

WEBINAR

Stories of use cases: Open data for the European Green Deal

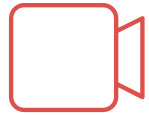
The logo for Data Europa Academy is located in the bottom left corner. It features a large red circle with a smaller white circle inside it. The text "data.europa academy" is written in white lowercase letters within the white circle.

data.
europa
academy

17 March 2023

10.00 — 11.30 CET

Rules of the game



The webinar will be recorded



Please mute yourselves during the webinar



Please reserve 3 min after the webinar to help us improve by filling in our feedback form



For questions, please use the ClickMeeting chat.

Agenda

10.00 – 10.15	Introduction to the series ‘Stories of use cases’ and the European Green Deal
10.15 – 10.45	Presentation of work by 3 use cases
10.45 – 11.25	Panel discussion with representatives from use cases
11.25 – 11.30	Wrap up and feedback

Introduction



Giuseppe Ascone Modica
Knowledge Management,
data.europa.eu



Matthias Böck
Environ-Mate



Arnout Sabbe
Geofluxus



Nikola Damjanovic
MyBioEUBuddy

Introducing ‘Stories of use cases’



What

Sharing experiences from the **Use Case Observatory**, **EU Datathon** and **data.europa.eu use case repository** to share how initiatives contribute to major global priorities

Why

Stories help grasp opportunities and showcase their potential and the impact of open data on innovative business opportunities

How

Delve into the green transition across Europe through 3 open-data-driven initiatives responding to environmental challenges

The European Green Deal

#EUGreenDeal

The European Green Deal is about **improving the well-being of people**.
No one will be left behind.

The EU will:



Become
climate-neutral
by 2050



Protect human life,
animals and plants,
by cutting pollution



Help companies
become world leaders
in clean products and
technologies



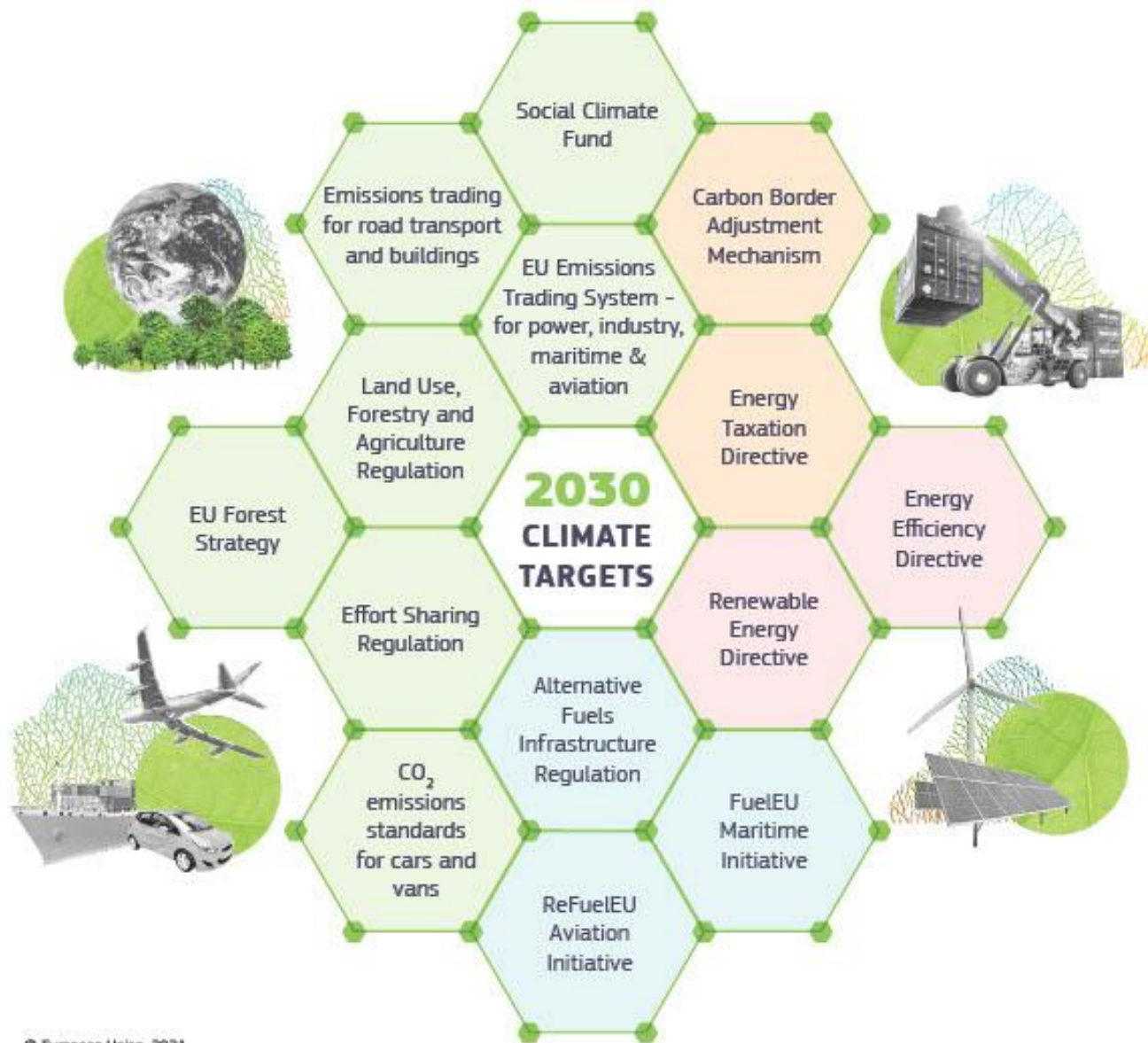
Help ensure a
just and inclusive
transition

WHAT WILL WE DO?

- **ENERGY** Decarbonise the energy sector
- **BUILDINGS** Renovate buildings, to help people cut their energy bills and energy use
- **INDUSTRY** Support industry to innovate and to become global leaders in the green economy
- **MOBILITY** Roll out cleaner, cheaper and healthier forms of private and public transport

DELIVERING THE EUROPEAN GREEN DEAL

THE DECISIVE DECADE



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Our panellists

Get to know: Environ-mate

Matthias Böck



FELDM

Marketing input for
business output.

Topic

Environ-mate

Focus

<https://environ-mate.feld-m.de>

Partner

EU

Author

FELD M

Date

16/03/2023

Why

In 2019, about half a year after Fridays for Future was started, we decided to participate in the EU Datathon and to find a solution that would help tackle climate change.

Climate is changing and we already feel the consequences



Overwhelming amount of sources of information



A new generation of politically active people



Educate pupils about climate change and means to act.

Who

We set out as a team of four and are/were part of FELD M.

FELD M is a Munich-based consultancy for digital products and strategies founded in 1999 with today 80 people.

FELDM

Team:

1 x Data Architect

2 x Data Scientists

1 x Working Student

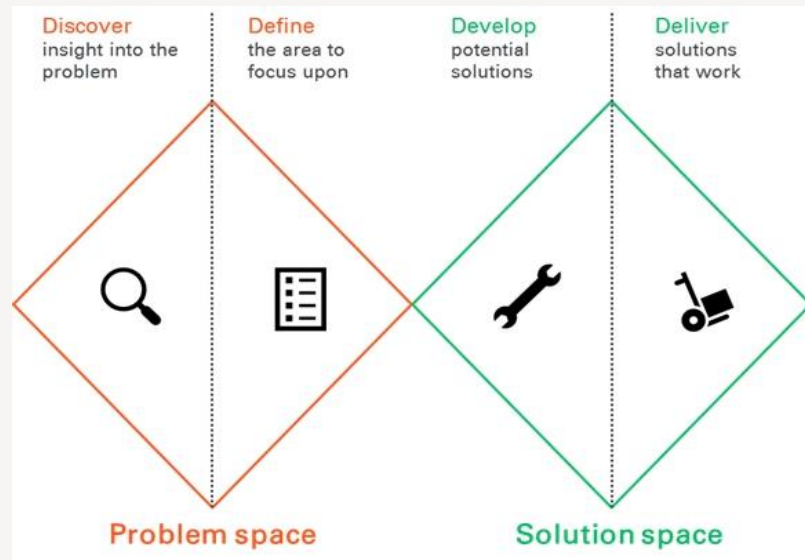


A banner for EUDATATHON 2019. The top left features the logo 'EUDATATHON 2019' with a colorful cube icon. To the right, it says 'THE FINALISTS' in a red box and 'Challenge 3 Tackling climate change' in a red box. Below this, there are four hexagonal portraits of team members. The top-left portrait is a man with dark hair. The top-right portrait is a grey silhouette of a person's head and shoulders. The bottom-left portrait is a man with dark hair. The bottom-right portrait is a man with dark hair. To the right of the portraits, the text reads 'ODCCI (Open Data Climate Change Insights)' and 'Dr. Matthias Böck, Bernhard Janetzki, Alexander Merdian-Tarko, Paul Schlumbom'.

What

We followed a Design Thinking approach to come up with our idea and tried to integrate our target group as much as possible throughout the development. One time-consuming aspect, which we did not account for in the beginning, was the creation of content (explanations).

Approach



Our Vision

- Explain cause and effect of climate change to pupils (10-14 years old)
- Interactive and intuitive platform, which uses scientific data
- Learn and act principle
- Open-source platform to allow development of own stories (framework)

Be the platform to go to for recent and reliable information on climate change for your own country and the whole of Europe.

Demo – Intro

What is climate change?

You've likely heard of climate change. So, what's it all about?
In recent decades the average temperature of earth has dramatically increased. 1 to 2 degrees celsius (°C) doesn't sound like much, but has a big impact on our environment.

If you take a look at the annual average temperature deviations in Europe and compare it to the time before 1900, you see that recent years in particular become increasingly warmer:

■ Annual average temperature deviations compared to pre-industrial average (pre 1900)

But why does the temperature on earth keep increasing?
I'll explain that to you on the next pages.

[Start explanation of climate change >](#)



In the intro we briefly explained the effect of climate change and its cause

Demo – Carbon Levels p. Industry

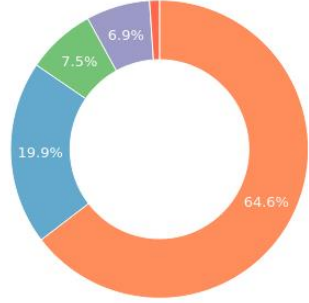
What are greenhouse gases and where do they come from?

The biggest contributor to the greenhouse effect is CO₂ gas. Car traffic and the burning of fossil fuels (e.g. gas, oil, coal) causes most of the CO₂ emissions (emissions of the gas into the environment).

Once greenhouse gases are released their stay in the atmosphere varies - CO₂ for example lasts up to 120 years.

Therefore, we cannot immediately reverse the effects with a sudden stop of emissions, but at least make sure that the situation does not get worse.

Greenhouse gas emissions 2019 in your country Deutschland



Sector	Percentage
energy	64.6%
transport	19.9%
agriculture	7.5%
industry	6.9%
waste	5.1%

Legend: agriculture (green), energy (orange), industry (purple), transport (blue), waste (red)

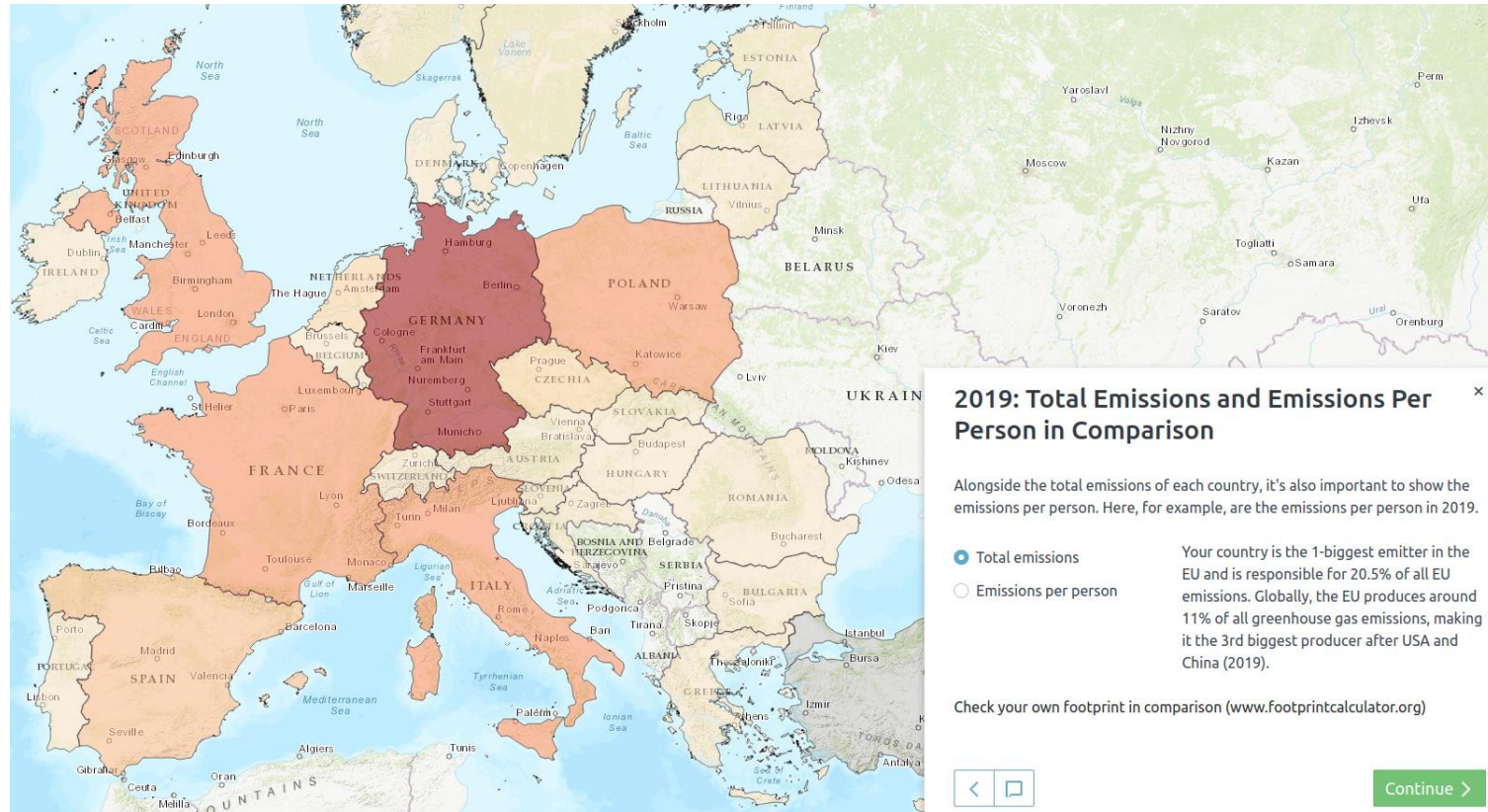
Notes: The EU provides actual emissions data until 2017. From 2018 on we therefore use official EU projections. The energy sector includes emissions of private households.

[Continue >](#)



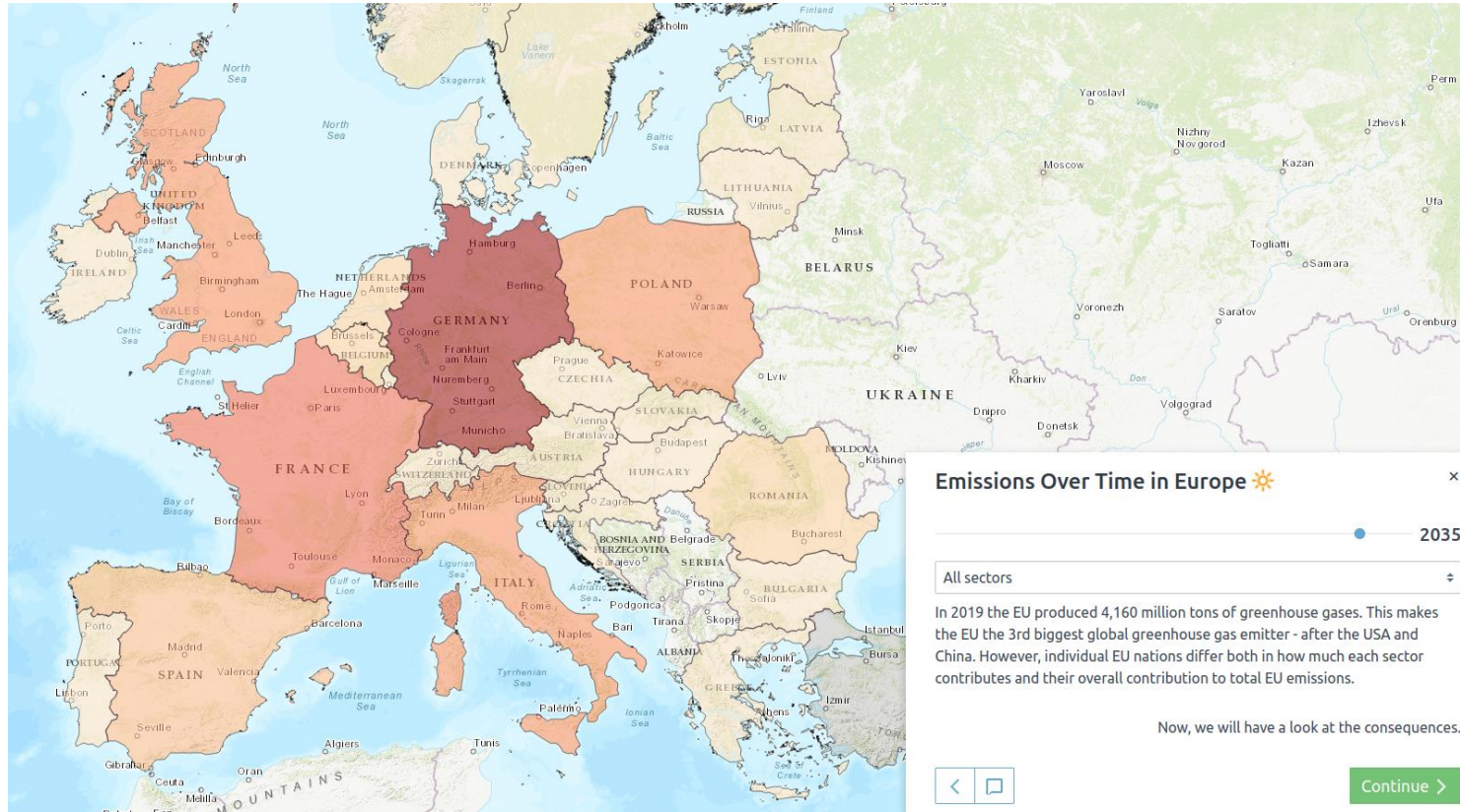
For your selected country we showed how the carbon emissions are distributed across different sectors

Demo – Carbon Levels p. Country



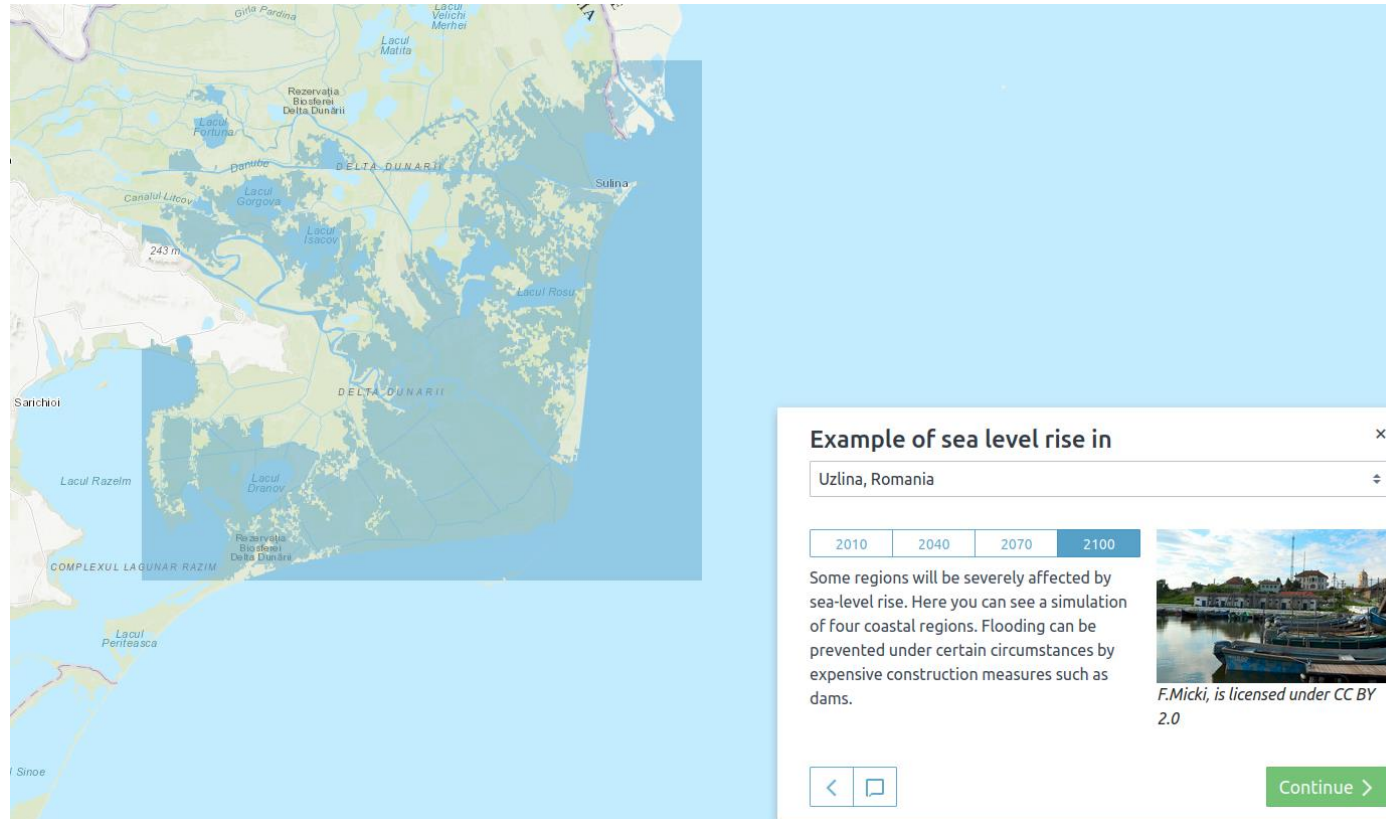
We also showed the emissions per country to put it in relation within an European context

Demo – Carbon Levels over Time



Using the projections from the EEA to show the development over time

Demo – Sea Level Rise



We showed for specific regions in Europe how the sea level rise might effect them.

Demo – Consequences/Actions

What can you do to help counter climate change and its consequences?

You've learnt much about the causes and consequences of climate change. But what can you, as a single person, do about all that? Here are some tips on what you can do to contribute to a better future for all

- Discuss climate change with family, friends, and acquaintances to show off what you've learnt
- Visit the next Fridays for Future demo in your area, to meet and collaborate with like-minded people: <https://www.fridaysforfuture.org/events/list/>
- Calculate your ecological footprint to check how sustainable your lifestyle is: <https://www.footprintcalculator.org/>
- Check out the EU's tips for how you can help counter climate change: https://europa.eu/euandme/passion/fighting-climate-change_en
- Try out the Zero Waste rules, to create a more sustainable and climate-friendly lifestyle: (button below)
- Develop your own Stories with Environ-Mate and help improve the understanding of climate change: <https://github.com/environ-mate/>


The following sites present further tips.

[5 Practical Examples >](#) [Zero Waste Rules >](#) [Further Infos >](#)

How might our future unfold?

With the current climate policies in place, the global average temperature increase would be more than 3°C until 2100. The agreed targets of the Paris Agreement of 2015 would also not limit the temperature increase to less than 2°C. To limit the temperature increase to clearly below 2°C, more ambitious measures have to be taken to contain the dramatic, already noticeable consequences of climate change.

- 4.1 to 4.8°C: Projections without any limitation of emissions.
- 3.1 to 3.7°C: Projections with current global policies in place.
- 2.6 to 3.2°C: The targets of the Paris Agreement are reached.
- 2°C: The targets of the Paris Agreement would have to be exceeded.
- 1.5°C: Emissions would have to be reduced quickly and drastically.

 **Take your opportunity to act against climate change and secure a brighter future for us all!**

[Back to Start >](#)



Giving some tips on how to act as an individual and the consequences for our future if we do not act now

Learnings

- Also with a small team and a small amount of time we can contribute to global problems
- Finding a sustainability strategy for the solution is difficult and needs additional time, effort and especially funding
- Open data is key for many initiatives and needs dedicated funding to be made accessible to the public
- Today we probably must less think about the younger generation since they are aware and are mostly educated on this topic but in the aging societies of Europe (median age above 44 years in 2022), politics are mostly driven by the older generations.

Thank you!

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FELDM

Get to know: Geofluxus

Arnout Sabbe

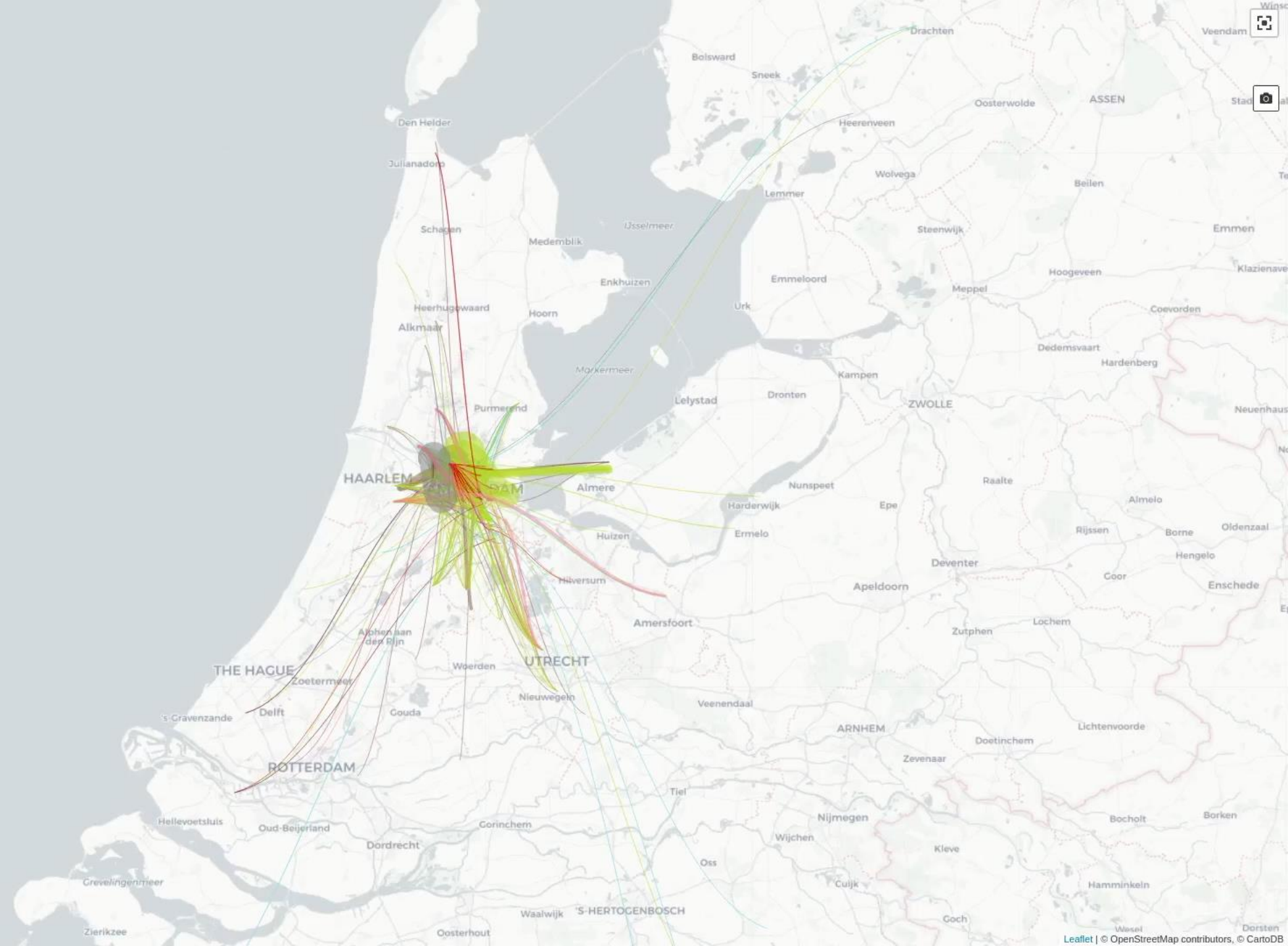


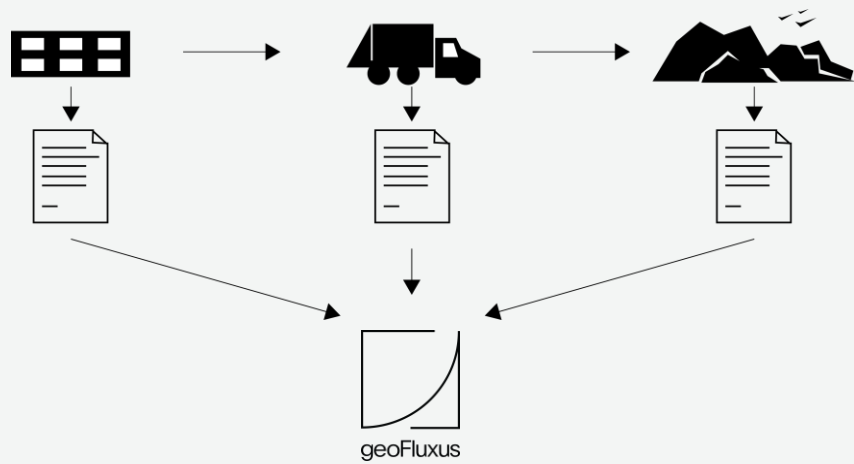
Linking open data for a
less linear economy





- Show stocks
- Show actors
- Show flows
- Display materials
- Cluster locations
- Light/dark
- Animate flows
- lines only dotted





- + data cleaning
- + geolocation
- + geospatial data enrichment
- + machine learning for the free text field interpretation
- + semantic reclassification of (waste) materials



Poland



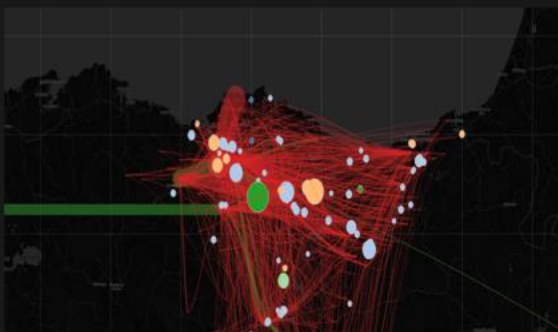
Italy



Hungary



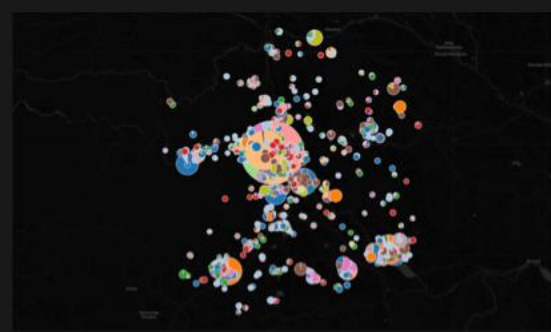
Belgium



Spain



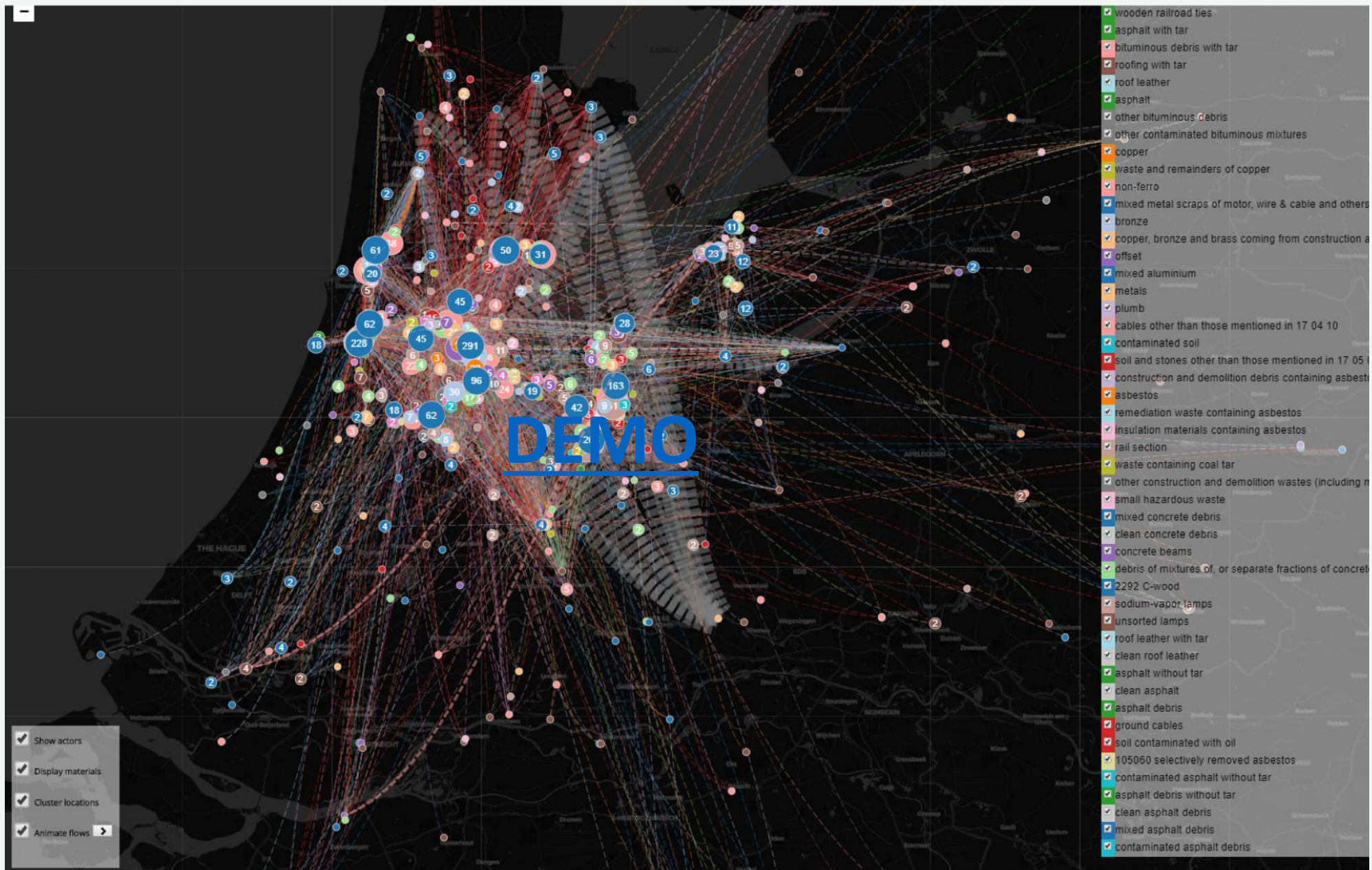
Slovenia



Germany



The Netherlands



89%

of all waste comes from
companies.

Only

11%

is household waste

[Metropoolregio Amsterdam, 2019]

60%

of all waste can be processed in a
better way.

[Metropoolregio Amsterdam, 2019]

70%

of all waste is produced by only

7%

of all companies.

[Metropoolregio Amsterdam, 2019]

Yearly more than

9 million kms

are travelled to transport waste
from Amsterdam to processors
around the country.

[Metropoolregio Amsterdam, 2019]

Waste



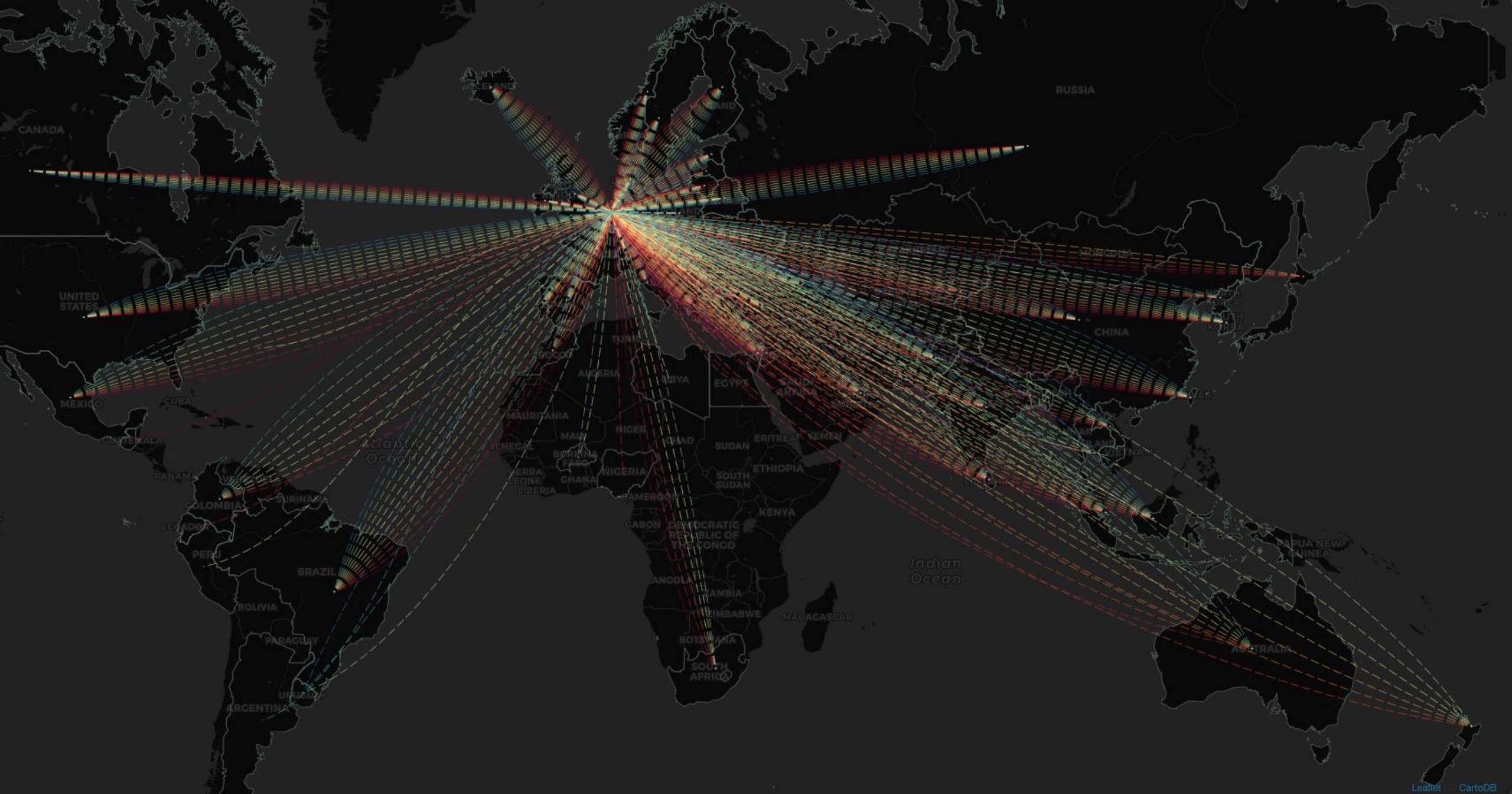
Economic activities



Product



Raw material





The European Green Deal

#EUGreenDeal

+ “Improving security of supply of products, components and materials”

+ “Reducing the environmental impact of material use”

+ “Developing forward-looking European economy”



More questions

arnout@geofluxus.com



Waste type

- Select All
- 01 Wastes from Exploration, Mining and Quarrying
- 02 Wastes From Agriculture and Food Preparation
- 03 Wastes From Wood Processing
- 04 Wastes From The Leather, Fur And Textile Industries
- 05 Wastes From Petroleum Refining and Natural Gas Purification
- 06 Wastes From Inorganic Chemical Processes
- 07 Wastes From Organic Chemical Processes
- 08 Wastes From The Manufacture Of Coatings and Paints
- 09 Wastes From The Photographic Industry
- 10 Wastes From Thermal Processes
- 11 Wastes From Chemical Treatment Of Metals
- 12 Wastes From Shaping Of Metals And Plastics
- 13 Oil Wastes And Wastes Of Liquid Fuels
- 14 Waste Organic Solvents, Refrigerants And Propellants
- 15 Waste Packaging
- 16 Wastes Not Otherwise Specified In The List
- 17 Construction And Demolition Wastes
- 18 Wastes From Human Or Animal Health Care
- 19 Wastes From Waste Management Facilities
- 20 Municipal Wastes

Get to know: MyBioEUBuddy

Nikola Damjanovic



My Bio EU BUDDY

Discover! Apply! Share!

Problem

The average EU bio production is 7.5%.

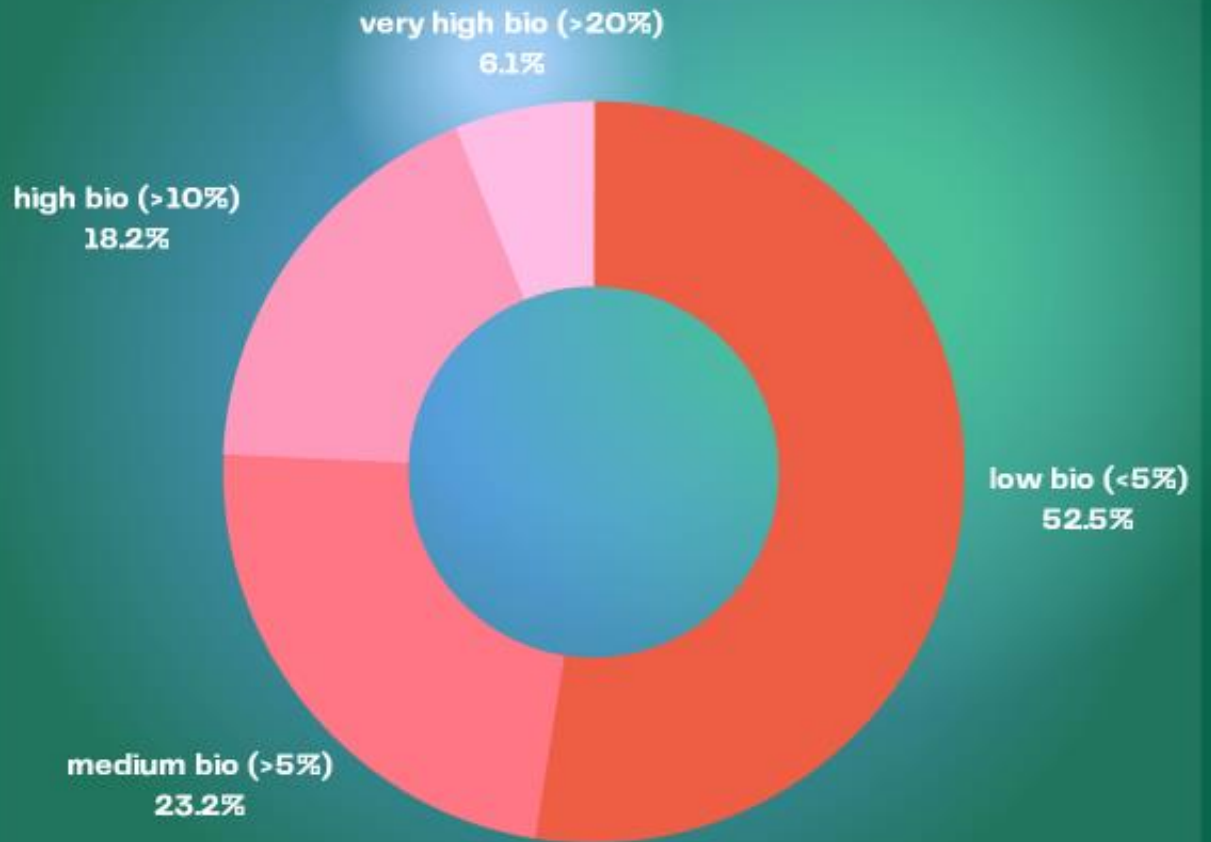
1

The Farm to Fork program aims to increase bio production to 25% by 2030.

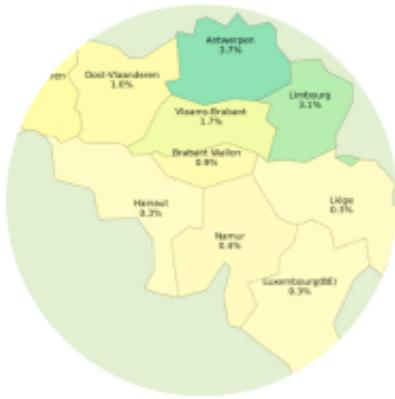
2

y/y growing demand for healthy food.

Distribution of EU regions (bio production)



Proposed Solution



Interactive visualizations

Dashboards on EU regions based on geo, agro, climate and bio indicators



Clusterization ML models

unsupervised and supervised ML models for identifying clusters



Data-driven recommendation

know-how of "buddy" regions (projects, initiatives, practices...)

Research & Methodology

How do we determine cluster for each region?

- Unsupervised Machine Learning model (clustering) of EU regions.
- Supervised machine learning model for classification of non-EU regions (EU candidate countries).

How do we determine bio-buddy?

- Recommendations are based on the properties of “Very High” and “High Bio” regions from the same cluster (qualitative analysis and benchmarking).

Tech

PER CATEGORY



SQL



Python



ML



CSS

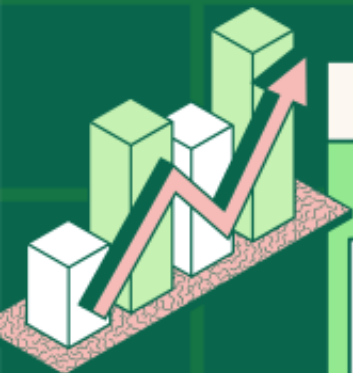


Storage



Web



A screenshot of a web browser window. The browser's address bar is empty. The page content includes:

- A green folder icon in the top right corner.
- A large green heading:

Resource Page
- Text:

Main Data Sources:
- Three smaller browser window thumbnails:
 - Left: eurostat logo with the European Commission logo.
 - Middle: data.europa.eu logo with FiBL and COZEP logos.
 - Right: Video Viewer window showing logos for bioregions.eu, EGDI, and Agence BIO.





Short analysis on clusters

Climate indicators in January, April, July and October:

Temperature by clusters (°C)



Humidity by clusters



Number of rainy days by clusters





- HOME
- COMPANIES
- PRODUCTS
- WORLDWIDE MARKET
- CONTACT

Please filter here

SEARCH FOR COMPANIES

SEARCH FOR BY COUNTRY/CLUSTER



Similarity score (the same cluster)

Friend score (TOP producers, bio >10%)



Key Challenges

DATA
COLLECTION
ACTIVITIES ON
EU LEVEL COVER
ONLY PART OF
OUR DATA
REQUIREMENTS

LOW LEVEL OF
DATA
GOVERNANCE IN
EU CANDIDATE
COUNTRIES

DATA
AVAILABILITY
ON REGIONAL
LEVEL



UNIFIED BIO
PROJECTS DATA
BASE NOT
EXISTING

NEXT STEPS

1
IMPROVE
QUALITY OF
RECOMMEND.


2
UI/UX
IMPROVEMENTS

3
CROSSING DATA
WITH EU
FUNDINGS FOR
BIO-BASED
INNOVATION
AND
BIOECONOMY

4
STRUCTURING
LIST OF BIO
PROJECTS

5
COLLABORATION
WITH REGIONAL
AND LOCAL
GOVERNMENTS
AND BIOLOGICAL
INSTITUTES

Thank You!

 @mybioeubuddy

Let food be thy medicine and
medicine be thy food.

HIPPOCRATES



Panel discussion

Leave your questions in the chat!



The panel discussion starts with a few structured questions

1

How does your initiative make an impact on environmental challenges?



2

What open data do you use for your initiative?



3

How do you gather your necessary data and what are the (quality) standards you maintain?



The panel discussion starts with a few structured questions

4

What challenges have you faced when founding your initiative?



5

What tips do you have for the open data community to start their own initiatives?



6

Questions from the audience



Stay up-to-date on our 2023 activities!

- **Webinar series dedicated to the Open Data Maturity dimensions – *coming soon***
- **Webinar series 'Stories of use cases' continued – *coming soon***
- **Ad-hoc activities on data spaces and open data – *coming soon***

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your feedback!



Thank you

