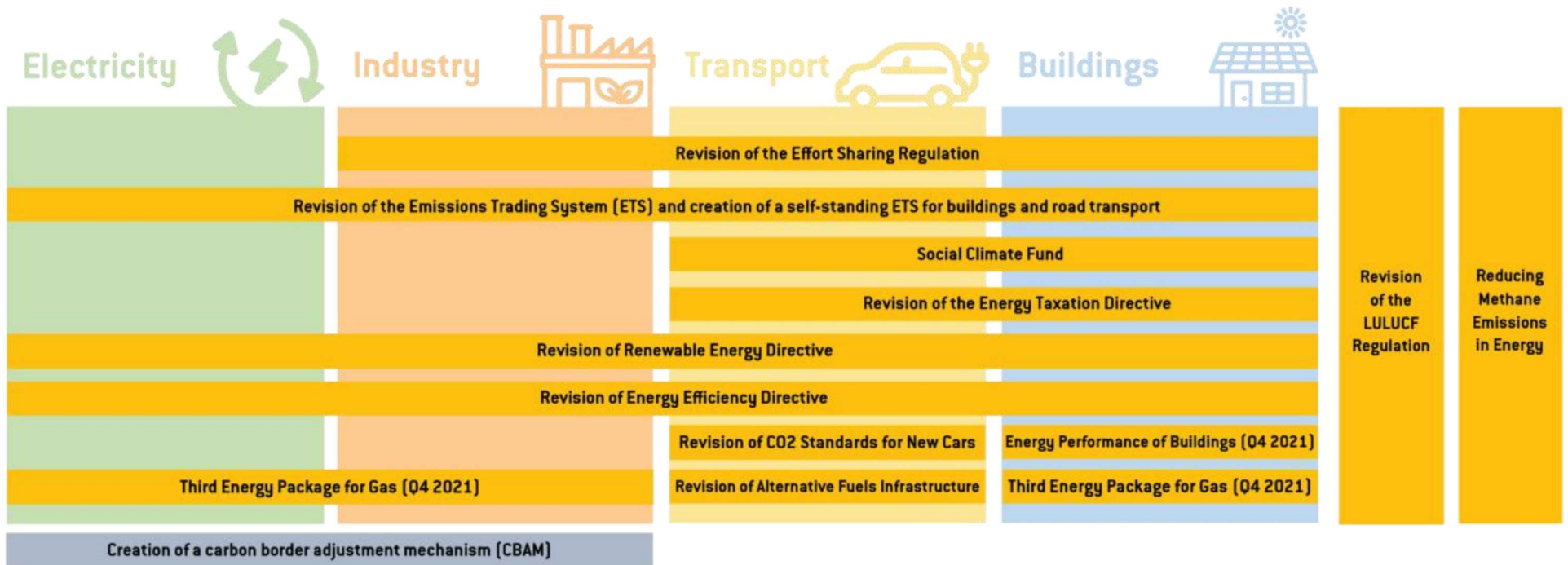
# DELIVERING THE EUROPEAN GREEN DEAL

## THE DECISIVE DECADE

- ❑ The EU will **reduce its net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels**, as agreed in the EU Climate Law.
- ❑ On 14 July 2021, the Commission presented the '**Fit for 55**' legislative package to deliver these targets and make the European Green Deal a reality.



## 'Fit for 55' is a Huge Package



**Source: Bruegel**

# Energy Efficiency Directive



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**NEXTGENERATIONEU AND HORIZON EUROPE**

5G

AR/VR

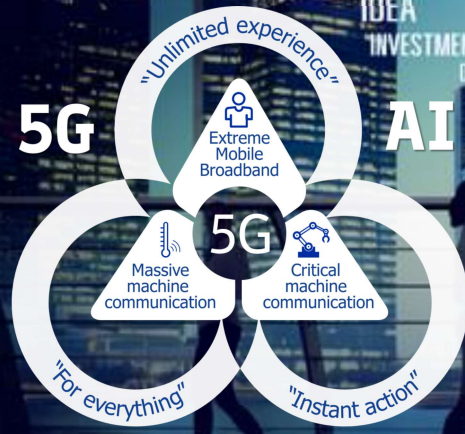
NETWORK

VISION

AI

GROWTH

6G



ROBOTICS

ROBOTICS



Source: Internet

# DIGITAL TRANSITION

- ❑ The digital transition should work for all, **putting people first** and **opening new opportunities for business**. Digital solutions are also key to **fighting climate change** and **achieving the green transition**.
- ❑ Especially, it should
  - ✓ open up new opportunities for businesses
  - ✓ encourage the development of trustworthy technology
  - ✓ foster an open and democratic society
  - ✓ enable a vibrant and sustainable economy
  - ✓ help fight climate change and achieve the green transition



**Green Deal  
Sustainability**



**TWIN  
TRANSITION**



**Digitalisation  
Smartness**

<https://www.digitaleurope.org/resources/digital-action-climate-action-8-ideas-to-accelerate-the-twin-transition>

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**EXAMPLE: CLIMATE NEUTRAL FINLAND**

**NEXTGENERATIONEU AND HORIZON EUROPE**



Location: **Northern Europe**

Population: **5,5 million**

Area: **338,424 km<sup>2</sup> (~Japan)**

Forest: **~73%**

Lakes: **~188,000**

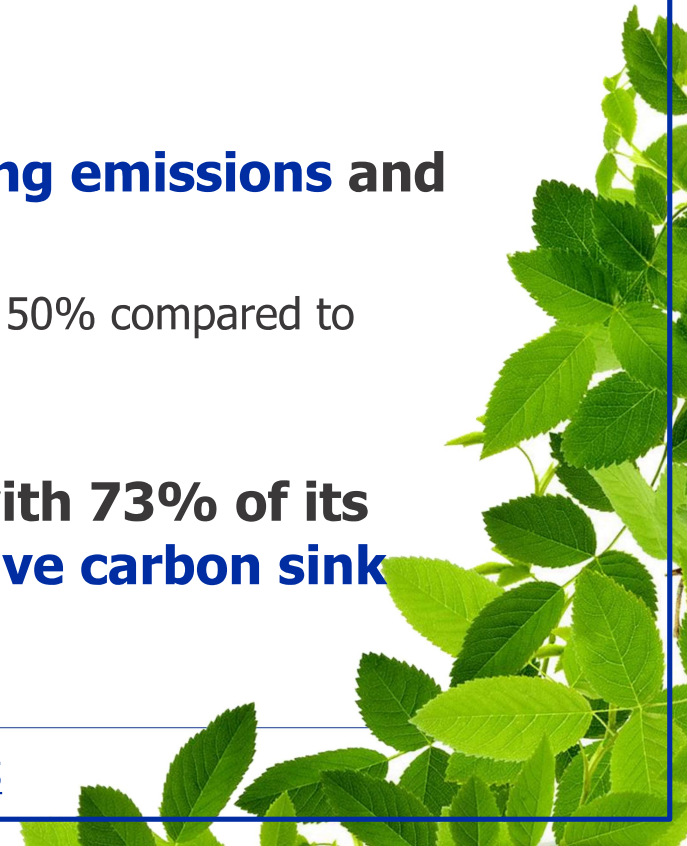
Islands: **~179,000**

Largest city: **Helsinki 642,045**

**Finland is more ambitious than EU:  
Climate Neutral Finland  
already by 2035**

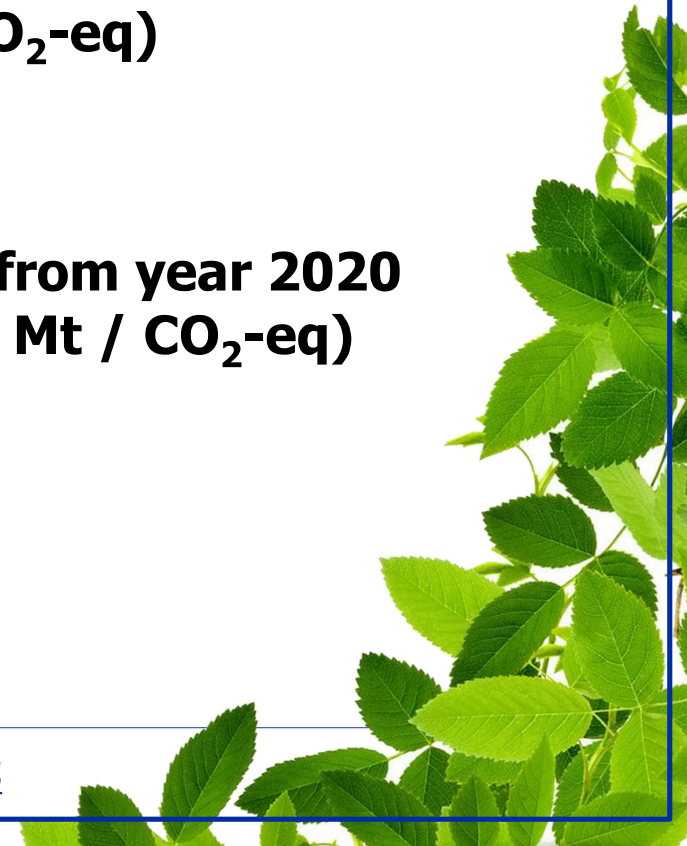
# Climate Neutral Finland by 2035 | Facts

- Finland aims to be **climate neutral by 2035** and the first fossil-free advanced economy
- Finland will achieve the target by **sharply reducing emissions** and **strengthening the carbon sinks**
  - Finland needs to cut the greenhouse gas emissions by around 50% compared to current levels and grow the carbon sinks by roughly 20%
- Finland is the **most forested country** in Europe with 73% of its land area covered by forests – they form a **massive carbon sink**
  - Finland has a major asset in reaching the climate targets

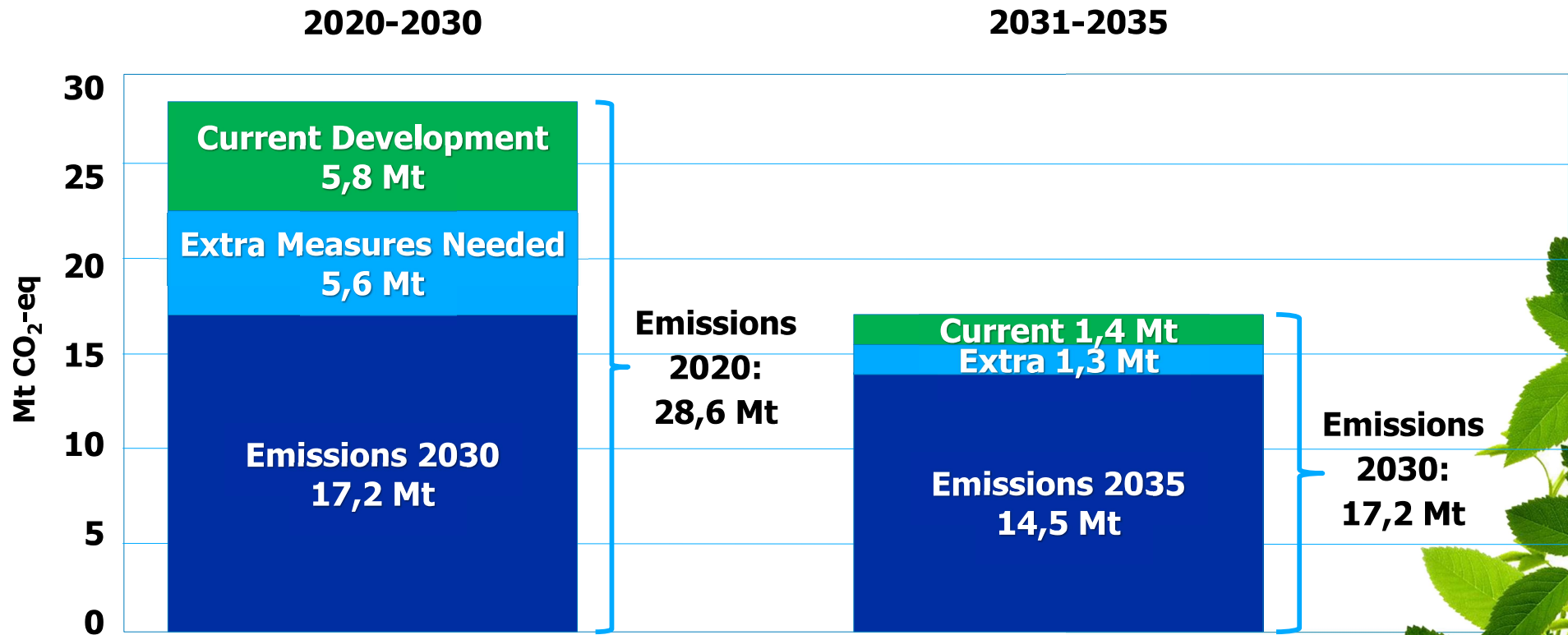


# Climate Neutral Finland by 2035 | KPIs

- **Target 2030:** Reduce greenhouse gas emissions from year 2005 level (34,4 Mt / CO<sub>2</sub>-eq) by 50% (to 17,2 Mt / CO<sub>2</sub>-eq)
  - Nearly Climate Neutral Finland
- **Target 2035:** Reduce greenhouse gas emissions from year 2020 level (28,6 Mt / CO<sub>2</sub>-eq) by almost 50% (to 14,5 Mt / CO<sub>2</sub>-eq)
  - Climate Neutral Finland
- **After 2035:**
  - Climate Negative Finland

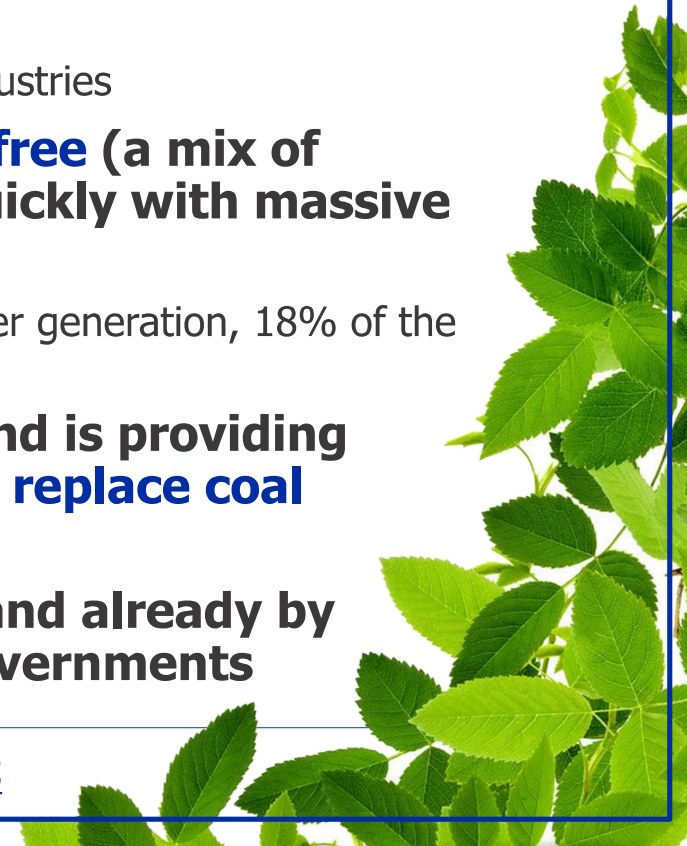


# Medium Term Climate Plan | Targets



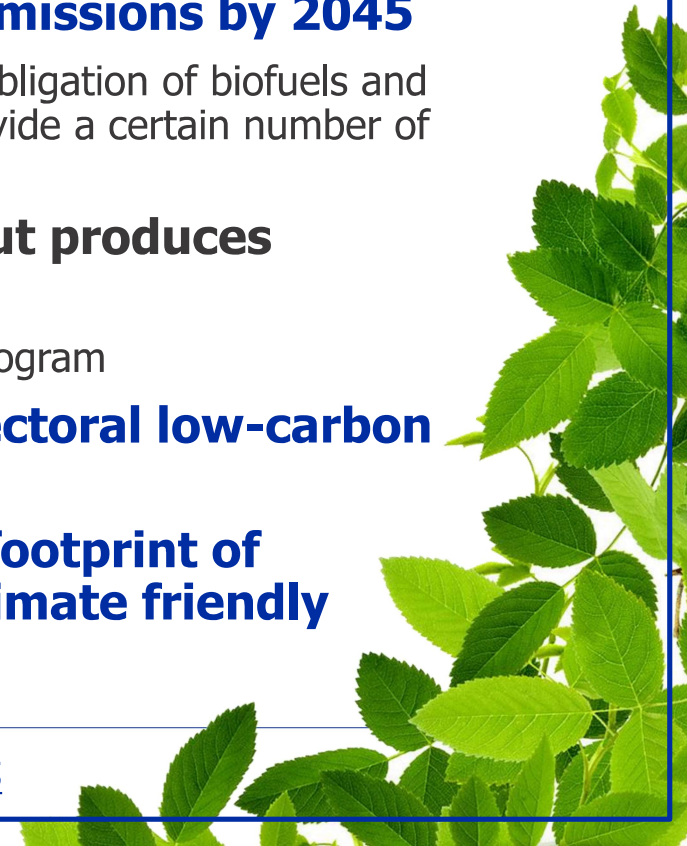
# Climate Neutral Finland by 2035 | Energy

- **Majority (~72%) of our greenhouse gas emissions come from energy sector**
  - This is due to cold climate, long distances and energy intensive industries
- **Finnish power generation is already 85% emissions-free (a mix of nuclear and renewables) and the share is growing quickly with massive wind capacity production**
  - Nuclear remains an important part of the energy mix (34% of power generation, 18% of the total energy consumption) and it is on increase
- **Finland has banned the energy use of coal by 2029 and is providing energy companies with incentives for investments to replace coal already by 2025**
- **The use of oil in heating will be phased out by 2030 and already by 2024 in properties owned by the central and local governments**



# Climate Neutral Finland by 2035 | Other

- **The transport sector accounts for one fifth of all our emissions – Finland will halve these emissions by 2030 and target zero-emissions by 2045**
  - First set of measures include for example increasing the blending obligation of biofuels and requiring petrol station chains as well as housing complexes to provide a certain number of charging points for electric cars
- **Land use sector in Finland is in total a carbon sink, but produces emissions as well**
  - The government is developing a comprehensive sectoral climate program
- **Public and private sector have developed together sectoral low-carbon roadmaps for energy-intensive and other industries**
- **Other major targets are the reduction of the carbon footprint of construction, promoting a circular economy, and a climate friendly food policy**



# Medium Term Climate Plan | Status and Actions

| Emission source           | 2005 (Mt) | 2019 (Mt) | 2020 (Mt)   | 05-20 (Mt) | 05-20 (%) | 2030 (Mt)      | 2035 (Mt)      |
|---------------------------|-----------|-----------|-------------|------------|-----------|----------------|----------------|
| Traffic                   | 12,6      | 11,1      | <b>10,4</b> | -2,2       | -18       | <b>-1,3</b>    | <b>-0,9</b>    |
| Agriculture               | 6,5       | 6,6       | <b>6,6</b>  | 0,1        | 1         | <b>-0,4</b>    | <b>-0,1</b>    |
| Building heating          | 4,0       | 2,4       | <b>2,2</b>  | -1,8       | -45       | <b>-0,7</b>    |                |
| Working machinery         | 2,6       | 2,4       | <b>2,4</b>  | -0,2       | -7        | <b>-0,5</b>    |                |
| Waste management          | 2,8       | 2,5       | <b>2,4</b>  | -0,4       | -15       | <b>-0,1</b>    |                |
| F-gases                   | 1,2       | 1,2       | <b>1,1</b>  | -0,1       | -4        | <b>-0,3</b>    | <b>-0,1</b>    |
| Industry                  | 1,7       | 1,2       | <b>1,2</b>  | -0,5       | -28       | <b>-0,7</b>    | <b>-0,1</b>    |
| Other emissions           | 2,7       | 2,3       | <b>2,3</b>  | -0,5       | -17       |                |                |
| Municipality actions      |           |           |             |            |           | <b>-0,2</b>    | <b>-0,1</b>    |
| Consumer actions          |           |           |             |            |           | <b>-0,2</b>    | <b>-0,1</b>    |
| On-off flexibility        |           |           |             |            |           | <b>-0,7</b>    |                |
| LULUCF flexibility        |           |           |             |            |           | <b>-0,4</b>    |                |
| Impact of current actions |           |           |             |            |           |                | <b>-1,4</b>    |
| Total                     | 34,2      | 29,6      | <b>28,6</b> | -5,6       | -16       | <b>5,5 (*)</b> | <b>2,8 (*)</b> |

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**NEXTGENERATIONEU AND HORIZON EUROPE**

# Recovery Plan for Europe | NextGenerationEU

- **The largest stimulus package ever**

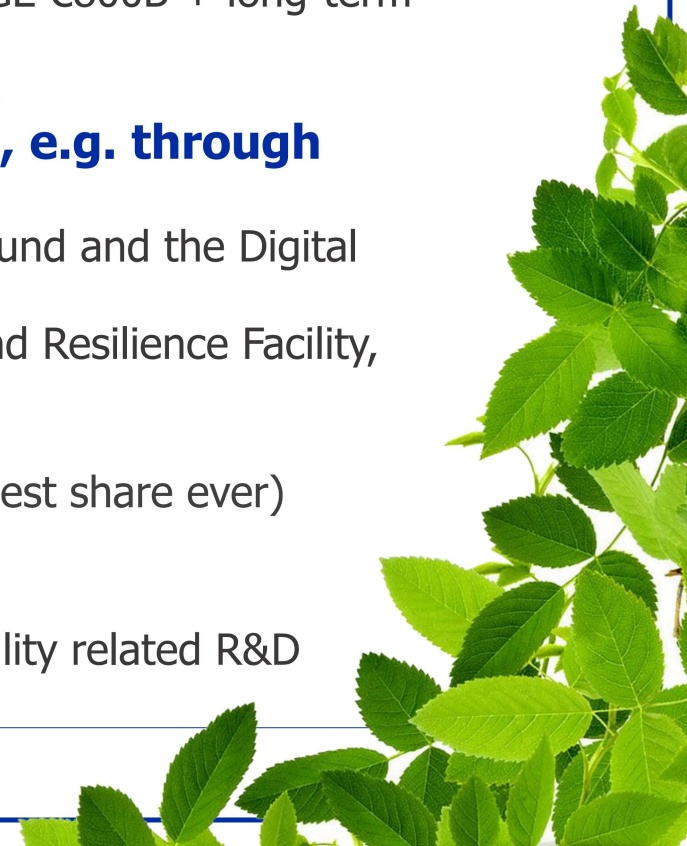
- Over **€2 trillion** to help rebuilding a post-COVID-19 Europe (NGE €800B + long-term EU budget €1200B)
- It will be a **greener, more digital** and **more resilient** Europe

- **Over 50% of the package is supporting modernization, e.g. through**

- **research and innovation**, via Horizon Europe
- **fair climate and digital transitions**, via the Just Transition Fund and the Digital Europe Programme
- **preparedness, recovery and resilience**, via the Recovery and Resilience Facility, rescEU and a new health programme, EU4Health
- **modernising traditional policies**
- **fighting climate change**, with 30% of the EU funds (the highest share ever)
- **biodiversity protection** and **gender equality**

- **E.g. in Finland (out of around €3B of NGE funding)**

- ~400 Meur of EU **Rescue Recovery Funding** (RRF) for sustainability related R&D



# Horizon Europe 2021-2027: Vision

- The new European Programme for research and innovation, **Horizon Europe**, aims at contributing to fulfil the priorities of the European Commission.
- They define headline **ambitions** and **vision** for a Europe that strives for more:
  - 1) a European **Green Deal**,
  - 2) an **economy** that works for **people**,
  - 3) a Europe fit for the **digital age**,
  - 4) promoting the European **way of life**,
  - 5) a **stronger** Europe in the world, and
  - 6) a new push for European **democracy**.

**Green Deal and Digitalisation**  
→ **Twin Transition**



# Four Key Strategic Orientations

**EU to lead  
the  
development  
of new  
technologies**

Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains to accelerate and steer the digital and green transitions through human-centred technologies and innovations



**Digitally  
enabled  
circular,  
climate  
neutral,  
sustainable**

Making Europe the first digitally enabled circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems



Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources to ensure food security and a clean and healthy environment



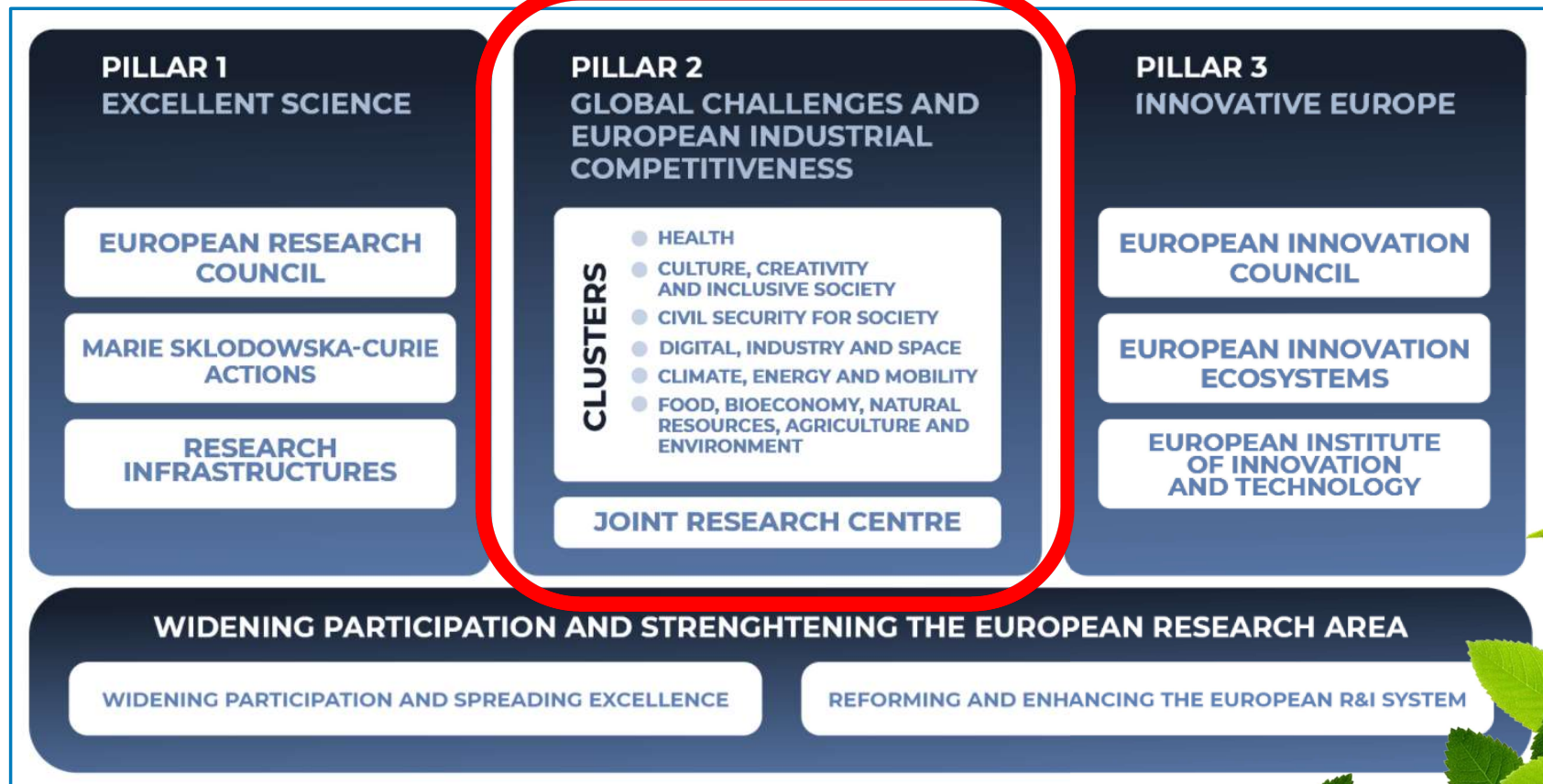
**Biodiversity,  
natural  
resources,  
food,  
environment**

Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions



**More  
resilient,  
inclusive,  
democratic**

# Horizon Europe 2021-2027: Structure



# Horizon Europe 2021-2027: Funding

# €95.5 billion

- Horizon Europe intends to boost Europe's scientific global leadership, excellent science and breakthrough innovation, whilst addressing the societal challenges that matter the most to all, such as **fight against cancer**, adaptation to **climate change**, **greener cities**, **healthy food and soil**, **protection of oceans, seas and waters** (=missions).



# BUSINESS FINLAND

# THANK YOU! 谢谢!



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