



Zero Pollution Stakeholder Workshop

**“Reducing health
inequalities through
zero pollution”**

Day 1, 14 June 2023





Agenda

14:00	Introduction & objectives of the workshop
14:30	Session 1: Setting the scene
15:00	Session 2: Reducing cancer inequalities through preventing zero pollution
<i>16:00</i>	<i>Break</i>
16:15	Session 2: Reducing cancer inequalities through preventing zero pollution (continued)
17:15	Wrap up of Day 1
<i>17:30</i>	<i>Networking drink</i>



Introduction & objectives of the workshop



Session 1: Setting the scene



Session 2: Reducing cancer inequalities through preventing zero pollution

Europe's Beating Cancer Plan

Flagship 9: European Cancer Inequalities Registry



#EUCancerPlan #HealthUnion

Why an EU Cancer Plan?

- Cancer is the primary cause of death for Europeans under 65.
- Every year around 2.7 million people living in the EU are diagnosed with cancer.
- The lives lost to cancer in the EU are set to increase by more than 24% by 2035.
- But 40 % of cancers can be prevented.

What is the EU Cancer Plan?

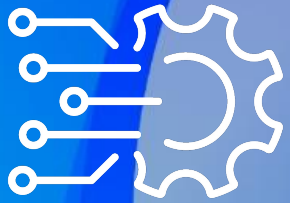
Europe's Beating Cancer Plan was launched in February 2021

4 KEY STRANDS:

1. prevention;
2. early detection;
3. diagnosis and treatment;
4. quality of life of cancer patients and survivors.

10 FLAGSHIP ACTIONS

10 FLAGSHIP ACTIONS



NEW TECHNOLOGIES, RESEARCH AND INNOVATION

1. European Commission Knowledge Centre on Cancer
✓ Launched June 2021
2. European Cancer Imaging Initiative
✓ Launched in December 2022



SAVING LIVES THROUGH SUSTAINABLE CANCER PREVENTION

3. Eliminate cancers caused by Human papillomavirus
✓ Joint Action on HPV vaccination launched November 2022 (PERCH)

10 FLAGSHIP ACTIONS



IMPROVING EARLY DETECTION OF CANCER

4. EU Cancer Screening Scheme

- ✓ Council Recommendation on Cancer Screening adopted in December 2022
- ✓ European Breast Cancer Guidelines and Quality Assurance Scheme finalised 2021
- ✓ European Colorectal Cancer Initiative (Guidelines and Quality Assurance Scheme) launched 2022
- ✓ Update of Cervical Cancer Guidelines and development of Quality Assurance Scheme in progress

10 FLAGSHIP ACTIONS



ENSURING HIGH STANDARDS IN CANCER CARE

5. EU network of Comprehensive Cancer Centres
 - ✓ Joint Action launched November 2022 (JA CraNE)
6. Cancer Diagnostic and Treatment for All
 - ✓ Personalised Cancer Medicine for all EU citizens (PCM4EU project) started January 2022
 - ✓ Improving diagnostics and survival for all children with Acute Myeloid Leukaemia (CHIP-AML22 project)
7. European Initiative to Understand Cancer
 - ✓ Coordination and Support Action launched 2022

10 FLAGSHIP ACTIONS



THE QUALITY OF LIFE FOR CANCER PATIENTS, SURVIVORS, AND CARERS

8. Better life for cancer patients' initiative

- ✓ Cancer Survivor Smart Card project started in November 2022 (smartCARE)
- ✓ Report on 'Access to financial services for persons with a history of cancer', including the right to be forgotten, published May 2022
- ✓ Work started on code of conduct

10 FLAGSHIP ACTIONS



REDUCING CANCER INEQUALITIES ACROSS THE EU

9. European Cancer Inequalities Registry

- ✓ Country Cancer Profiles launched February 2023
- ✓ Website and data tool launched February 2022

PUTTING CHILDHOOD CANCER UNDER THE SPOTLIGHT

10. Helping Children with Cancer Initiative

- ✓ *EU Network of Youth Cancer Survivors*, launched February 2022
- ✓ New section on Pediatric Cancers added to the European Cancer Information System
- ✓ Renewed funding for the *ERN PaedCan*

The European Cancer Inequalities Registry

Flagship 9 of Europe's Beating Cancer Plan

“will identify trends, disparities and inequalities between Member States and regions. Alongside regular qualitative assessments of the country-specific situation, the Registry will identify challenges and specific areas of action to guide investment and interventions at EU, national and regional level under Europe's Beating Cancer Plan.”

- *Not a monitoring tool for the Cancer Plan*
- *Not restricted to socio economic inequalities*

Milestones of the Registry

LAUNCHED FEB 2022

JRC

Data tool and website

- functions as the front end of the Cancer Inequalities Registry

LAUNCHED FEB 2023

OECD

Biennial country profiles

- trends and inequalities in cancer care in each EU Member State

AS OF FEB 2024

OECD

Biennial horizontal reports

- trends and inequalities in cancer care across Europe

<https://cancer-inequalities.jrc.ec.europa.eu/>

LAUNCHED MAY 2023

Factsheets

- Summarize research on specific themes:
 - (1) Demography
 - (2) Environment

JRC

LAUNCHED TODAY

“Topics” section

- Data on a dedicated topic:
 - Environmental indicators

UPCOMING

IARC

Study on socio-economic inequalities in cancer mortality

The Country Cancer Profiles

The Country Cancer Profiles highlight the **key achievements and challenges** in cancer prevention and care for each country, **shedding light on cancer inequalities** within countries and when compared to the EU as a whole.

Key findings:

1. Cancer is a major health challenge of our time and the **second leading cause of death**
2. Across all Member States, lung cancer remains by far the most common cause of death from cancer, with a **two-fold difference in cancer mortality** across the EU.
3. Mortality rates, risk factors and access to care vary hugely, depending on socioeconomic status, gender, or age.
4. People with **lower education levels and lower incomes** are the most affected, and access to care is more limited in remote areas.



Published on 1 February 2023 for EU 27, Norway and Iceland

Thank you

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The ECIR data tool

Zero Pollution Stakeholder Workshop “Reducing health inequalities through zero pollution”

Head of Unit JRC.F.1 - Disease Prevention

Brussels, 14/06/2023

Outline

1. The European Cancer Inequalities Registry (ECIR)
2. The ECIR Data Tool and the Zero Pollution Action Plan
3. Environmental indicators in the ECIR
4. The Factsheet on environmental factors and cancer
5. Future developments

Outline

- 1. The European Cancer Inequalities Registry (ECIR)**
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EU Cancer Inequalities Registry (ECIR)

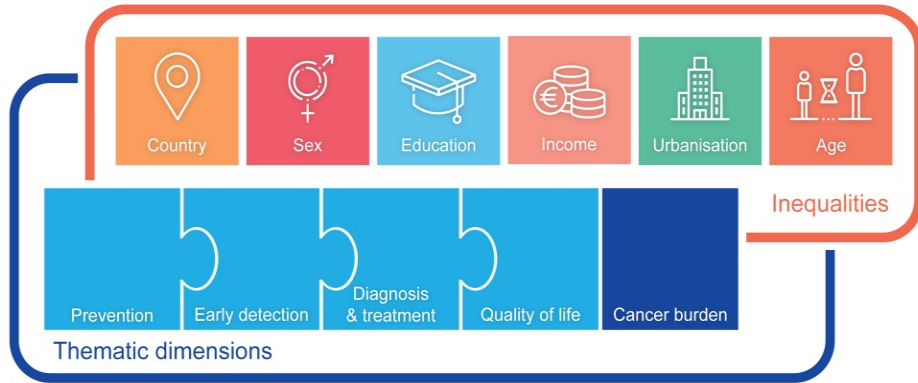
- Launched on 2 February 2022



The Registry consists of 3 elements:

- **Data tool**, which is already available: indicators
- **Cancer country profiles**: reports focusing on the assessment of the country-specific situation (already published)
- **Analytical reports** comparing countries' performance at EU level (published in odd years)

The ECIR Data Tool: thematic dimensions



Thematic dimensions

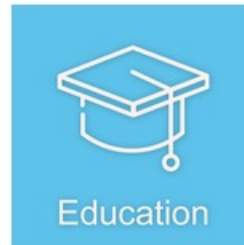
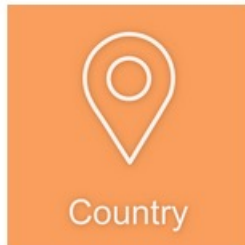
- Cancer burden
- Prevention
- Early detection
- Screening
- Diagnosis and treatment
- (Quality of life)
- (Policies)

The screenshot shows the European Cancer Inequalities Registry website. The header includes the title 'European Cancer Inequalities Registry' and a description: 'The European Cancer Inequalities Registry is a flagship initiative of Europe's Beating Cancer Plan. It provides sound and reliable data on cancer prevention and care to identify trends, disparities and inequalities between Member States and regions.' Below the header is a navigation menu with 'Home', 'ECIR Data tool', 'Country Cancer Profiles', and 'About'. The main content area is titled 'ECIR data tool' and features a search interface with dropdown menus for 'Inequality dimension' (set to 'Inequalities by country'), 'Data variable' (set to 'Mortality'), 'Cancer site' (set to 'All'), and 'Year' (set to '2019'). A red circle highlights the 'Data variable' dropdown menu, which is open and shows a list of options including 'Mortality', 'Incidence', 'Premature mortality', 'Mortality relative change from 2020 to 2040', 'Incidence relative change from 2020 to 2040', 'Prevention', 'Smoking', 'Passive smoking', 'Obesity', 'Fruit & vegetables consumption', 'Alcohol consumption frequency', 'Alcohol consumption quantity', 'Physical inactivity', 'Particulate matter 2.5', 'Particulate matter 10', 'HPV vaccinated girls', and 'Early detection', 'Breast examination by X-ray'. Below the dropdown is a map of Europe showing age-standardised rates per 100,000 inhabitants, with a legend indicating performance levels and a list of countries like Luxembourg (210.5) and Malta (203.5).



The ECIR Data Tool: inequality dimensions

ECIR data tool




Explore inequalities in cancer prevention and care across Europe. Start by selecting the inequality dimension. Then check out maps and graphs that clearly present indicators related to cancer, revealing existing inequalities.

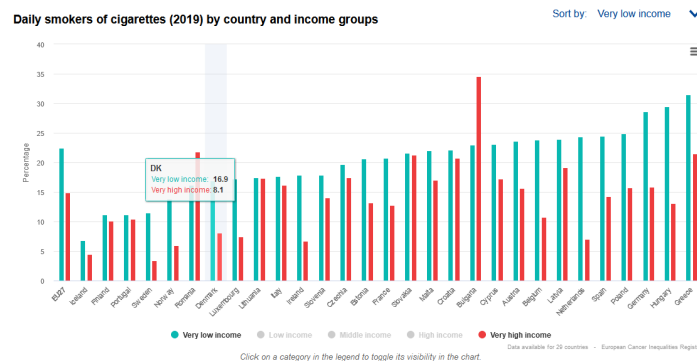
<https://cancer-inequalities.jrc.ec.europa.eu/>

The ECIR Data Tool: inequality dimensions

ECIR data tool



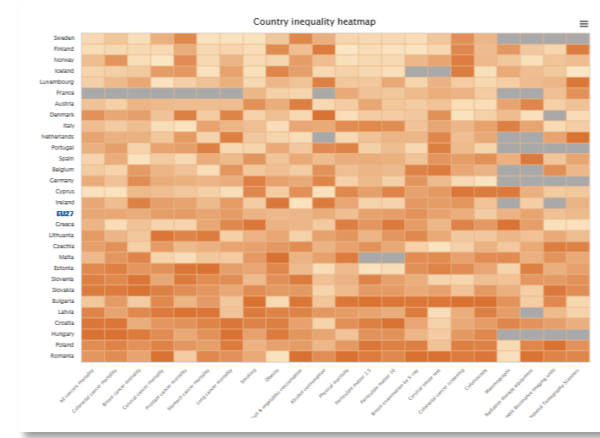
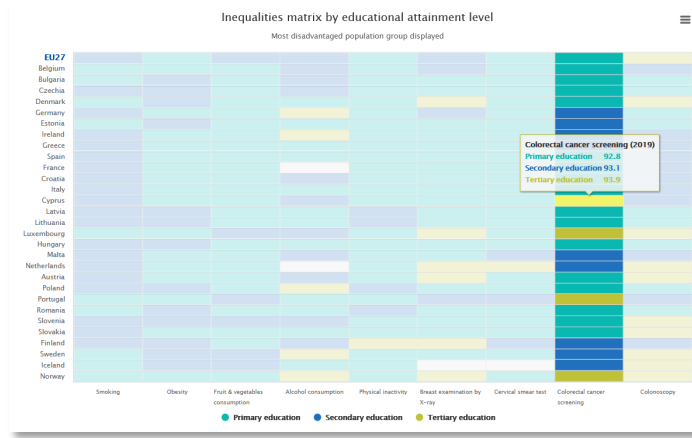
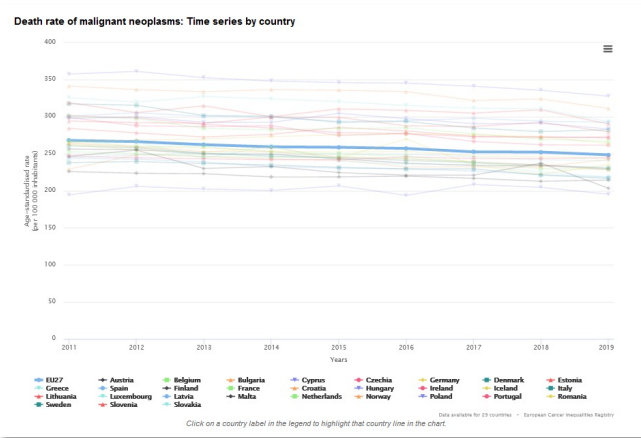
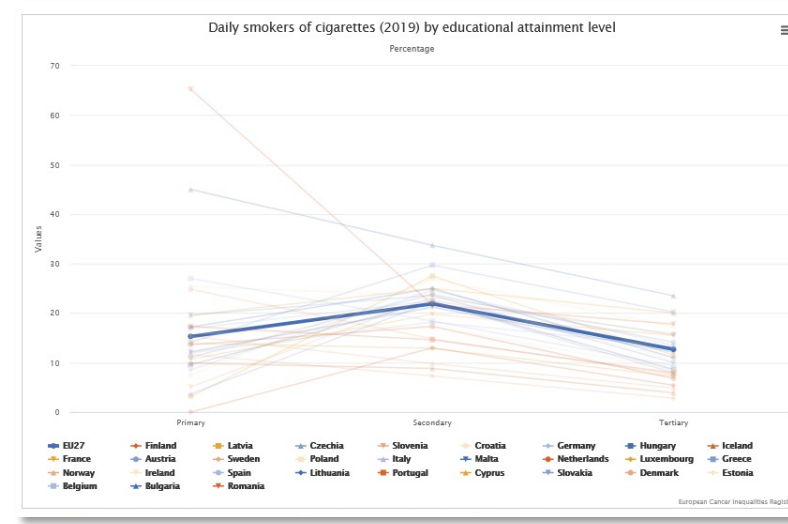
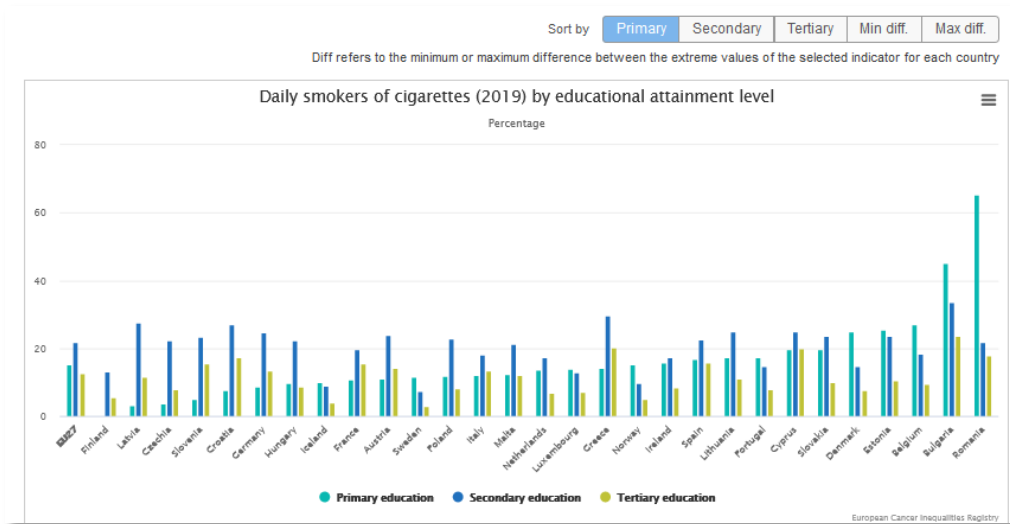
Explore inequalities in cancer prevention and care across Europe. Start by selecting the inequality dimension. Then check out maps and graphs that clearly present indicators related to cancer, revealing existing inequalities.



5 categories: very low, low, middle, high and very high income
(= quintile groups of equivalised income)

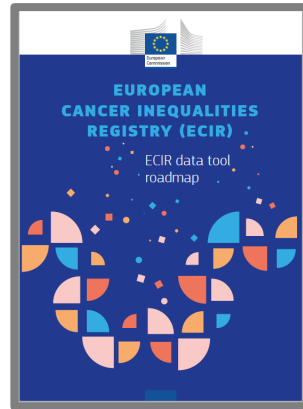
<https://cancer-inequalities.jrc.ec.europa.eu/>

The ECIR Data Tool: data presentation



The ECIR Data Tool: Roadmap and Annex

- Quality criteria
- Indicators to be published next (and projected timelines)



The data considered should be:

- available for at least 65%⁷ of the 29 European countries (n=19),
- authorised to (re-)use,
- standardised within and between population groups,
- collected using harmonised data collection techniques,
- containing detailed, quality descriptions of the data collection process (metadata),
- relatively recent, representing the last 6 years (i.e. for the last available data point or estimate).

The Annex to the ECIR Roadmap presents indicators which will be included in the [European Cancer Inequalities Registry \(ECIR\) Data Tool](#) in the course of 2022/2023 (version 1, October 2022).

Pillars	ECIR ROADMAP- ANNEX Indicators	2022				2023			
		1st Q	2nd Q	3rd Q	4th Q	1st Q	2nd Q	3rd Q	4th Q
1. Cancer burden	Age-standardised death rate per 100 000 inhabitants due to malignant neoplasms Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Age-standardised death rate per 100 000 inhabitants due to breast cancer Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Age-standardised death rate per 100 000 inhabitants due to colon, rectosigmoid junction, rectum, anus and anal canal Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Age-standardised death rate per 100 000 inhabitants due to stomach cancer Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Age-standardised death rate per 100 000 inhabitants due to trachea, bronchus and lung cancer Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Age-standardised death rate per 100 000 men due to prostate cancer Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Age-standardised death rate per 100 000 women due to cervical cancer Source: Eurostat - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2011-2019	●							
	Estimated age-standardised cancer incidence rates Source: ECIS - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2020					●			
	Estimated number of new cancer cases from 2020 to 2040 Source: ECIS - Coverage: 27+2 - Dimensions: country, sex, age - Years: 2020					●			
	Standardised deaths due to cancer for age category 30-65 (percentage) Source: ECIS - Coverage: 27+2 - Dimensions: country, NUTS2, sex - Years: 2001-2019 annually - Age: 30-65					●			
	Cancers attributable to alcohol drinking (age-standardised rates per 100 000 individuals) Source: IARC - Coverage: 27+2 - Dimensions: country, sex - Years: 2020								●
	Cancers attributable to helicobacter pylori (age-standardised rates per 100 000 individuals) Source: IARC - Coverage: 27+2 - Dimensions: country, sex - Years: 2018								●
	Cancers attributable to hepatitis B virus (age-standardised rates per 100 000 individuals) Source: IARC - Coverage: 27+2 - Dimensions: country, sex - Years: 2018								●
	Cancers attributable to hepatitis C virus (age-standardised rates per 100 000 individuals) Source: IARC - Coverage: 27+2 - Dimensions: country, sex - Years: 2018								●
	Cancers attributable to human papillomavirus (age-standardised rates per 100 000 individuals) Source: IARC - Coverage: 27+2 - Dimensions: country, sex - Years: 2018								●
	Estimated cancer disability-adjusted life years (DALYs) Source: IHME - Coverage: 27+2 - Dimensions: country, sex, income - Years: 2019								●
	Productivity losses due to premature mortality from cancer Source: Ortega-Ortega et al, 2021 - Coverage: 27+2 - Dimensions: country, sex - Years: 2018								●

Please note it is a living document that will be continuously updated on the ECIR website (<https://cancer-inequalities.jrc.ec.europa.eu/roadmap>)

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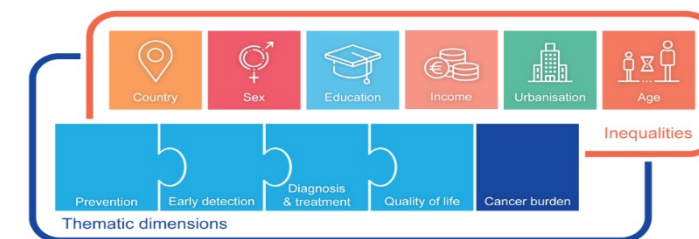
The ECIR and the Zero Pollution Action Plan

- The Zero Pollution Action Plan & Health Inequalities:

“The fight against pollution is also a fight for fairness and equality.”

- 9 flagship initiatives → Flagship 1 focuses on **“reducing health inequalities through zero pollution”**.

*Action: “From 2022 onwards, the Commission will ensure that the newly announced **Cancer Inequalities Registry** (...) [is] **regularly fed with pollution monitoring and outlook data**”*



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Existing environmental indicators

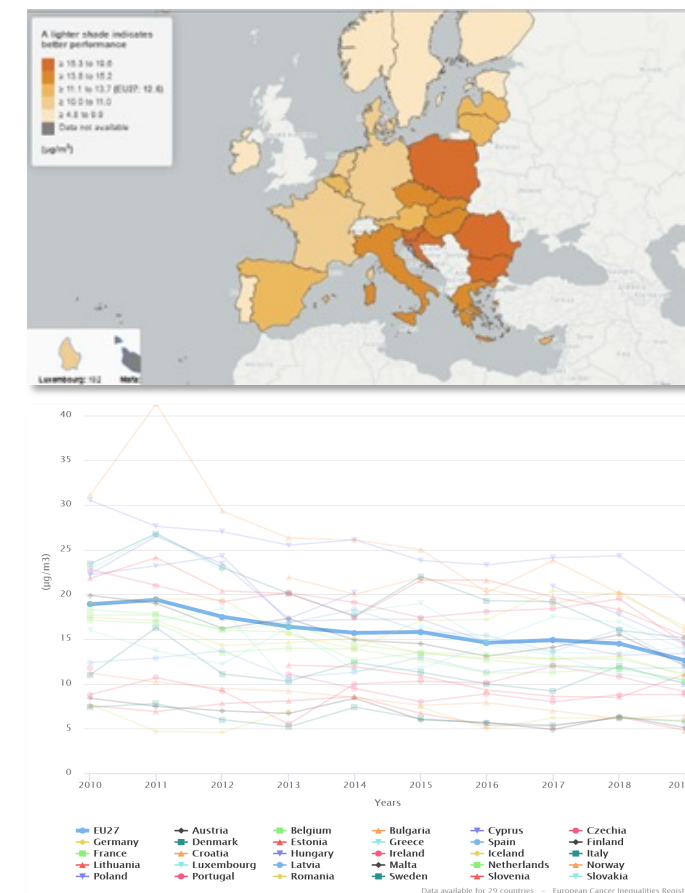
Cancer burden.

Estimated cancer deaths attributable to:

- **Ambient particulate matter pollution**, by country and sex (IHME).
- **Household air pollution from solid fuels**, by country and sex (IHME).
- **Occupational carcinogens**, by country and sex (IHME).
- **Residential radon**, by country and sex (IHME)

Prevention.

- **Passive smoking**, by country, sex, education, income, degree of urbanisation and age (EUROSTAT).
- **Particulate matter (PM_{2.5})**, by country (EUROSTAT).
- **Particulate matter (PM₁₀)**, by country (EUROSTAT).



Ambient particulate matter pollution, by country

New environmental indicators

Cancer burden. Estimated cancer deaths attributable to:

- Second-hand smoking, by country and sex (IHME).
- PM_{2.5} (Projections until 2050) (JRC).

Prevention

- Population-weighted average of radon concentration, by country (JRC).

New environmental indicators

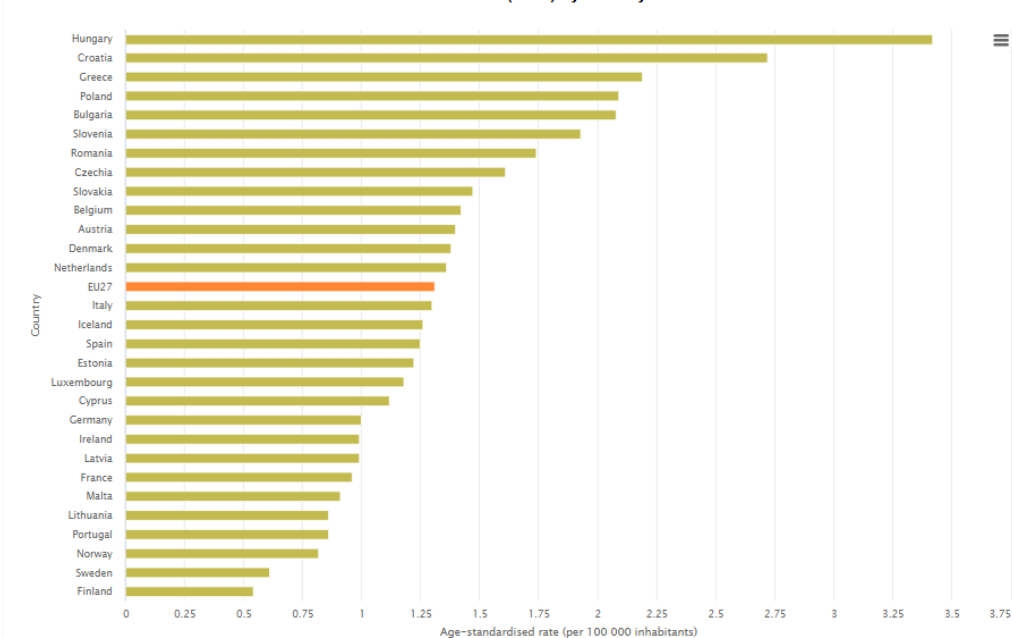
Cancer burden. Estimated cancer deaths attributable to:

- **Second-hand smoking, by country and sex (IHME).**
- PM_{2.5} (Projections until 2050) (JRC).

Prevention

- Population-weighted average of radon concentration, by country (JRC).

Estimated cancer deaths attributable to second-hand smoke (2019) by country



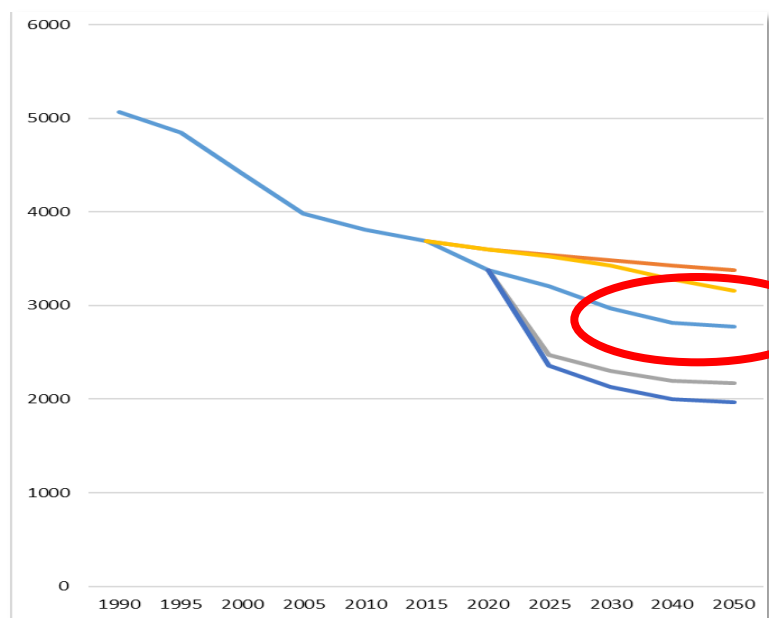
New environmental indicators

Cancer burden. Estimated cancer deaths attributable to:

- Second-hand smoking, by country and sex (IHME).
- **PM2.5 (Projections until 2050) (JRC).**

Prevention

- Population-weighted average of radon concentration, by country (JRC).



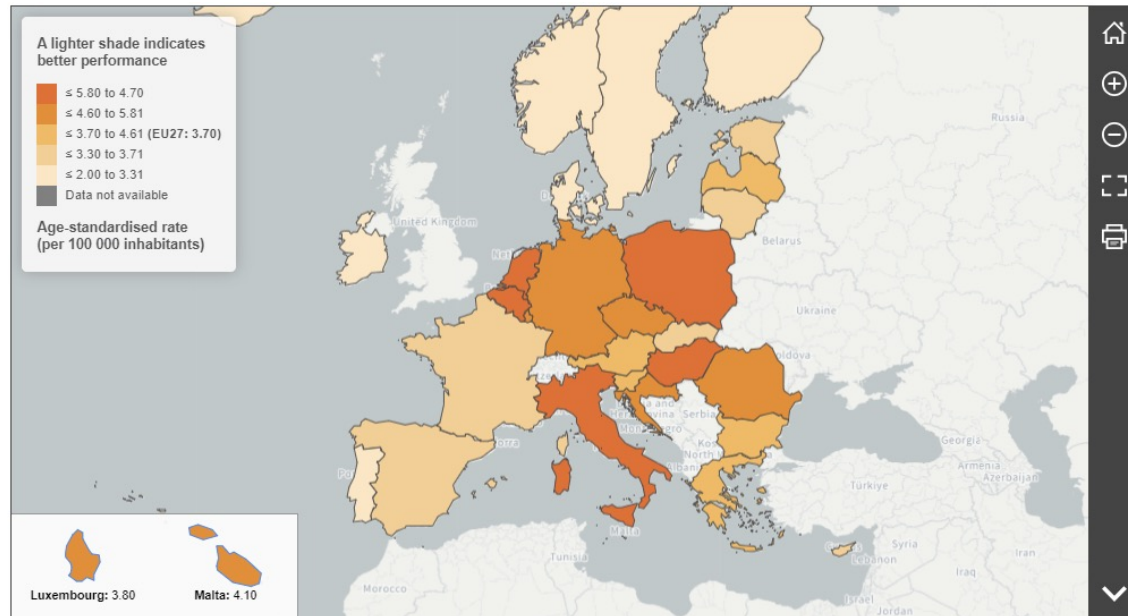
- Estimations of lung cancer deaths due to PM2.5 exposure (from 2015 to 2050).
- Emission scenarios: **“current legislation”** (baseline)
- **Lower emissions = Fewer lung cancer deaths**

Example: Lung cancer deaths projections for Italy

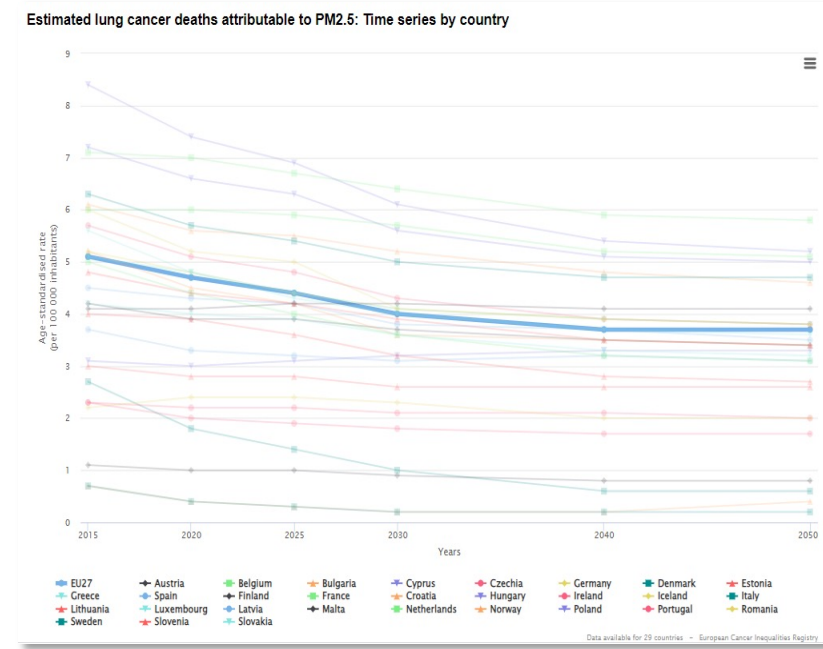
New environmental indicators

Cancer deaths due to PM2.5 (Projections until 2050)

The indicator presents the estimated age-standardised death rate attributable to exposure to ambient concentration of particulate matter 2.5 (PM2.5; particles with an aerodynamic diameter smaller than 2.5 μm), and the estimated rates covering period from 2015 to 2050. PM2.5 is a major component of ambient air pollution. In 2013, it was classified as a cause of lung cancer by WHO's [International Agency for Research on Cancer \(IARC\)](#)



Estimated lung cancer deaths attributable to PM2.5 (2050) by country



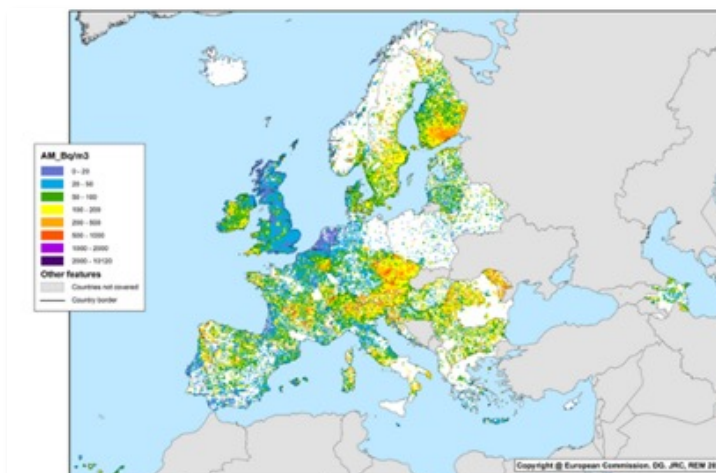
New environmental indicators

Cancer burden. Estimated cancer deaths attributable to:

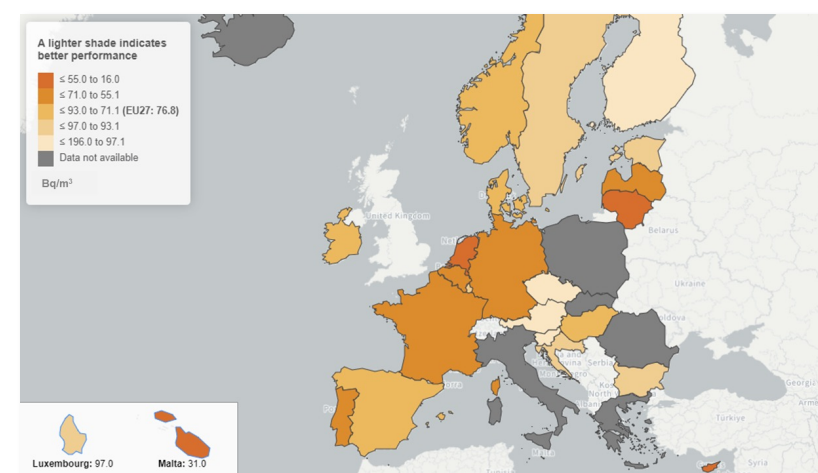
- Second-hand smoking, by country and sex (IHME).
- PM_{2.5} → Projections until 2050 by country, according to different emission scenarios (JRC).

Prevention

- **Population-weighted average of radon concentration, by country (JRC).**



Indoor radon concentration (grid 10x10 Km)
Source: JRC European Indoor radon Map



Population weighted-average of indoor radon concentration by country
ECIR Data Tool

Display of environmental indicators

ECIR data tool

Inequality dimension: Inequalities by country ▼

Indicator: Mortality ▼

Cancer site: All ▼

Year: 2020 ▼

All cancers mortality

The indicator presents age-standardised ICD-10 code: C00-C97

Death rate of malignant neoplasms

The shade of colour relates to the ranking of countries. The lightest shade were among the 20% of highest performing countries. Countries with a lighter shade indicate better performance.

Topics:

- Environmental indicators
- All indicators

Particulate matter 2.5 concentration

Radon concentration

Cancer deaths due to household air pollution

Cancer deaths due to residential radon

Cancer deaths due to PM2.5 (Projections until 2050)

Particulate matter 10 concentration

Cancer deaths due to ambient air pollution

Cancer deaths due to occupational carcinogens

Cancer deaths due to passive smoking

red with the states the data is

Male Female

Home icon

Display of environmental indicators

ECIR - European Cancer Inequalities Registry

A flagship initiative of Europe's Beating Cancer Plan.

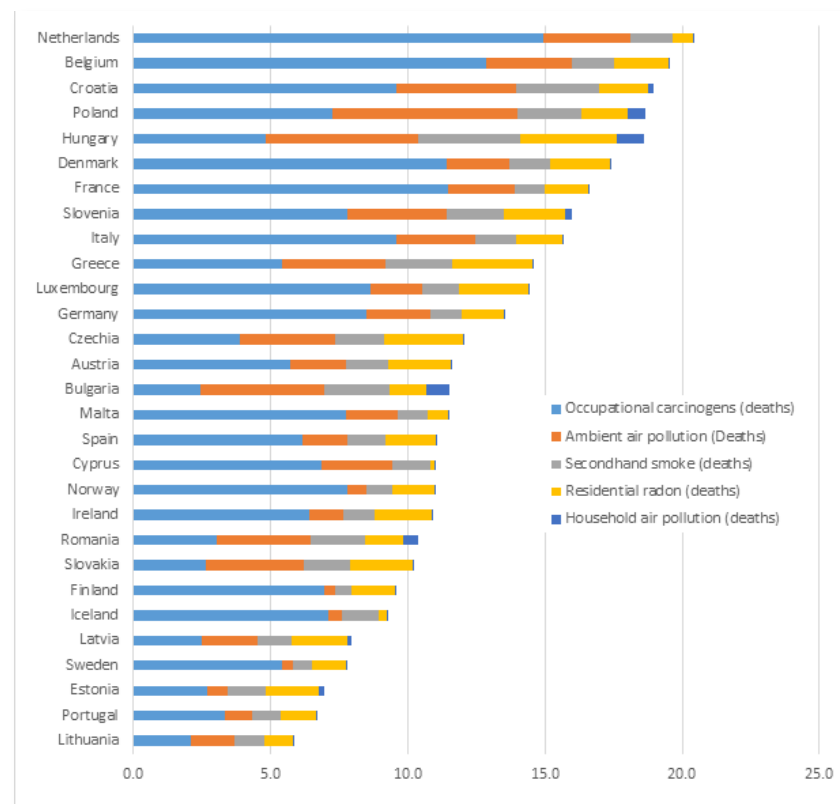
Home
ECIR data tool
Country Cancer Profiles
Cancer inequalities factsheets
Topics ▾
About ▾

Environmental indicators

Pollutants in the environment and the workplace have a huge impact on our health and are key risk factors for cancer. Exposure to environmental pollutants such as particulate matter, occupational carcinogens, radon, and indoor air pollution, may be responsible for over one tenth of the total cancer burden in Europe.

However, exposure to environmental pollution varies widely across the EU and there are pronounced inequalities in the environmental impact on cancer burden.

The environmental module of the European Cancer Inequalities Registry supports the Zero Pollution Action Plan, particularly its flagship initiative focusing on "Reducing health inequalities through zero pollution". It aims to shed light on trends and disparities across the EU, to better inform and direct decision-making at EU, national, and local levels. The current indicator set integrates data on exposure to environmental pollutants and the related cancer burden.

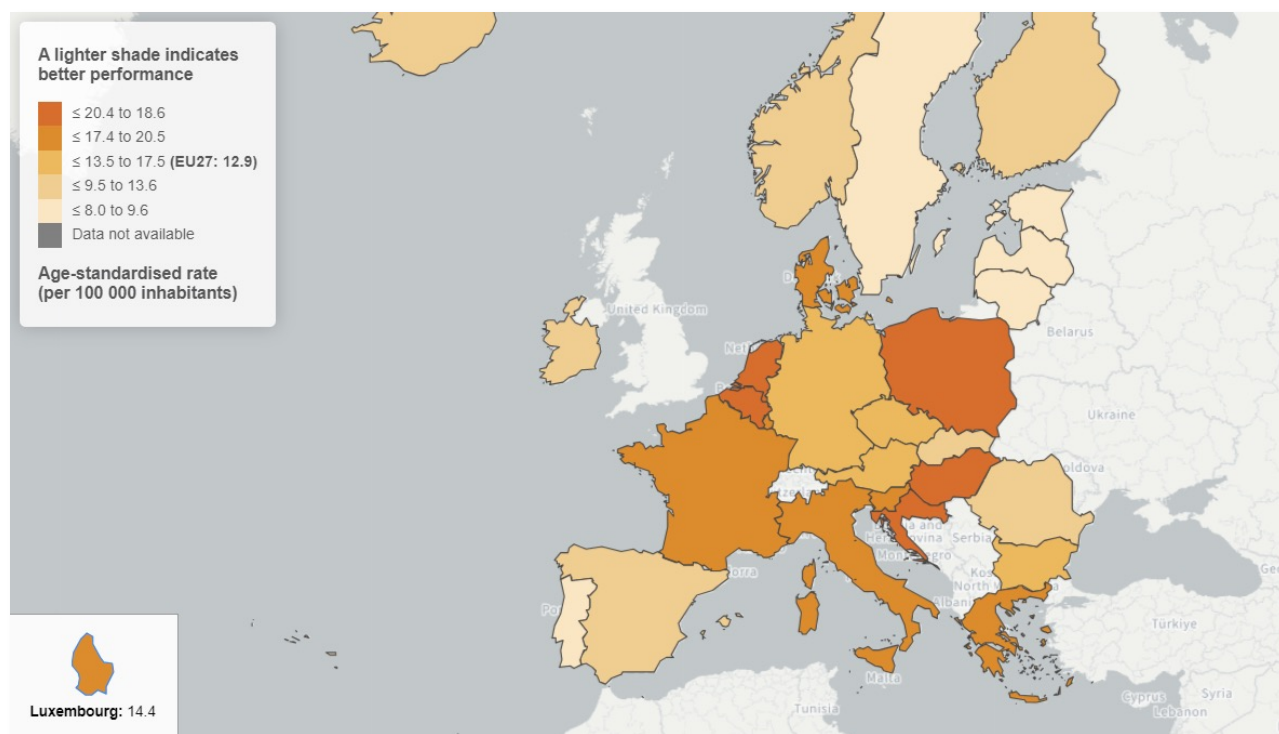


Cancer deaths attributable to environmental factors (per 100,000 inhabitants)

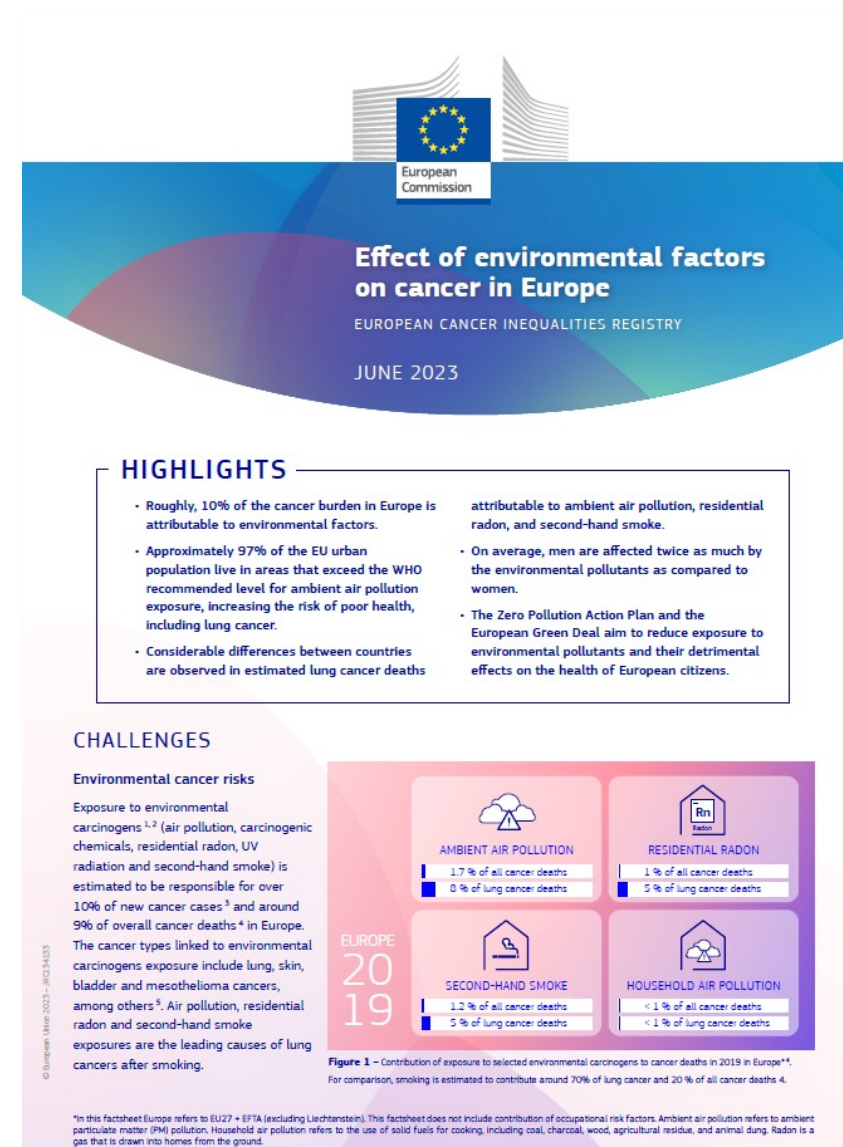
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Factsheet

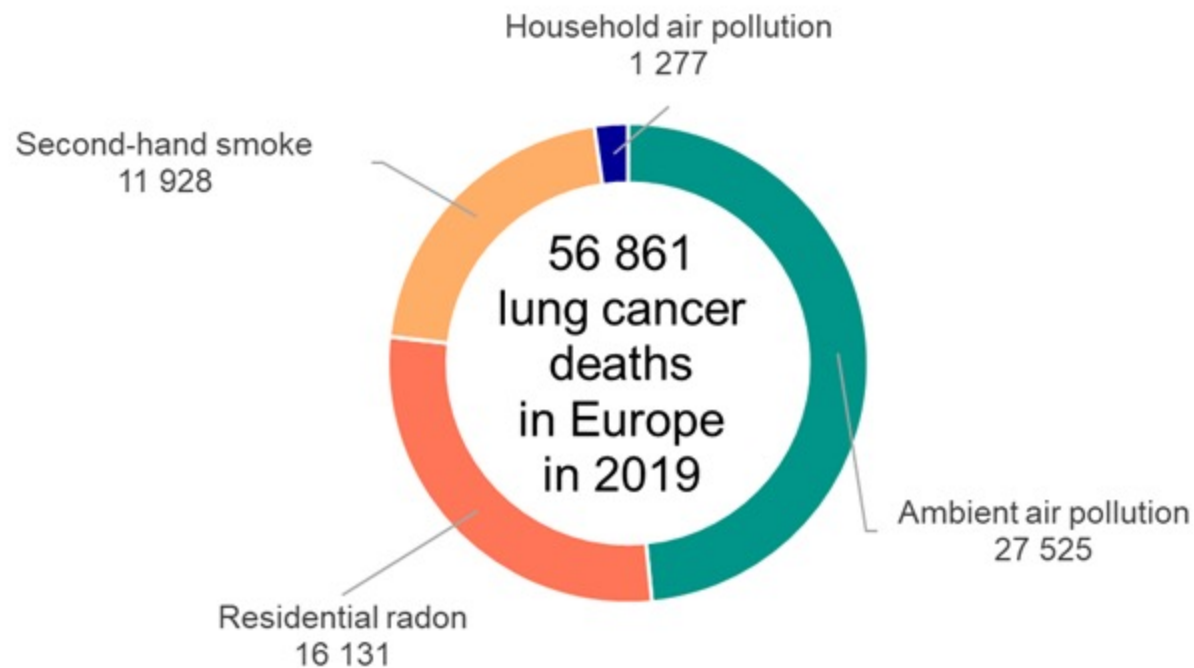


Cancer deaths attributable to environmental factors (per 100,000 inhabitants)

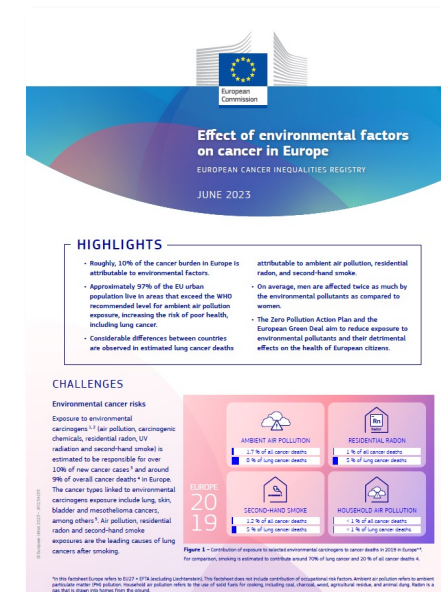


<https://cancer-inequalities.jrc.ec.europa.eu/sites/default/files/ECIR-inequalities-factsheet-environmental-cancer-Jun2023.pdf>

Effect of environmental factors

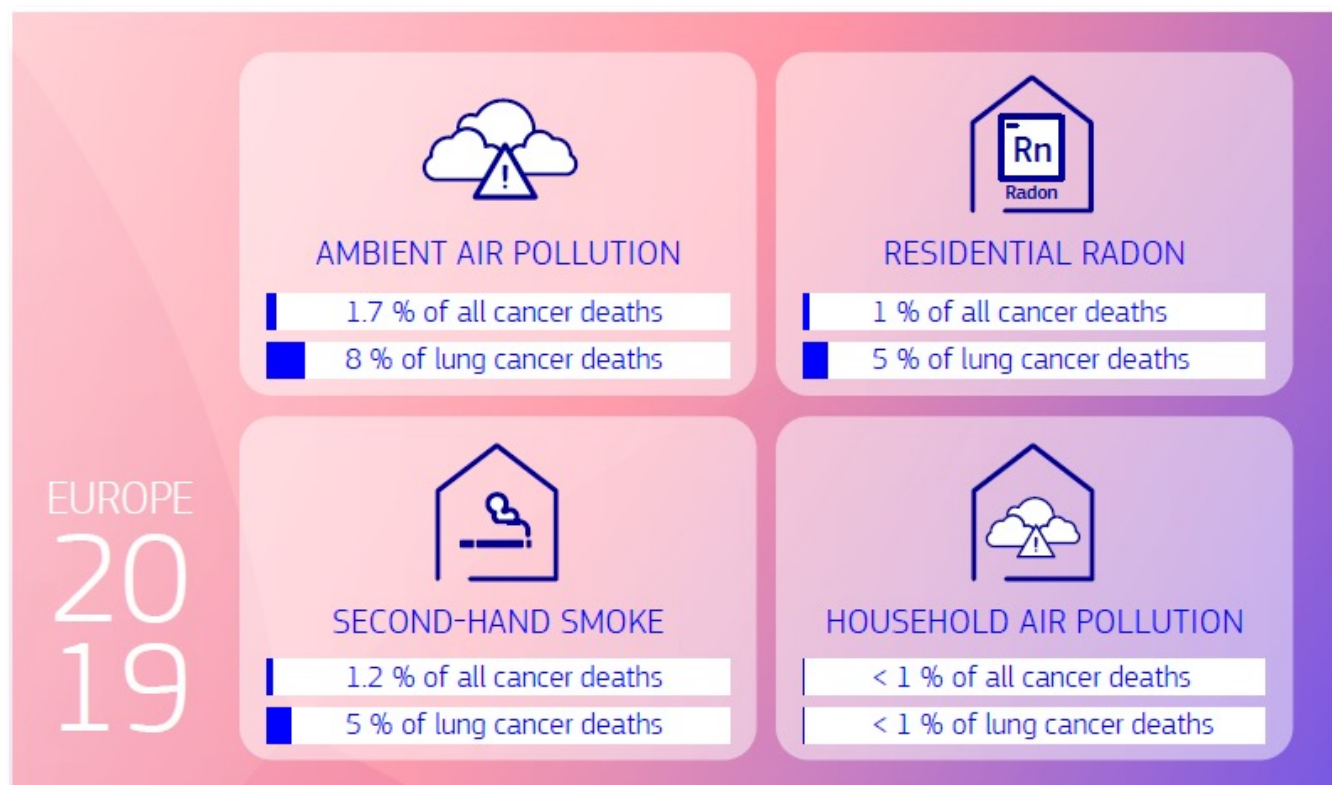


Number of lung cancer deaths in 2019 in Europe* due to exposure to environmental carcinogens.



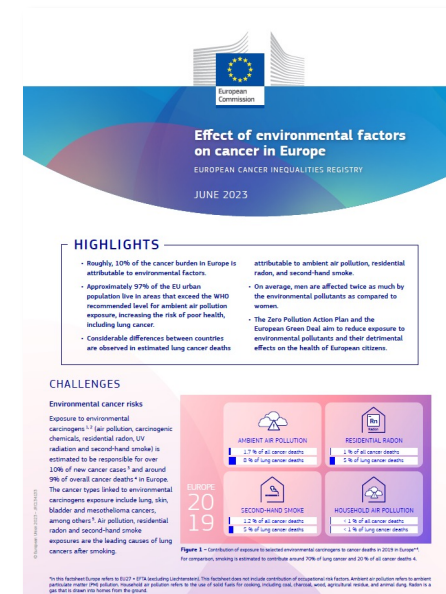
<https://cancer-inequalities.jrc.ec.europa.eu/sites/default/files/ECIR-inequalities-factheet-environmental-cancer-Jun2023.pdf>

The environmental burden of cancer



Contribution of exposure to selected environmental carcinogens to cancer deaths in 2019 in Europe.

<https://cancer-inequalities.jrc.ec.europa.eu/sites/default/files/ECIR-inequalities-factheet-environmental-cancer-Jun2023.pdf>



Closing the gap

The **inequalities** between EU countries and socioeconomic groups show the **need for action** – from governments and public health authorities - to mitigate the detrimental **impact of environmental carcinogens** on health.



<https://cancer-inequalities.jrc.ec.europa.eu/sites/default/files/ECIR-inequalities-factsheet-environmental-cancer-Jun2023.pdf>

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Conclusions and future developments

- Exposure to environmental pollutants may be responsible for **over one tenth** of the total cancer burden in Europe.
- **Exposure to environmental pollution** varies widely across the EU and there are pronounced **inequalities** in the environmental impact on cancer burden.
- The **environmental module** of the European Cancer Inequalities Registry supports the Zero Pollution Action Plan, particularly its flagship initiative focusing on "Reducing health inequalities through zero pollution".
- Future developments in the ECIR Data Tool may include the addition of more environmental indicators and the **generation of new data** on impacts of environmental factors on cancer

Keep in touch



EU Science Hub: ec.europa.eu/jrc



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EU Science Hub – Joint Research Centre



EU Science, Research and Innovation



Eu Science Hub

Thank you

If you have any questions or need more information, please contact us at: EC-ECIR@ec.europa.eu



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ZERO POLLUTION TALKS



COFFEE BREAK - we will reconvene at 16:15

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the newsletter



Register for the first **ZP Talk**:
Zero Pollution and the European Year of Skills





Session 2: Reducing cancer inequalities through preventing zero pollution



Wrap up of Day 1



Thank you for joining us and see you tomorrow!

For those joining us online, you will find us on the same link.

9:30	Session 3: Examining the impact of demographic factors on pollution
11:00	<i>Break</i>
11:15	Session 3: Examining the impact of demographic factors on pollution (continued)
11:45	Session 4: Outlook of the zero pollution and health agenda for 2030
12:45	Conclusions and next steps

Keep in touch:

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https://ec.europa.eu/environment/zero-pollution-stakeholder-platform_en

