Population grew by 24% and GDP doubled (with a significant recession in-between).

Domestic extraction, domestic material consumption and material footprint slightly increased and matched the G20 average in evolution and magnitude.

Domestic extraction was 17 tonnes per capita and material footprint was 14 tonnes per capita.

Material related environmental impacts decoupled from GDP.

Per-capita climate change impacts related to material extraction and processing increased only slightly.

Particulate matter related health impacts showed the same development as GDP from a consumption perspective.
**CONTRIBUTION OF NATURAL RESOURCES BY CATEGORY**

Figure 3: Contribution of resource types to domestic extraction, material footprint, and total environmental and socio-economic impacts in Argentina (2015)

Unlike G20 average, biomass dominated domestic extraction amounts and material footprint.

The extraction and processing of natural resources accounted for more than 40% of Argentina’s total climate change impacts from both a production and a consumption perspective (the G20 average was approximately 50% from both perspectives).

Resource extraction and processing caused more than 60% of outdoor particulate matter health impacts, much higher than G20 average.

Water stress and land use-related biodiversity impacts were caused mainly by biomass production (same as other G20 countries).

The material sector contributed to about 20% of value added, which is similar to G20 average.

**Glossary**

Consumption perspective: The consumption perspective allocates the use of natural resources or the related impacts throughout the supply chain to the region where these resources, incorporated in various commodities, are finally consumed by industries, governments and households.

Decoupling: Decoupling is when resource use or some environmental pressure either grows at a slower rate than the economic activity that is causing it (relative decoupling) or declines while the economic activity continues to grow (absolute decoupling).

Domestic extraction (DE): Direct, gross physical extraction of materials within a country’s territory (production perspective).

Domestic material consumption (DMC): Amount of materials directly used by an economy (DMC = DE + Material Imports – Material Exports).

Material resources: - metals, - non-metallic minerals, - biomass, - fossils.

*Remaining economy refers to activities other than resource extraction and processing (e.g. manufacturing of finished products, construction).

**Key Sectors and Resources**

**Figure 4: Climate change impacts from material sectors in Argentina (1995-2015)**

- Production perspective: The production perspective allocates the use of natural resources or the impacts related to natural resource extraction and processing to the location where they physically occur.
- Consumption perspective: The consumption perspective allocates the use of natural resources or the impacts related to natural resource extraction and processing to the location where they are consumed.

**Material-related impacts:** Impacts related to the extraction and processing of material resources (including the upstream supply chain, such as electricity generation and transport).

**Net traded materials/impacts:** Difference between material-related impacts from a production and consumption perspective. In the case of environmental impacts, a positive value means that the material-related impacts from exports are greater than the impacts from imports (and vice versa: environmental impacts with negative values mean that the material-related impacts from imports are greater than the impacts from exports).

- From a production perspective, material-related climate change impacts were mainly caused by cattle farming, cement production, and petroleum refinery (together they represented 50% of material related climate impacts).
- From a consumption perspective, cattle farming and petroleum refinery mattered less due to exports of beef and petroleum. The iron and steel as well as the coal mining sectors caused an important share of material-related climate change impacts due to imports.
- Material related climate-change impacts were more than 25% lower than G20 average from both a production and consumption perspective.
- Argentina has water-scarce regions, but overall water stress impacts are lower than the G20 average.
- Water stress was dominated by the production of vegetables, fruits, and nuts (mostly for export).
- Land use related biodiversity loss was more than 20% higher than the G20 average from a production perspective. From a consumption perspective, the impact was close to the G20 average. Forestry, beef and dairy production were main causes, from both perspectives.

*Data after 2011 was nowcasted.*

*Source: Exiobase v3.4, Eora 26, FAOSTAT, Cabernard et al 2019

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**Figure 5: Water stress from agricultural crop and material sectors in Argentina (1995-2015)**

- Argentina has water-scarce regions, but overall water stress impacts are lower than the G20 average.
- Water stress was dominated by the production of vegetables, fruits, and nuts (mostly for export).

*Data after 2011 was nowcasted.*


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**Figure 6: Land-use related biodiversity loss from agricultural crops and material sectors in Argentina (1995-2015)**

- Land use related biodiversity loss was more than 20% higher than the G20 average from a production perspective. From a consumption perspective, the impact was close to the G20 average. Forestry, beef and dairy production were main causes, from both perspectives.

*Data after 2011 was nowcasted.*

The environmental effects of trade

Figure 7: Per-capita consumption footprints (above) and net traded impacts (below) in Argentina (1995-2015)*

future trends and potential decoupling

Ambitious resource efficiency and circular economy policies could decrease material related environmental impacts.

Argentina harbors valuable ecosystems and further efforts for biodiversity protection could achieve large ecological benefits.

The energy mix relies on primarily on fossil fuels. Increasing the share of renewable energies and making use of the large potential, particular for solar based technologies, could lower the impacts of fossil mining and greenhouse gas emissions during the use phase.

*Data after 2011 was nowcasted.
*Consumption: Impacts throughout the supply chain from goods imported and consumed in Argentina.
*Net traded impacts: Difference between material-related impacts from a production and consumption perspective.


Argentina is a net exporter of biomass, metals and fossils, but a net importer of non-metallic minerals.

More climate change, water stress and land use related biodiversity impacts were caused by biomass exports (particularly beef) than for biomass imports.

More climate change, water stress and land use related biodiversity impacts were caused by imports of metals and fossils than by exports.

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The data analysis and text for the G20 was prepared by Livia Cabernard, Stephan Pfister Stefanie Hellweg (ETH Zurich), and Maria Jose Baptista (UNEP) with inputs from Victor Valido (UNEP), Yingying Lu and Heinz Schandl (CSIRO). The layout and infographics were designed by Yi-Ann Chen with support from Qinhan Zhu on figure layout. Icons used are from Freepik.