

# Environmental indicators for monitoring the Swedish construction and real estate management sector

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Organisers:



International Co-owners:



# A new monitoring system

- Environmental indicators that show environmental impact from the construction and real estate management sector year by year at national level
- Environmental impacts from the production of roads and railways are reported separately
- Developed by Royal Institute of Technology and Statistics Sweden
- Based on the environmental and national accounts at Statistics Sweden
- Annual updates since 2015
- Open data

**Boverket shall:** Specifically build up and disseminate knowledge about the sector's environmental impact and development



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Sustainable Buildings and Climate Initiative  
Promoting Policies and Practices for Sustainability



Global Alliance  
for Buildings and  
Construction

# Follow-up of environmental quality objectives

## Seven environmental indicators:

- Emissions to air of greenhouse gases
- Emissions to air of NO<sub>x</sub>
- Emissions to air of particles
- Energy use (fossil, renewable, nuclear power)
- Use of chemical products hazardous to health and environment
- Waste



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# Environmental indicators for the construction and real estate management sector

- Method development in three reports 2009-2014

## Method:

- Environment-expanded input-output analysis (IOA)
- Two scientific publications
- The environmental indicators are available at [www.boverket.se](http://www.boverket.se)



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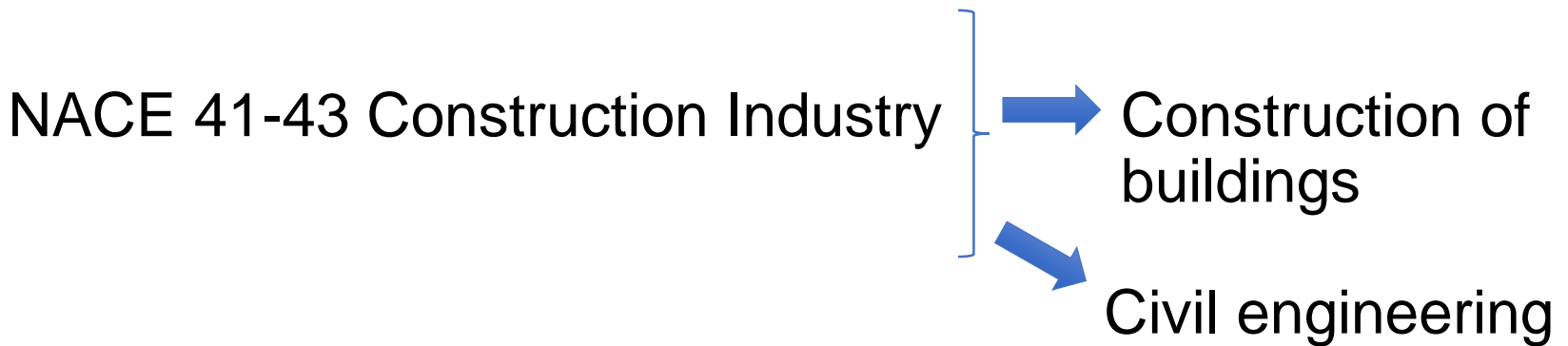
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# Definition of the construction and real estate management sector

Industries according to the Environmental Accounts 2007:



NACE 68 Real Estate Management



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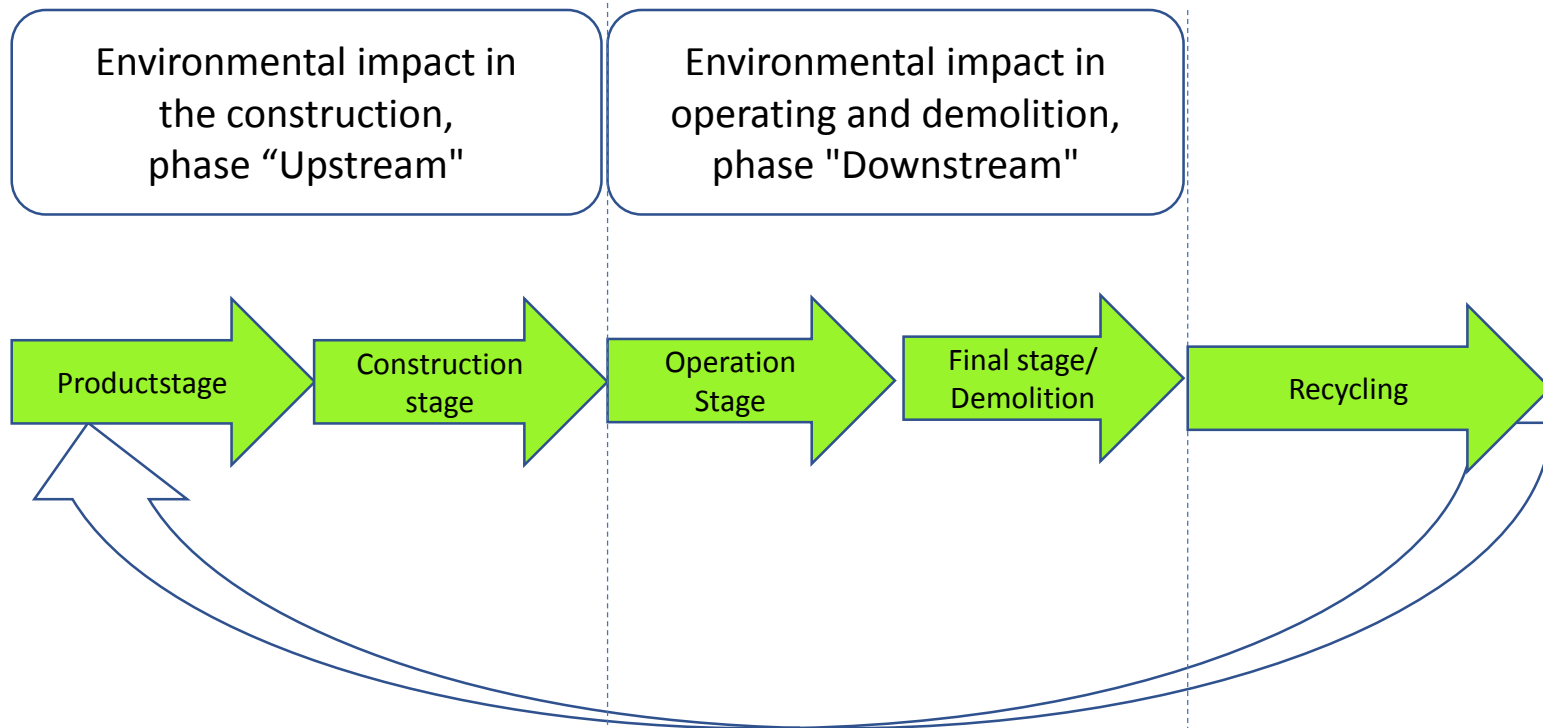


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# Life cycle perspective defined as



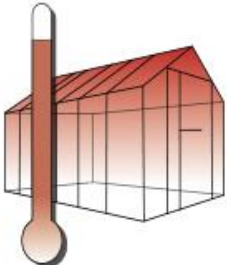
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# Environmental impact from the construction and real estate sector - Share of domestic emissions or use



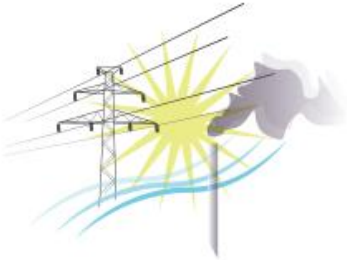
19 %  
Greenhouse gases



11 %  
NO<sub>x</sub>



25 %  
Particulates



30 %  
Energy use



17 %  
Hazardous chemicals (health)



33 %  
Waste

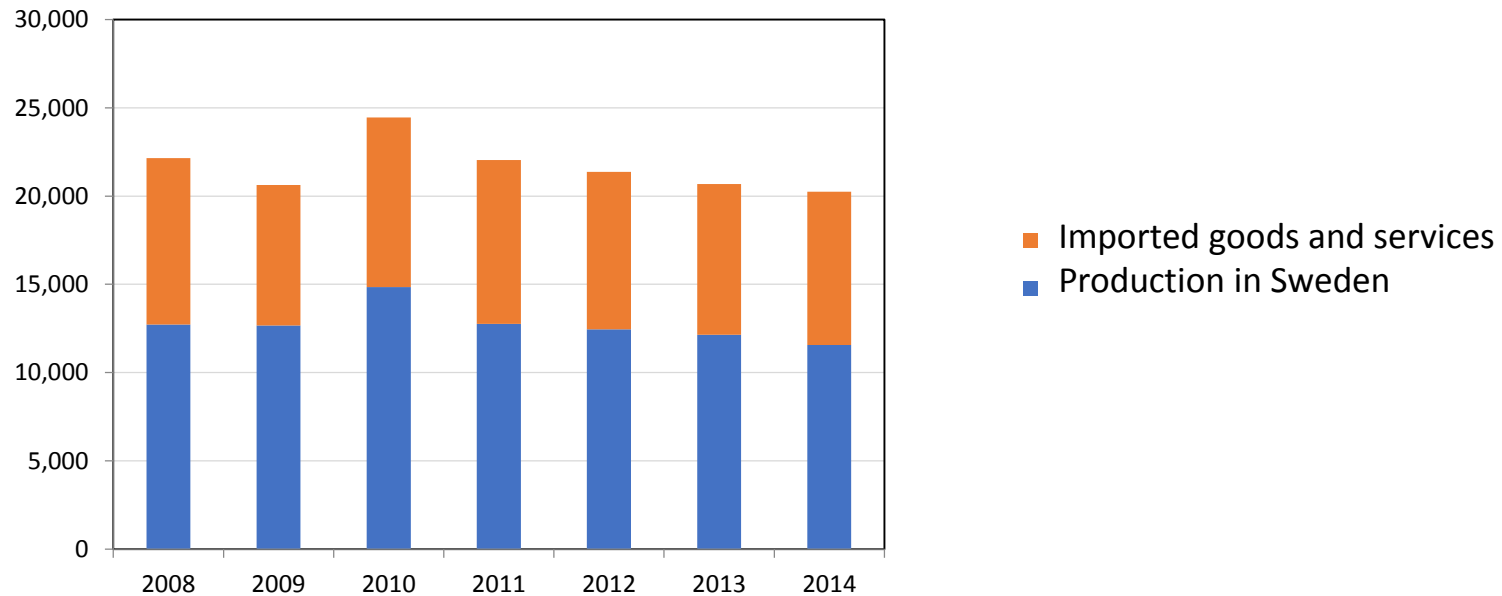


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# Total greenhouse gas emissions from the construction and real estate management sector including imports

Kilotonnes CO<sub>2</sub>e

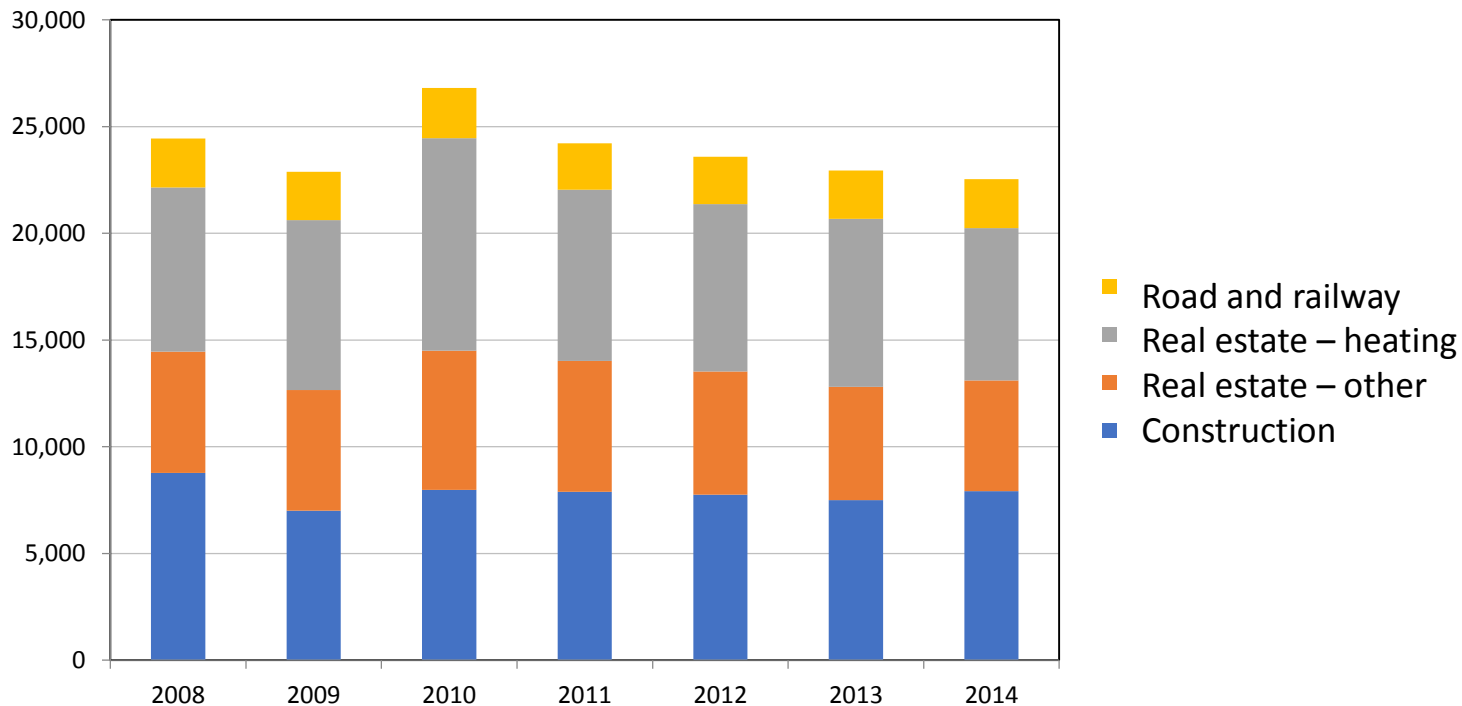


Percentage of domestic emissions 19% in 2014 (blue part of the bar)



# Total emissions of greenhouse gases from the construction and real estate sector, broken into different industries, including roads and railways

Kilotonnes CO<sub>2</sub>e



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# Conclusions

- The domestic environmental impact from the sector is 4 – 31 %. A significant environmental impact, though not a 40% sector
- Big emissions from imported products
- Important with a broader perspective in the analysis of environmental impact – a large part of the impact is missed if only domestic is reported
- Material manufacturing is important
- This is a cost effective method, use of existing data, internationally useable



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# More information

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- [www.boverket.se](http://www.boverket.se)



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# Thank you



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