

# Using FIGARO to produce national statistics on consumption-based greenhouse gas emissions

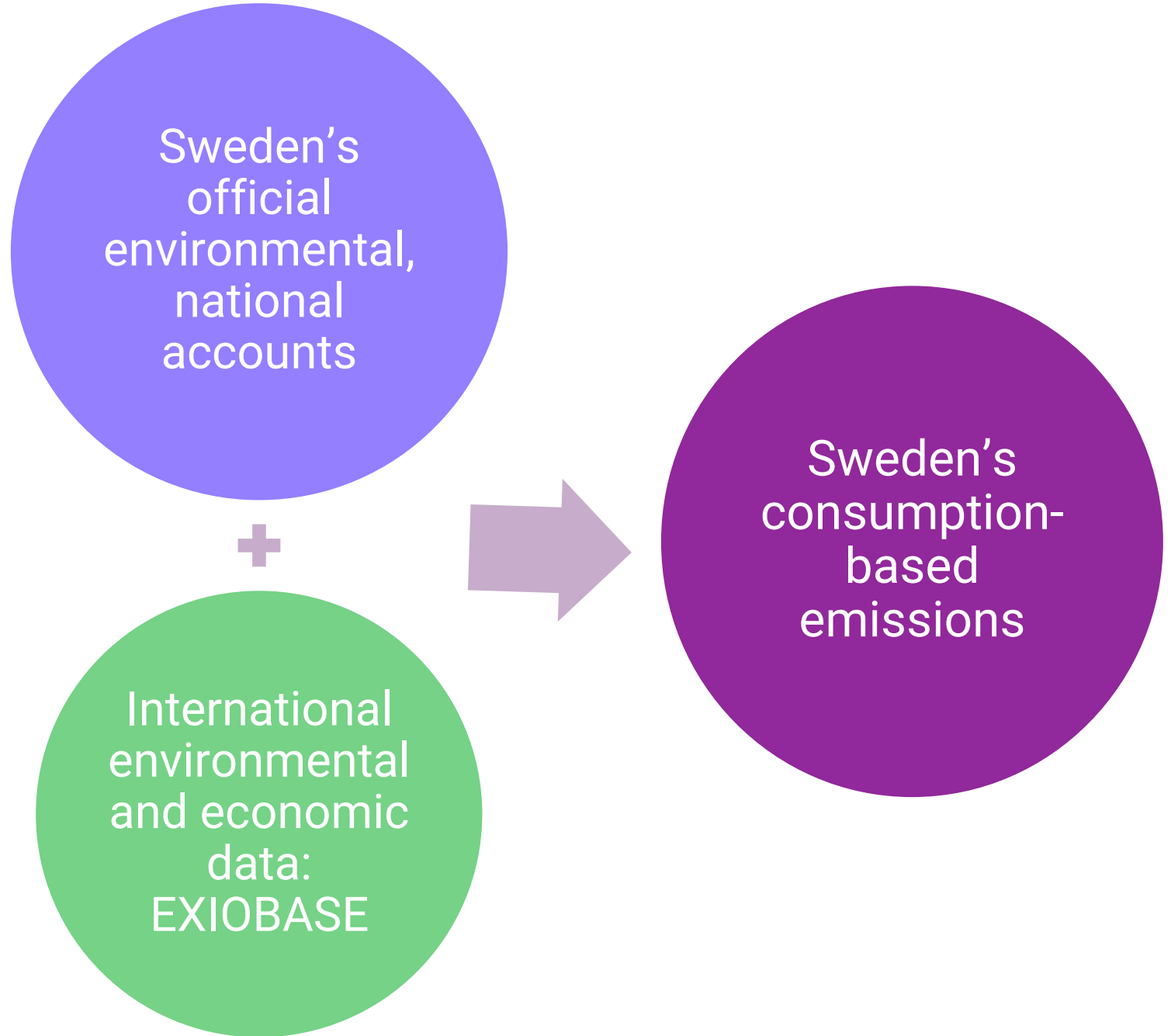
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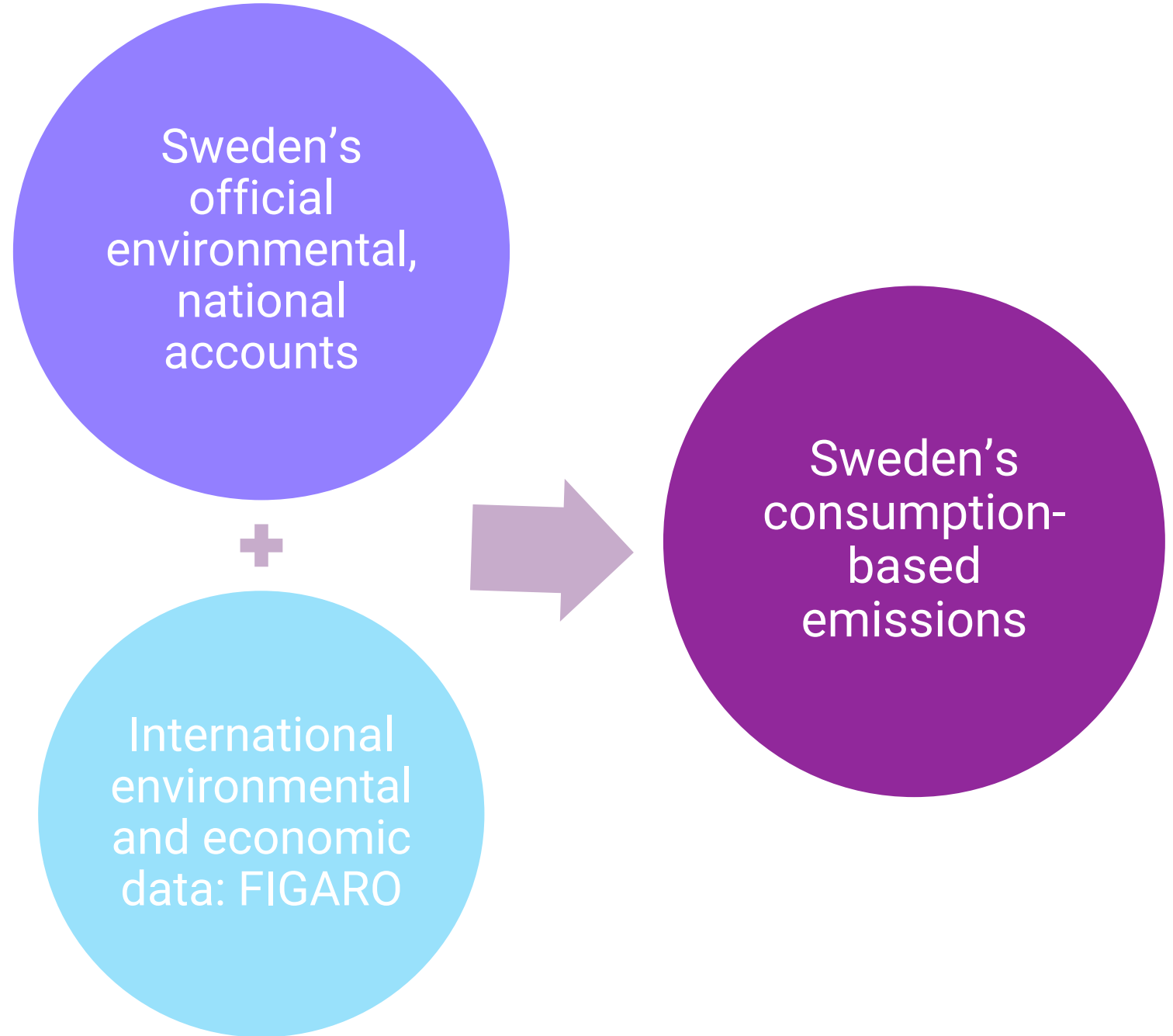
# Growing interest in input-output and consumption-based emissions in Sweden

- In Sweden:
  - Official statistics since 2019
  - Analysis and indicators:
    - > Ongoing: Environmental indicators for building and real estate sectors (National Board of Planning)
    - > 2023 – 24: Climate effects of exports (ministry of climate and enterprise)
    - > 2024: Emissions embodied in public procurement (

**Stats Sweden  
uses a so called  
coupled model  
to calculate  
consumption-  
based  
emissions**



# FIGARO application



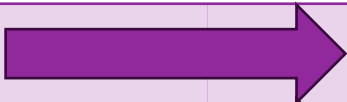

# Advantages and disadvantages with FIGARO and EXIOBASE

- EXIOBASE:
  - High resolution (geographic, product groups)
  - Intermediate use data has not been updated recently
  - Comprehensive environmental extensions
  - Irregular updates, unclear financing
- FIGARO:
  - Regular updates
    - > ESTAT financing
  - Based on highly detailed, official data

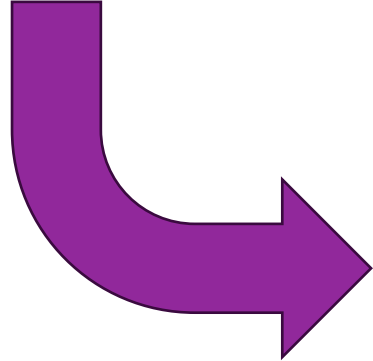
# Correspondance matrices need to be developed

Current production:

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	<b>EXIOBASE</b>		<b>SCB</b>
Countries/regions	49		209
Productgroups	163		91

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FIGARO:

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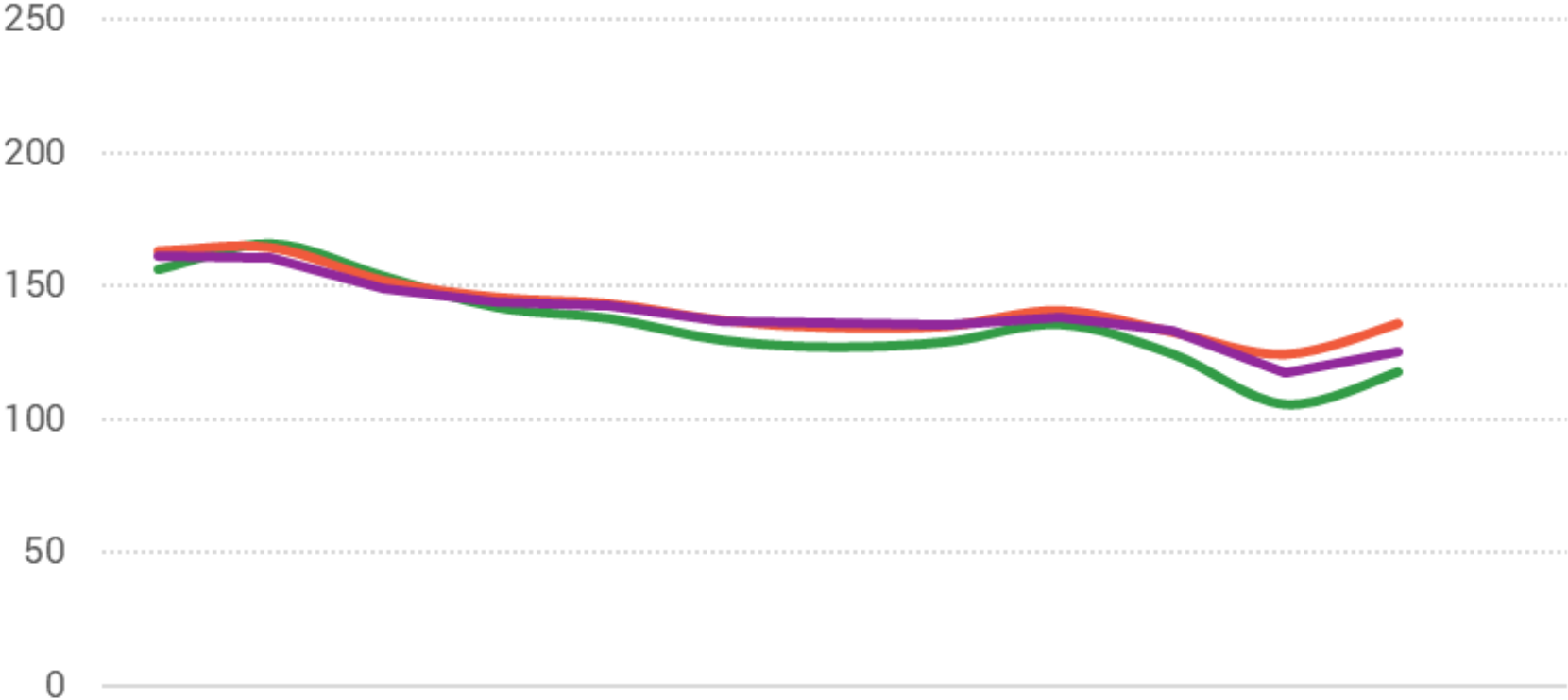
	<b>FIGARO</b>		<b>SCB</b>
Countries/regions	44		209
Productgroups	64		91

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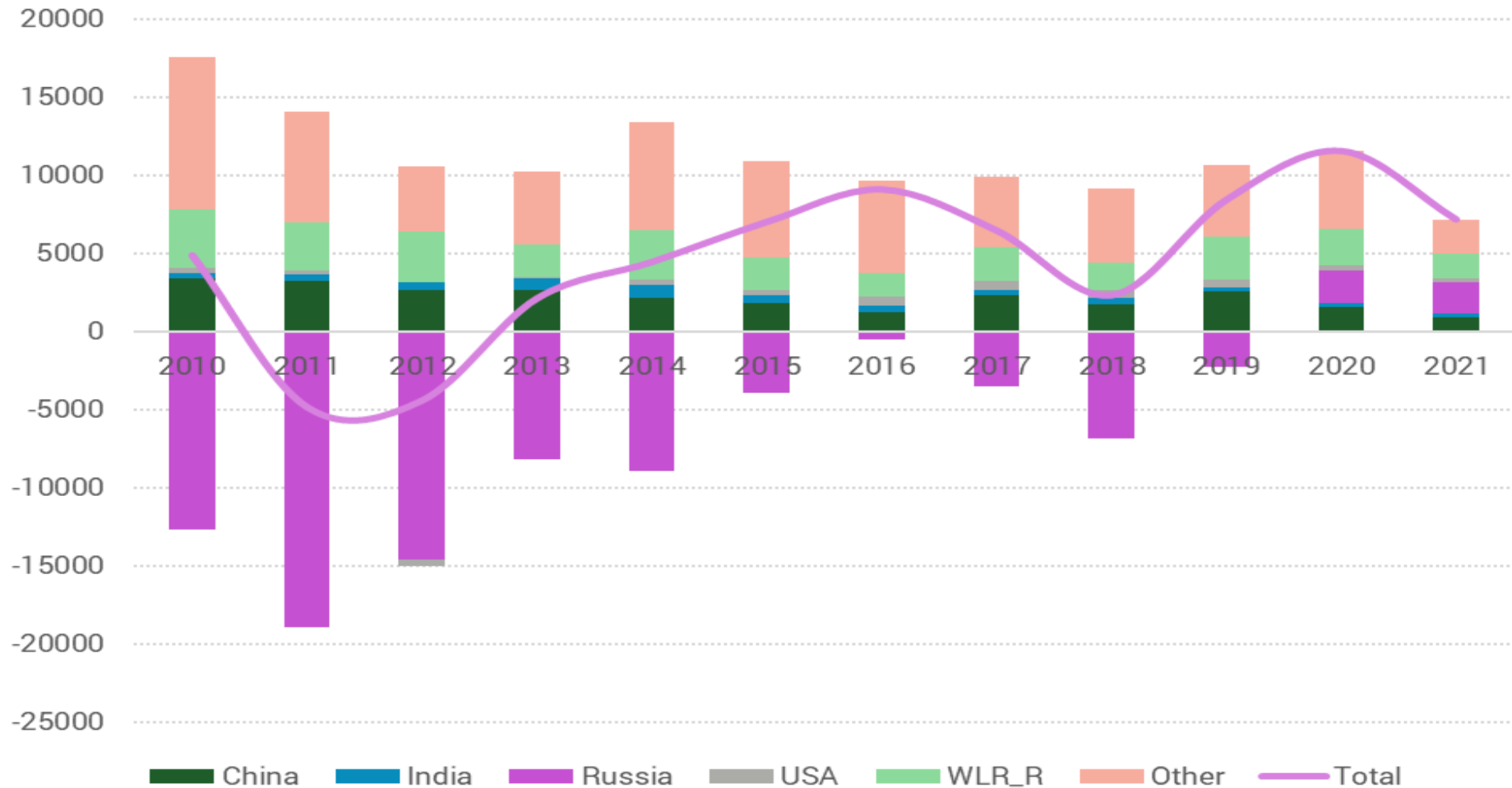
# Variation in time series for Sweden's consumption-based carbon dioxide emissions

Mton CO<sub>2</sub>



— EXIOBASE (EXIOBASE\*EXIOBASE) — FIGARO (EXIOBASE\*FIGARO)  
— FIGARO (FIGARO\*FIGARO)

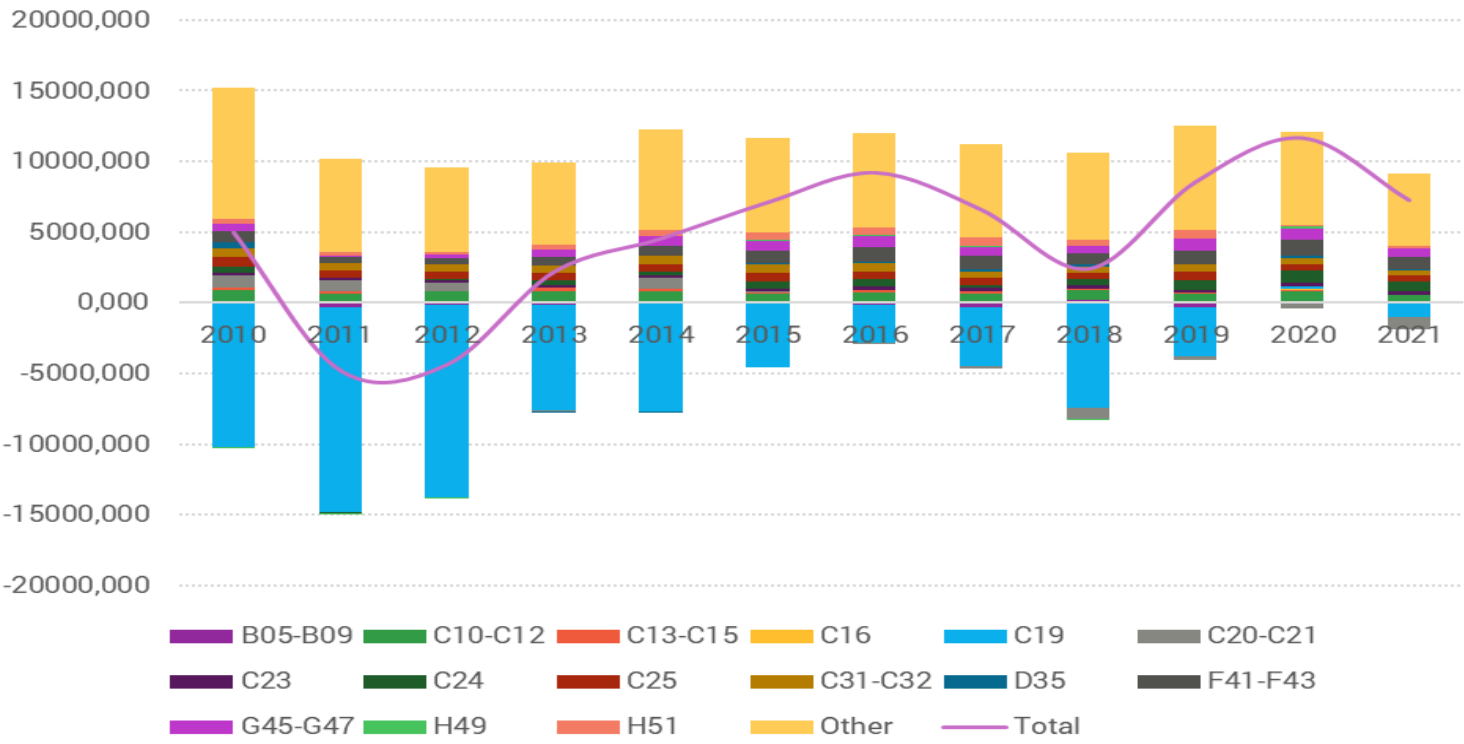
Calculated country difference of imported CO2 emission (FIGARO C02 – EXIOBASE C02) – kilotons. Note WLR\_R is the FIGARO rest of world category.



- Large differences for production in Russia



# Calculated product difference of imported CO<sub>2</sub> emission (FIGARO CO<sub>2</sub> – EXIOBASE CO<sub>2</sub>) – kilotons



-Large difference for petroleum products (C19) and “others”



# The future: FIGARO, the coupled model, harmonisation

- New environmental vectors are being developed in FIGARO
- Need to extend the time series back to 2008
- Implementation in Stats Sweden's models:
  - Stats on consumption based emissions
  - Environmental indicators for building and real estate, etc.
- GIANT project will further improve representativeness of FIGARO