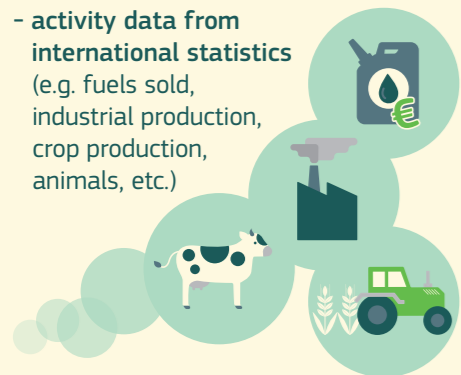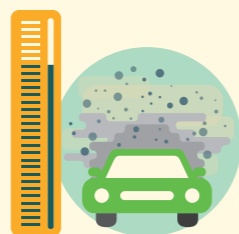## HOW DOES IT WORK?

Emissions are calculated using:
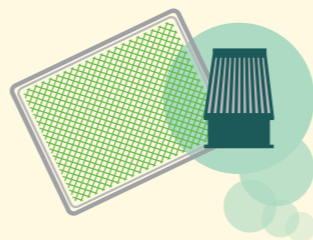
– **activity data from international statistics**
(e.g. fuels sold, industrial production, crop production, animals, etc.)

– **emission factors**
(e.g. how much of a certain pollutant is emitted for a certain amount of fuel burnt)

– **technologies penetration and abatement measures**
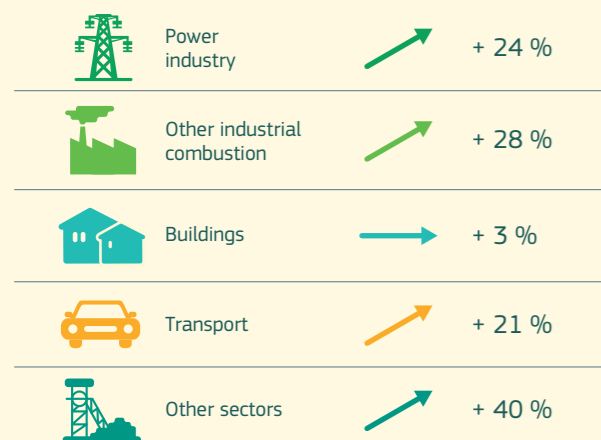(e.g. filters on vehicles or on a stack of a power plant, etc.)
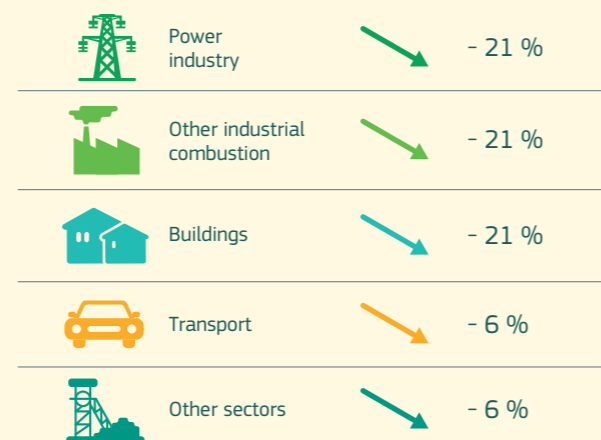
WHAT DOES IT TELL US?

Examples of **key findings:**

Global fossil CO_2 emissions are still rising (+ 23 % with respect to 2005), although **not in Europe** (– 16 % with respect to 2005). Efforts to reduce emissions are now put forward in a transparent way under the **Paris agreement,** but verification of their effectiveness will need consistent atmospheric measurements and global tool linking emissions to measurements.
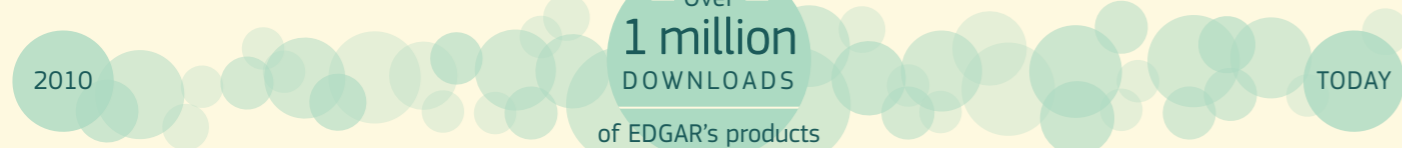
Global fossil CO_2 emissions (2017 vs 2005)

Power industry	+ 24 %
Other industrial combustion	+ 28 %
Buildings	+ 3 %
Transport	+ 21 %
Other sectors	+ 40 %

EU-28 fossil CO_2 emissions (2017 vs 2005)

Power industry	– 21 %
Other industrial combustion	– 21 %
Buildings	– 21 %
Transport	– 6 %
Other sectors	– 6 %

HOW MANY DOWNLOADS?

2010

Over **1 million** DOWNLOADS of EDGAR's products

TODAY

ARE YOU CURIOUS TO KNOW MORE?

The Emissions Database for Global Atmospheric Research (EDGAR):
http://edgar.jrc.ec.europa.eu

Fossil CO_2 emissions of all world countries, 2018:
http://edgar.jrc.ec.europa.eu/overview.php?v=booklet2018

COLLABORATIONS

International Energy Agency (iea)

PBL Netherlands Environmental Assessment Agency

Copernicus — Europe's eyes on Earth

OECD

ipcc — INTERGOVERNMENTAL PANEL ON climate change

HORIZON 2020

UNFCCC

UNECE

LRTAP — Long-range Transboundary Air Pollution

VERIFY

GEIA — Global Emissions InitiAtive

CIRCE — Climate Change and Impact Research the Mediterranean Environment

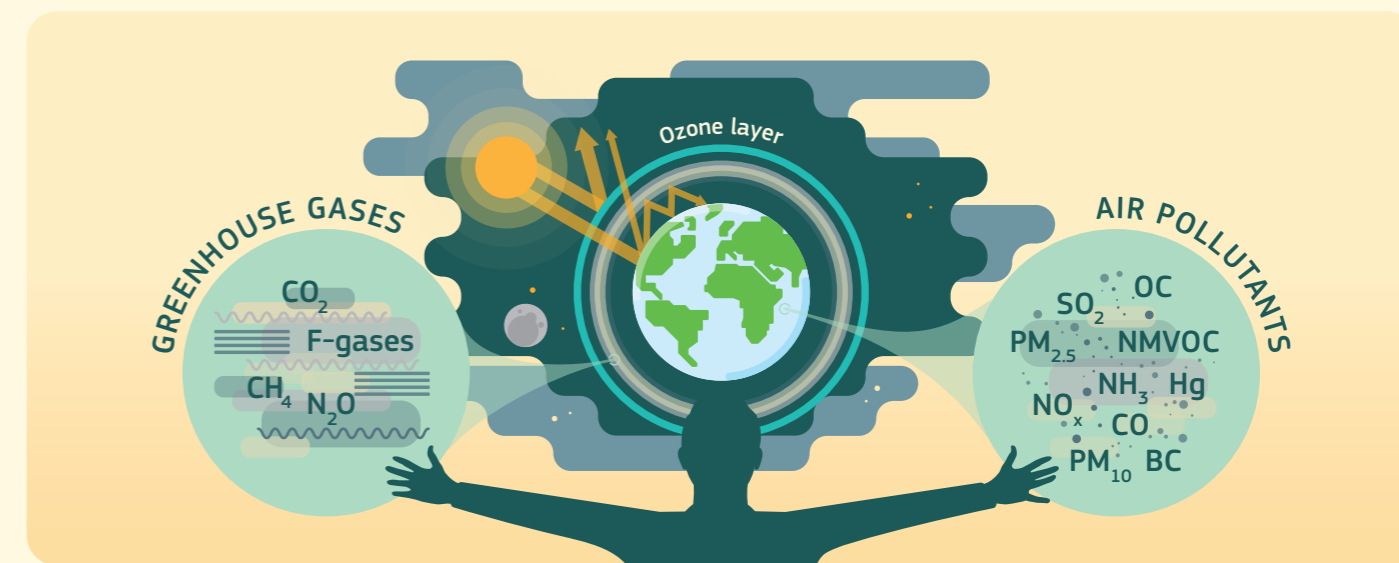European Commission

EDGAR
The Emissions Database for Global Atmospheric Research
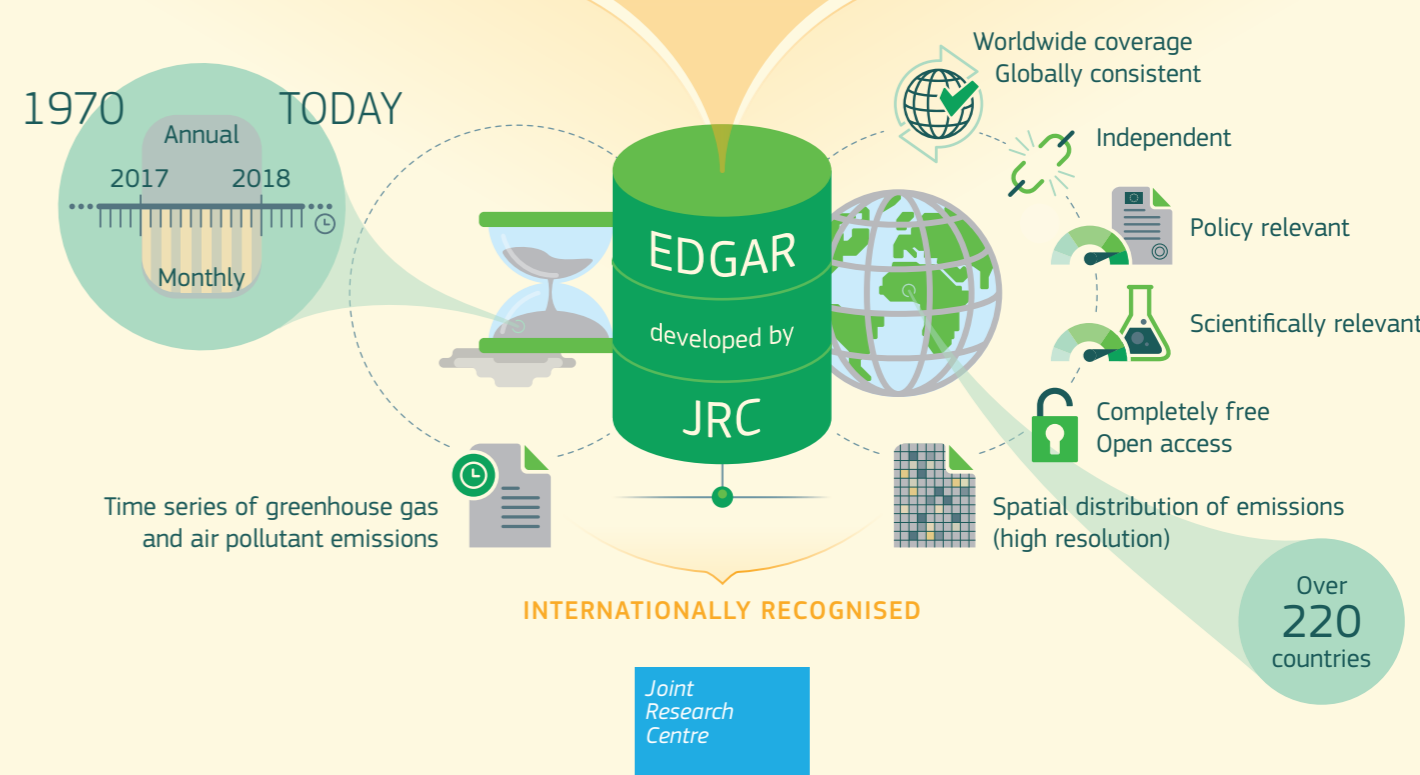
Mapping human emissions on Earth

WHAT IS IT?

EDGAR is a multipurpose, independent, global database of human emissions of greenhouse gases and air pollution on Earth.
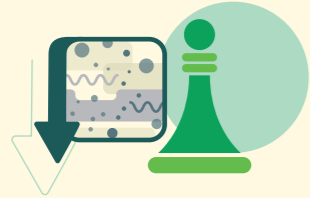

GREENHOUSE GASES
CO_2
F-gases
CH_4 N_2O

Ozone layer

AIR POLLUTANTS
SO_2 OC
$PM_{2.5}$ NMVOC
NO_x NH_3 Hg
CO
PM_{10} BC

ACCOUNTABILITY

EXCELLENCE

1970 TODAY
Annual
2017 2018
Monthly

Worldwide coverage
Globally consistent

Independent

Policy relevant

Scientifically relevant

EDGAR developed by JRC

Completely free
Open access

Time series of greenhouse gas and air pollutant emissions

Spatial distribution of emissions (high resolution)

INTERNATIONALLY RECOGNISED

Over **220** countries

Joint Research Centre
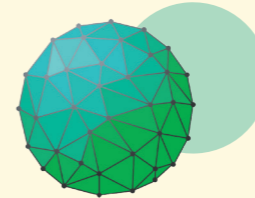
- control strategies for emission mitigation

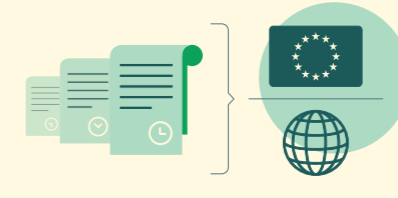- emission trend analysis and projections

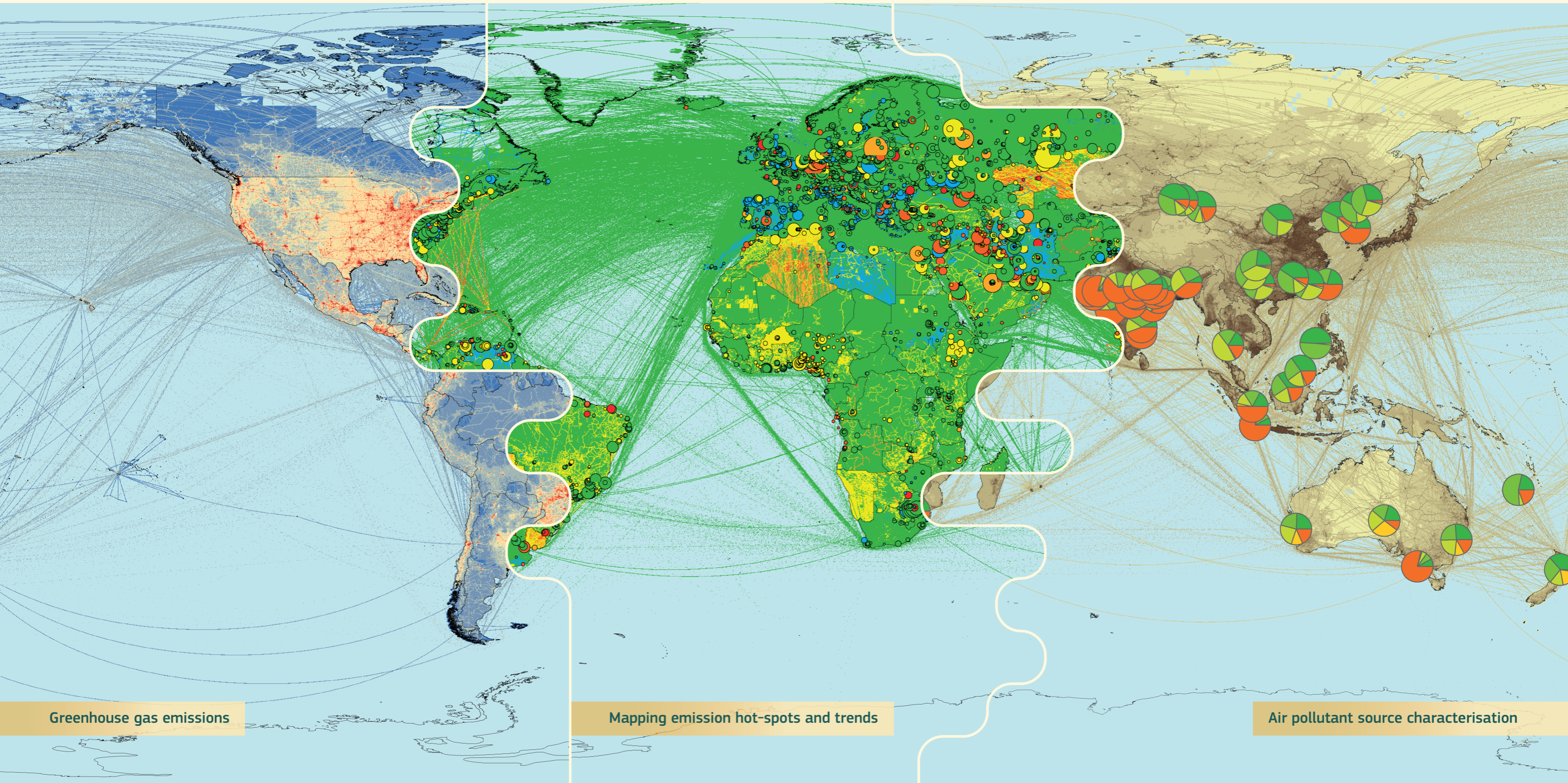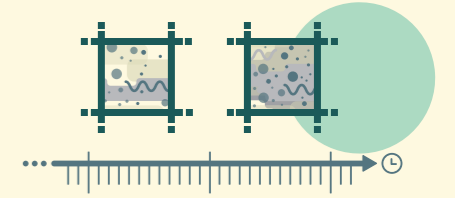- international treaty reporting requirements (e.g. Paris agreement)

- global and regional modelling of atmospheric pollution and climate change

- evaluate current and historical policy impacts at the European and global scales

- track emissions changes in emissions sources, fuels, technologies and abatement measures

Greenhouse gas emissions

Mapping emission hot-spots and trends

Air pollutant source characterisation