



GLOBAL MONITORING OF POLICIES FOR DECARBONISING BUILDINGS: *A MULTI-LEVEL APPROACH*

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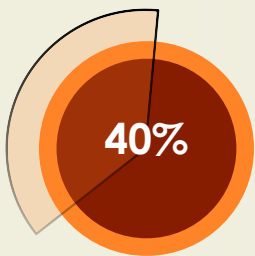
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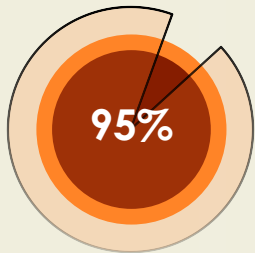
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Why decarbonise homes?

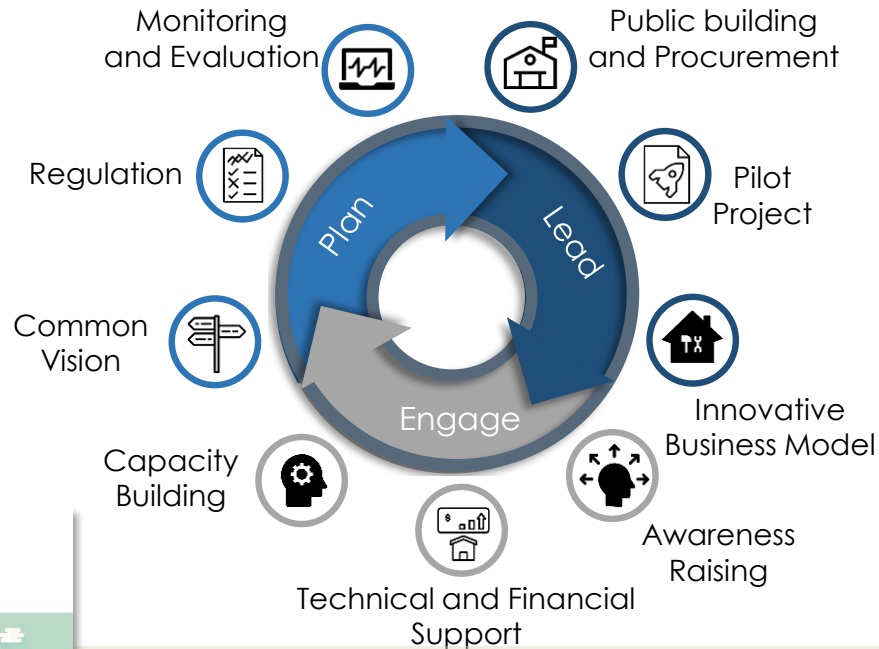
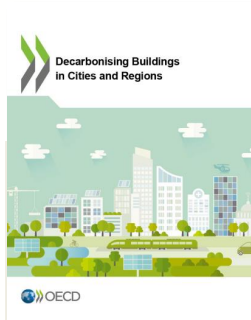
Global Context



Buildings and construction account for nearly 40% of global energy-related CO2 emissions



85% to 95% of today's buildings will still be standing in 2050.(EU)



“Decarbonising Buildings in Cities and Regions”

Synthesis report March 2022

01 A momentum to decarbonise buildings

Opportunity

Megatrends

Urbanisation

Climate Change

Digitalisation

Demographic change

COVID Recovery

Supra-national level

(EU) Renovation
Wave Strategy

National level

(EU) National
Recovery and
Resilience Plans

Subnational level

Local recovery
plans

Energy crisis

Supra-national level

(EU) REPowerEU,
EPBD new revision

National level

Fiscal support energy
bill, insulation, heat
pumps programme

Subnational level

Energy coach to
reduce energy
demand

Co-benefits of Decarbonising buildings



Improve health

For every 1 USD energy saved, + 0.77 USD in health and climate co-benefits ([Macnaughton, et al, 2018](#))



Reduce energy bills

Retrofits can cut 58 to 79% of energy use ([ACEEE, 2021](#))

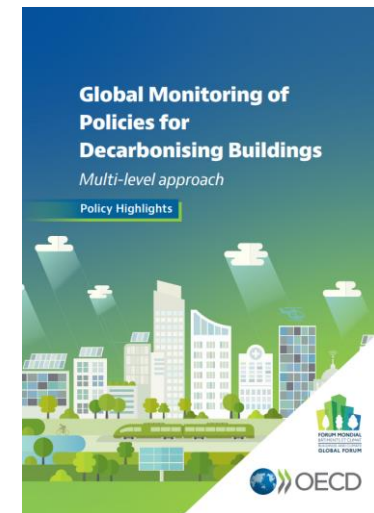


Create green jobs

9 to 30 jobs/1M USD investment ([IEA, 2020](#))

Building Momentum Globally: The Chaillot Declaration

Buildings and Climate Global Forum (7-8th March 2024)



OECD Global Survey on Buildings and Climate (2024)

28

countries
participating
in the survey



Policy Highlights
&
28 Country
profiles

Europe

BELGIUM GERMANY ITALY NORWAY SWEDEN
FINLAND GREECE LITHUANIA POLAND SWITZERLAND
FRANCE ICE LAND NETHERLANDS SPAIN UNITED KINGDOM

America

BRAZIL
CANADA
COLOMBIA
COSTA RICA
MEXICO
USA

Africa

IVORY COAST

Middle East

ISRAEL

Asia

JAPAN
KOREA
PHILIPPINES
SINGAPORE
THAILAND



Thematic areas of the survey

Basic data
(building stock,
energy/emission)

**Goals and
strategies**

**Financial
incentives**

**Information
and training**

Standards & Regulation

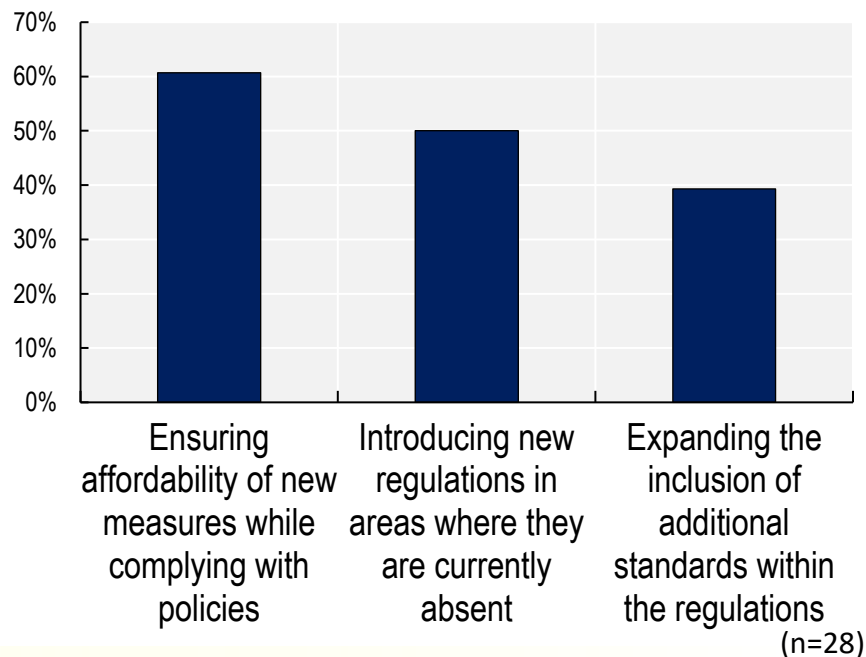
**Climate
resilience**

**Multi-level
governance**

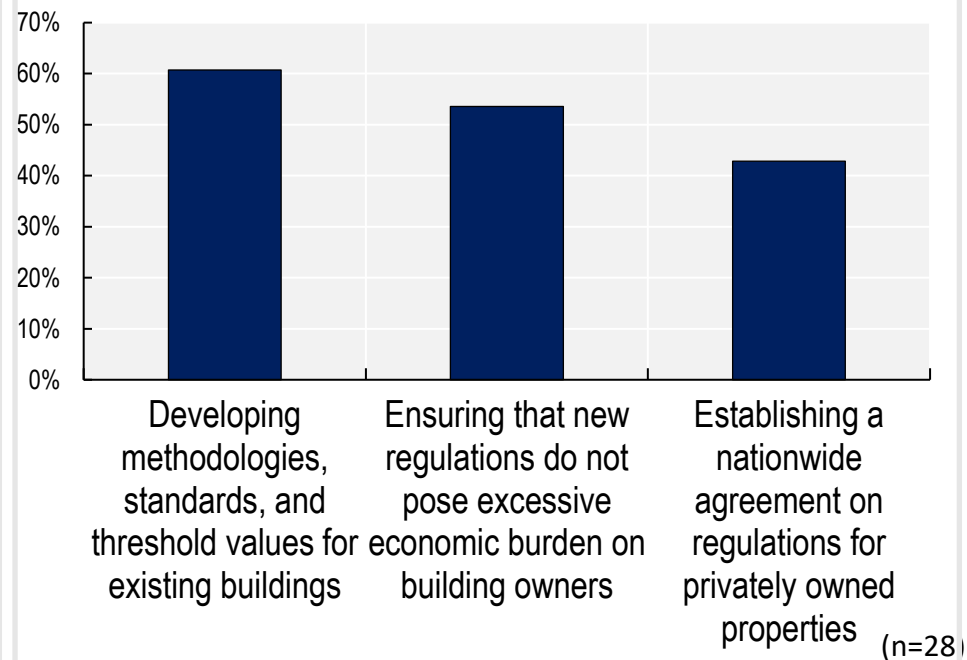
3-1

Challenges in regulatory measures

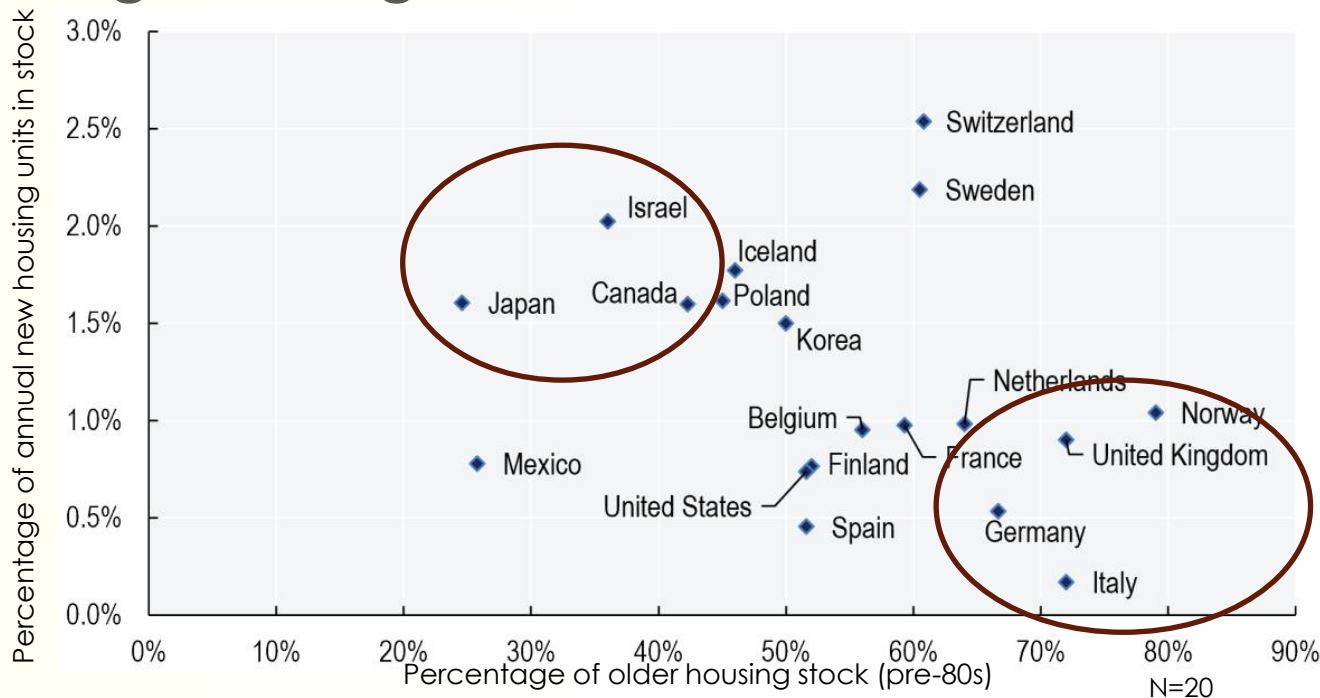
Top 3 challenges for new buildings



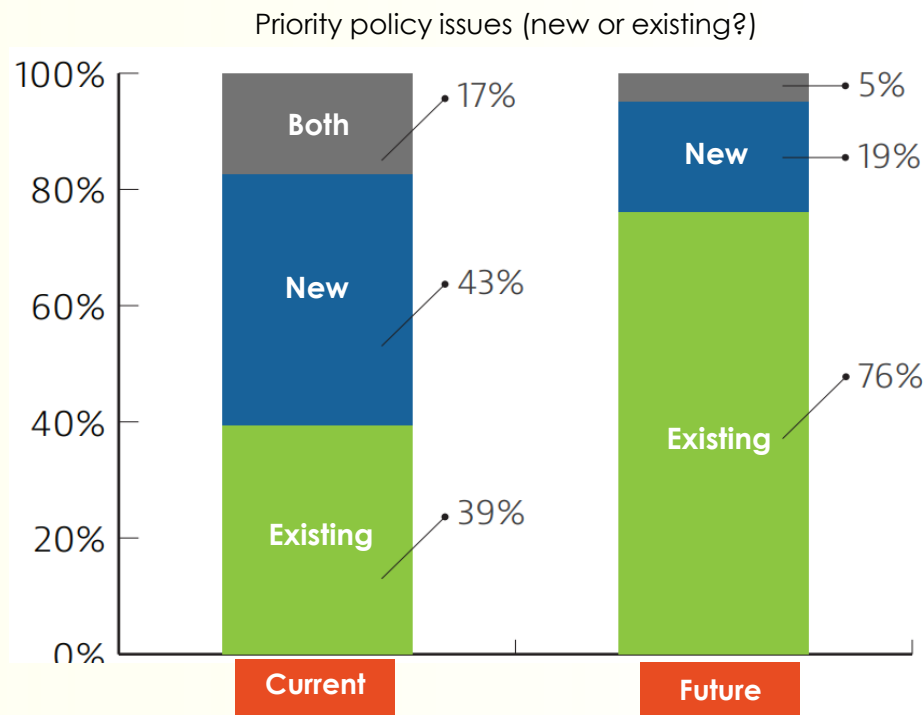
Top 3 challenges for existing buildings



3-2 Currently, countries such as Japan and Israel focus on new buildings while European countries focus on existing buildings



3-2 Most countries will prioritise existing buildings in the future



Countries that indicated that their **priorities are shifting** from **current new construction** to **existing buildings in the future**.

- ✓ Japan
- ✓ Thailand
- ✓ Singapore
- ✓ Philippines
- ✓ Canada
- ✓ Costa Rica
- ✓ Colombia
- ✓ Costa Rica
- ✓ Spain
- ✓ Belgium
- ✓ Lithuania
- ✓ Israel

Existing buildings are a priority for many European countries, both now and in the future.

3-3 Currently, countries are focusing on energy efficiency/ operational carbon according to their climate

Current priorities

Heating

Belgium, Canada, Finland, France, Germany, Iceland, Italy, Lithuania, Netherlands, Norway, Philippines, Poland, Sweden, Switzerland, United Kingdom, United States

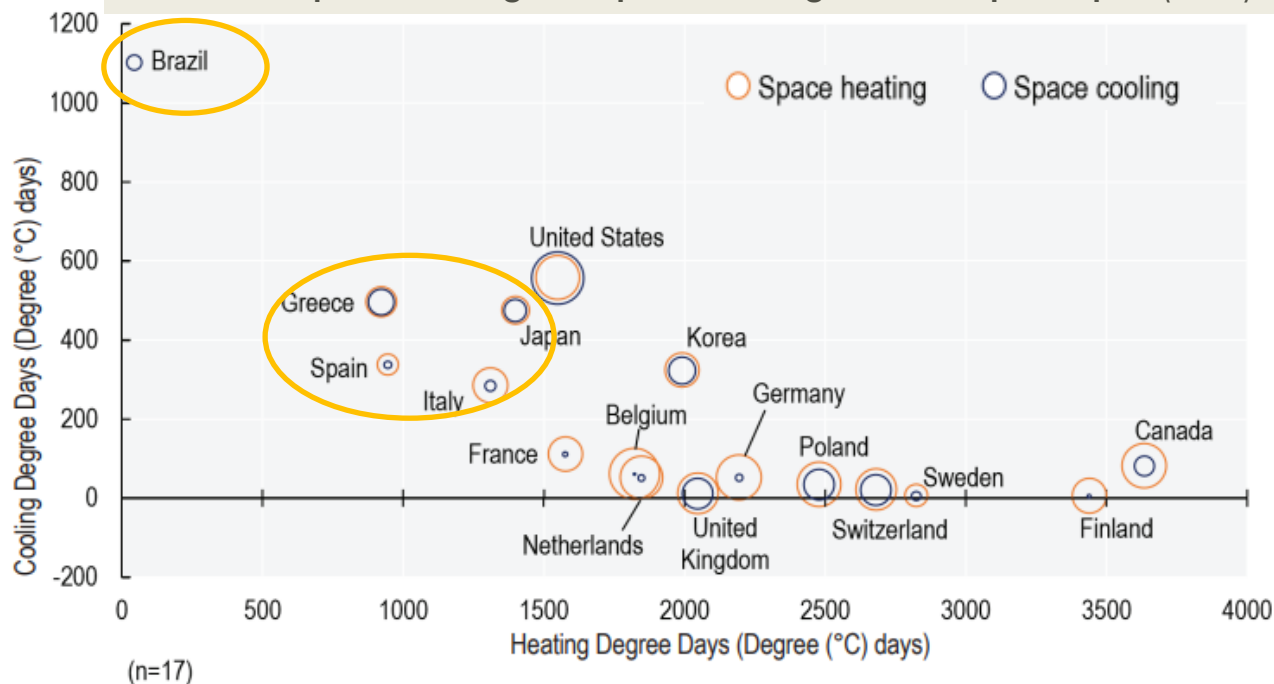
Heating & cooling

Japan, Colombia, Greece, Korea, Spain

Cooling

Brazil, Costa Rica, Cote d'Ivoire, Israel, Mexico, Thailand, Singapore

Residential space heating and space cooling emissions per capita (2021)

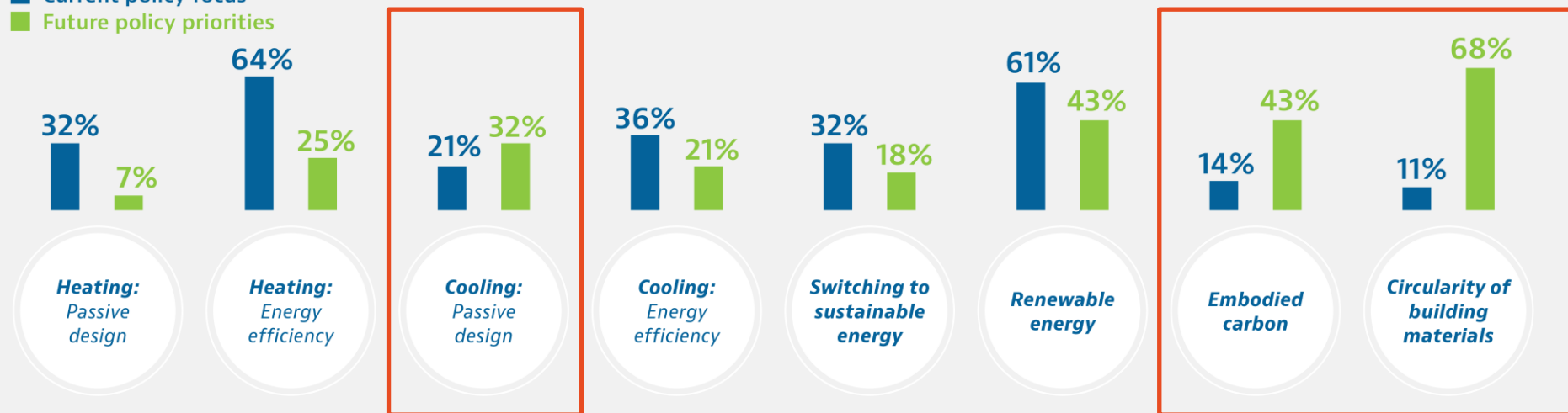


3-3 Embodied carbon & circularity will be the common priority in the future

Shift of policy priorities

■ Current policy focus

■ Future policy priorities



3-3 Governments are developing whole life carbon policies step by step

53%

Assessment methodology

43%

National database of EPD

25%

Mandatory declaration

11%

Limit value

Whole-life carbon policies

Source: OECD Global Survey on Buildings and Climate (2024)

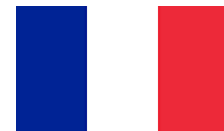
Note: n=28

Table 2. Incremental measures for whole-life carbon

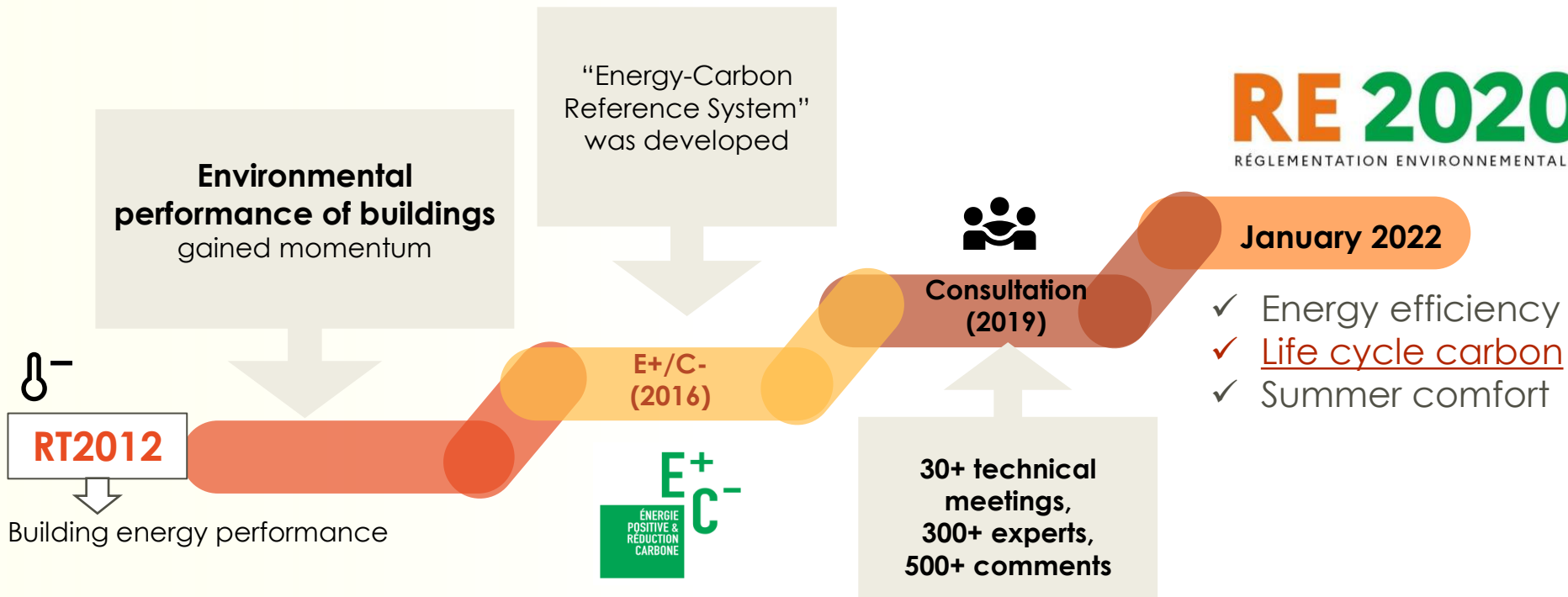
LCA methodology	LCA database	Mandatory declaration	Limit value
Costa Rica, Finland, France, Germany, Israel Italy, Japan, the Netherlands, Norway, the Philippines, Poland, Singapore, Sweden, Switzerland, Thailand	Brazil, Costa Rica, Finland, France, Germany, Japan, the Netherlands, the Philippines, Poland, Sweden, Switzerland, Thailand, the United States	Finland, France, Italy, the Netherlands, Norway, Sweden	Finland, France, the Netherlands

Source: OECD Global Survey on Buildings and Climate (2024)

France refined energy and environment performance assessment methodology step-by-step



RE 2020
RÉGLEMENTATION ENVIRONNEMENTALE



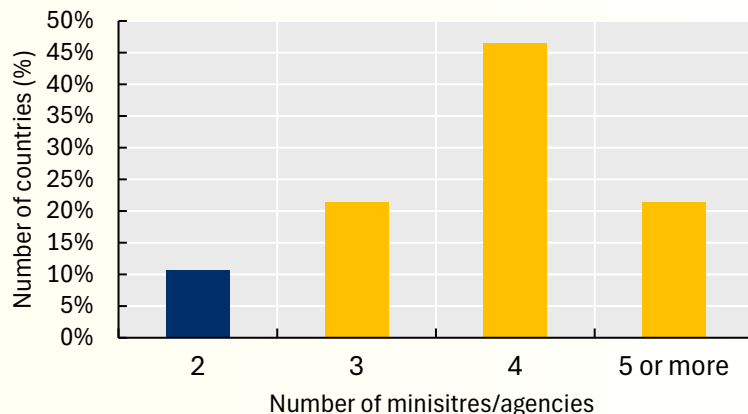
Sweden targeted reducing upfront carbon to bring immediate impact



	2 0 2 2	2 0 2 5 (TBC)	2 0 2 7
Declaration	A1~A5 (Upfront carbon) Product and construction		A1~A 5 <u>B2, B4, B6 (Use stage)</u> <u>C1~C4 (End of life stage)</u>
Limit Value	none	<u>A 1 ~A 5 (Upfront carbon)</u>	A 1 ~A 5 (Upfront carbon)
Building elements	Load-bearing structures, Building envelope, Interior walls	Load-bearing structures, Building envelope, Interior walls, <u>Installations, Interior surface finishes, Room fittings</u>	Load-bearing structures, Building envelope, Interior walls, Installations, Interior surface finishes, Room fittings

3-4 Multi-level governance challenges

Number of ministries responsible for decarbonising buildings

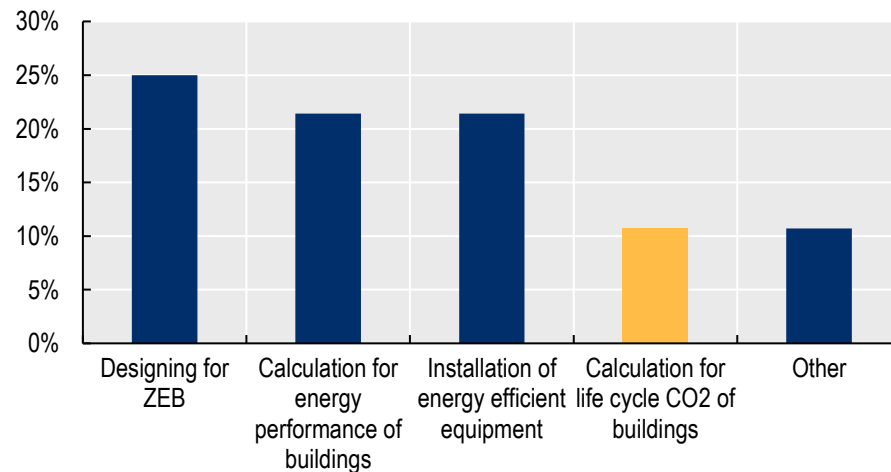


Source: OECD Global Survey on Buildings and Climate (2024)

Note: n=28

93% of responding countries have **at least 3 ministries** involved in decarbonising buildings

Countries having government funding programmes to train skills for SMEs



Only 11% of responding countries are providing **training programme for SMEs on Life Cycle Assessment (LCA)**

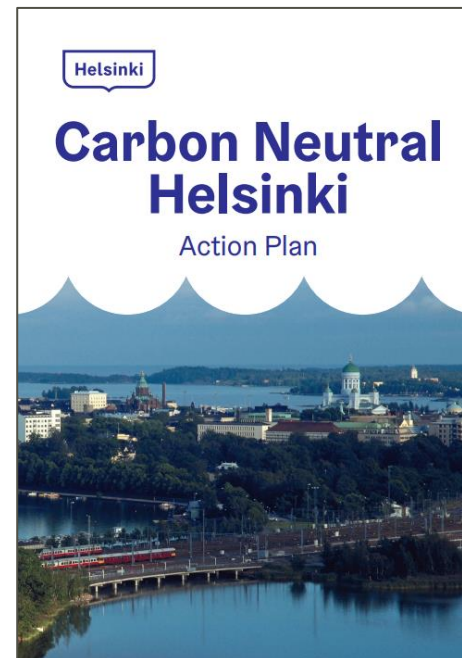
3-4 Helsinki (Finland) leverages national calculation method in CO2 footprint limits for new construction

1 **City-level carbon limit value**
New construction must meet a carbon emissions limit of 16.0 kg CO₂ e/m²/year over 50 years, affecting plot draws and allocations

2 **Ambitious local actions**
2 years ahead of the national 2025 plan

3 **Utilising national resources & expertise**
Helsinki uses **the carbon calculation methodology developed by the national government**, demonstrating its effectiveness and applicability

Source: Carbon footprint limit value, City of Helsinki
<https://www.hel.fi/en/urban-environment-and-traffic/plots-and-building-permits/applying-for-a-building-permit/carbon-footprint-limit-value>



Thank you

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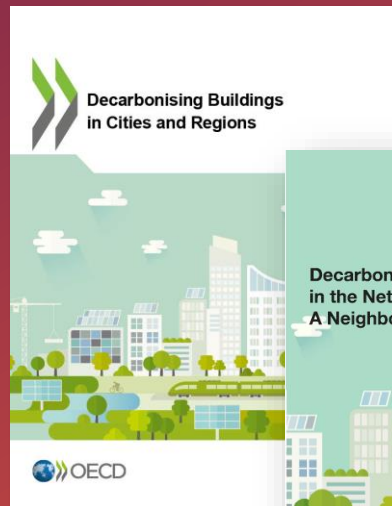
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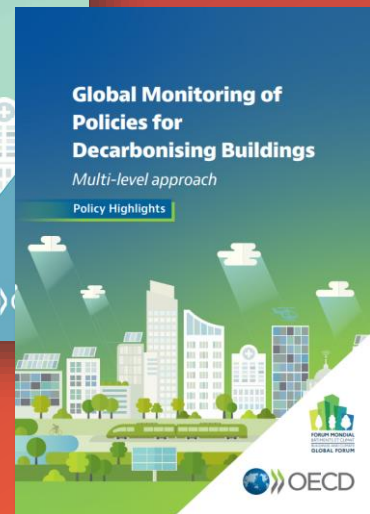
2022



2023



2024



Decarbonising Buildings in Cities and Regions