

MASTER IN RENEWABLE ENERGY IN THE MARINE
ENVIRONMENT



Climate change policies & Career paths for engineers

Dr Thomas Vyzikas, Bilbao 18 June 2025

SKOLSTREJK
FÖR
KLIMATET









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1. Overview of the climate international agreements
2. Climate scenarios
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4. The offshore energy strategy
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Cornerstone international agreements

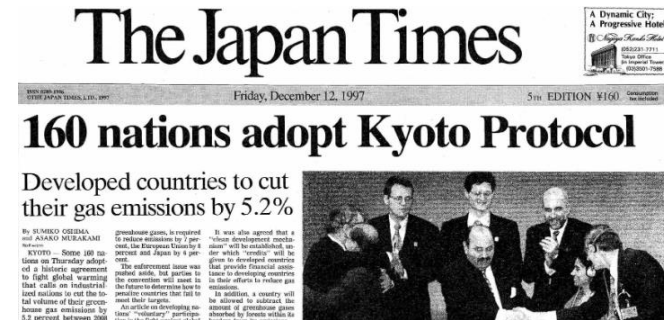


- 1992 Rio de Janeiro: The UN Framework Convention on Climate Change (Earth Summit)

Recognising the problem of global warming and the need for sustainable development model

- 1997 The Kyoto protocol

First binding rules for reducing by 5% the Green House Gas (GHG) emissions



- 2015 UN Agenda 2030 Sustainable Development Goals: 13 Climate Action



- 2015 The Paris agreement

The first legally binding treaty for not exceeding global warming by 2°C and make effort for limiting to 1.5°C



- 2019 European Green Deal

Balanced and sustainable growth model aiming for climate neutrality by 2050 (55% reduction of GHGs by 2030)



- 2021 The Paris agreement rulebook (COP26, Glasgow)

191 countries held accountable for delivering emission reductions Nationally Determined Contributions (NDCs)
“enhanced transparency framework”: parties must report regularly on their emissions and on their progress

IPCC Intergovernmental Panel on Climate Change

- Body of the United Nations with the objective to provide knowledge and evidence for the analysis of climate change caused by human activities
- Founded in 1988 by the World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP) and it has 195 members
- Analyses the current scientific body of knowledge about climate change, its impacts, vulnerabilities, risks, climate mitigation and adaptation, it compiles it in comprehensive periodic reports with the scope to provide evidence for appropriate climate policies
- Review and summarizing of the recent research is done by volunteer scientists
- Last publication Assessment Report 6: Climate Change 2023
- Working groups:

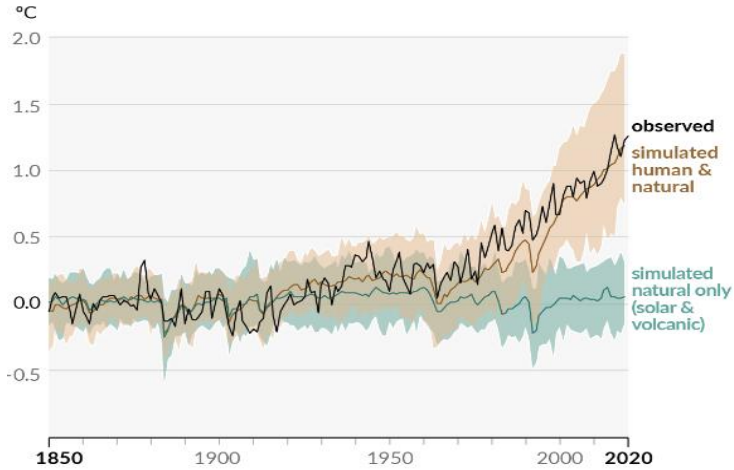
I) The Physical Science Basis

II) Impacts, Adaptation, and Vulnerabilities

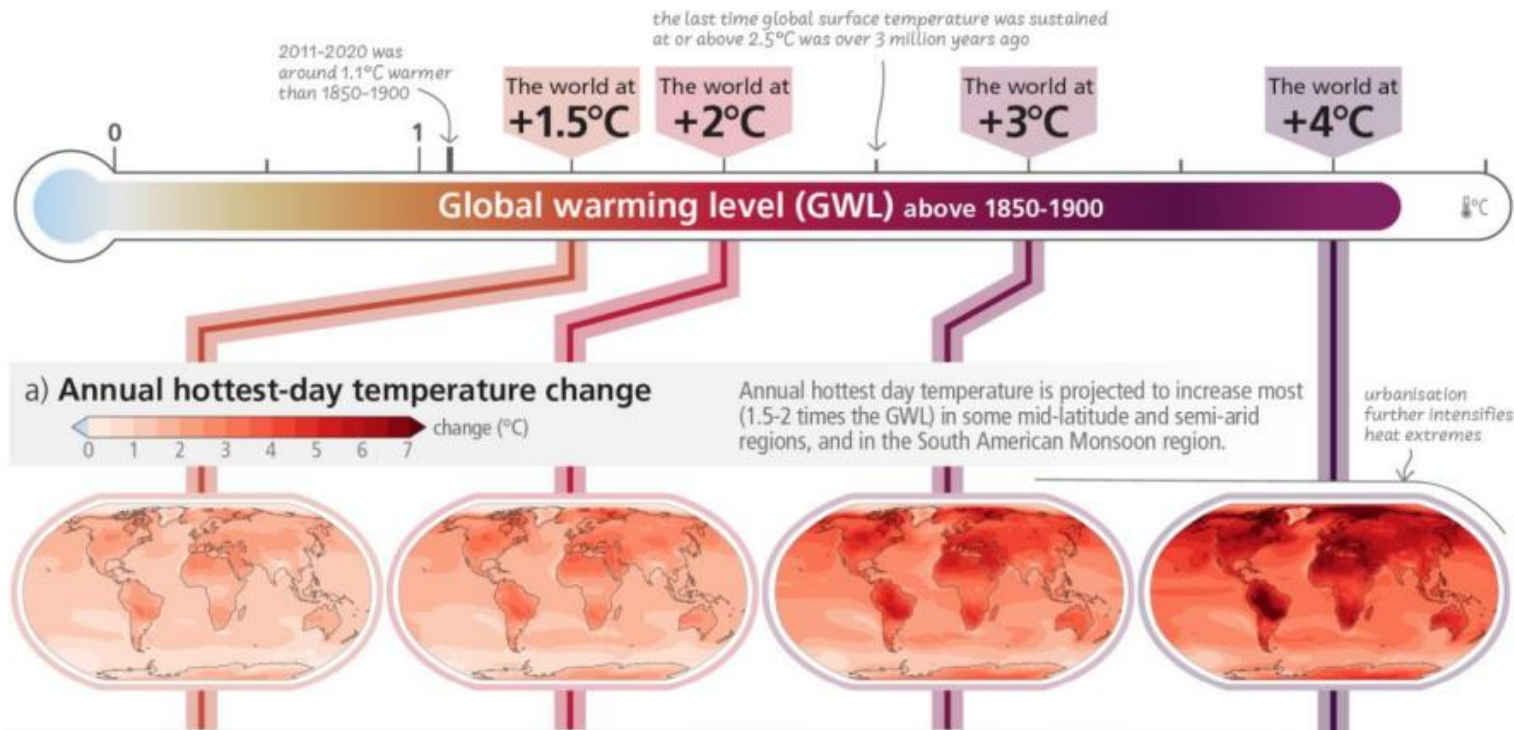
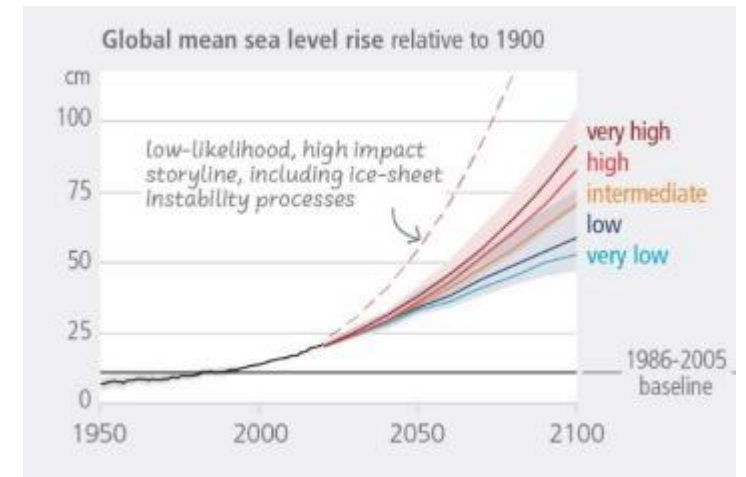
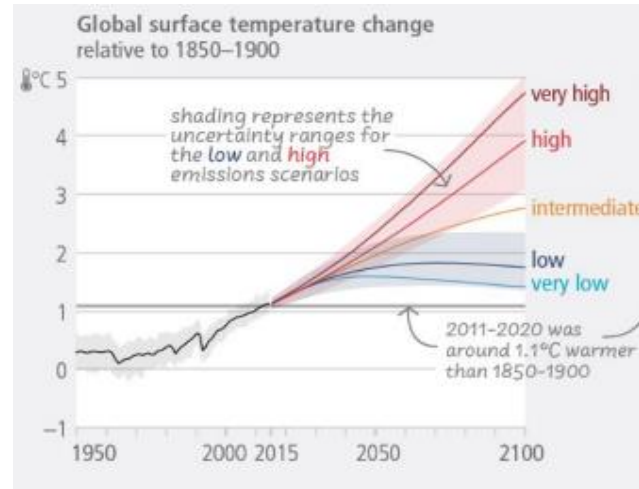
III) Mitigation of Climate Change

See also: UN Climate Change Conference (COP)

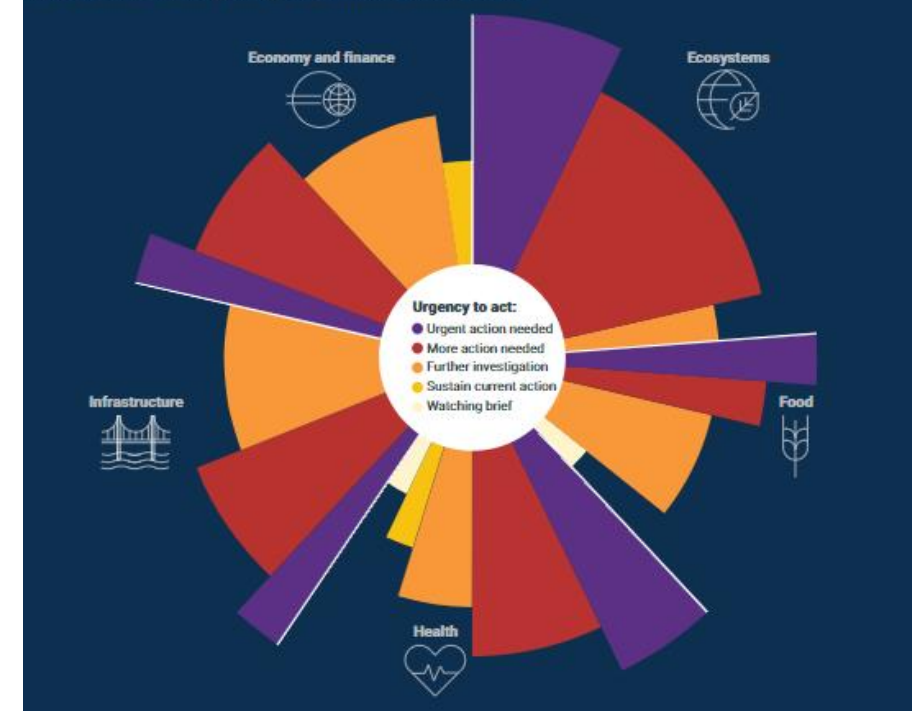
Climate scenarios - Shared Socioeconomic Pathways (SSPs)



IPCC AR6: <https://www.ipcc.ch/report/ar6/wg1/chapter/chapter-2/#2.2.3>

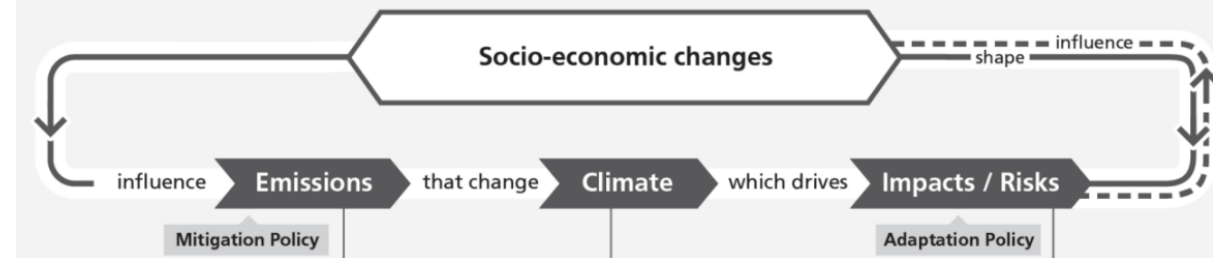
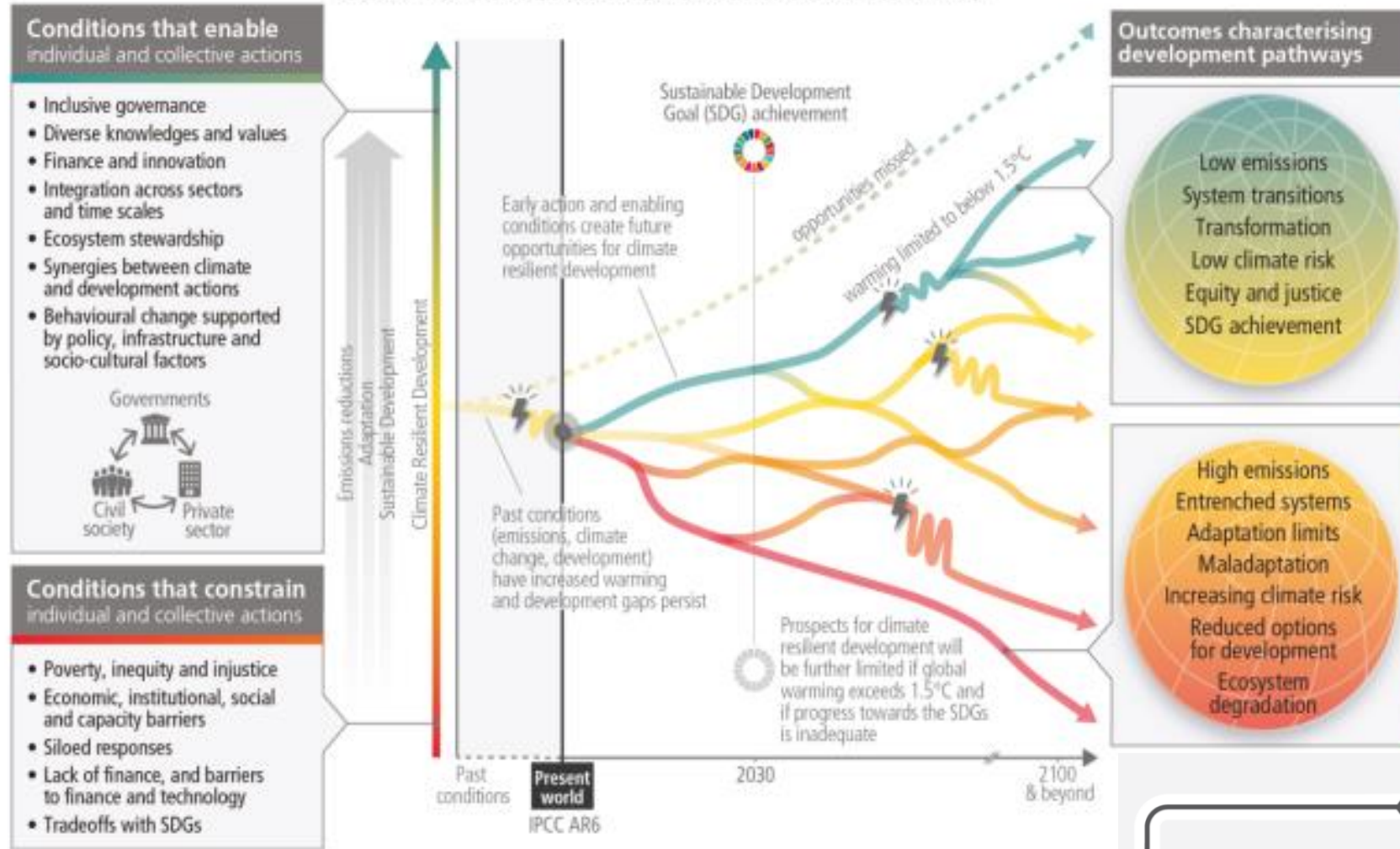


Priorities for EU policy on climate adaptation



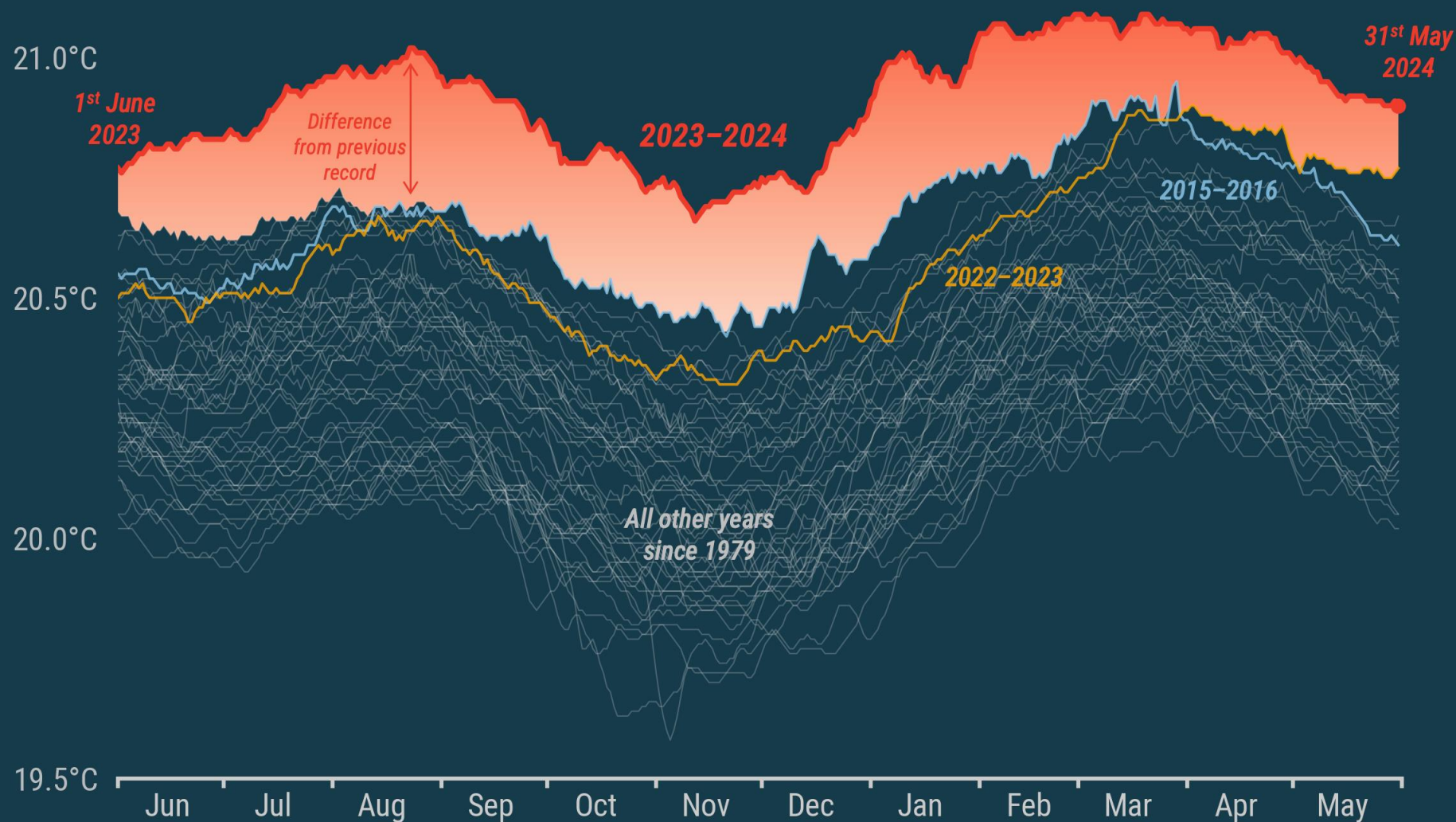
Climate scenarios, actions and vulnerabilities

Multiple interacting choices and actions can shift development pathways towards sustainability



Daily sea surface temperature for 60°S-60°N

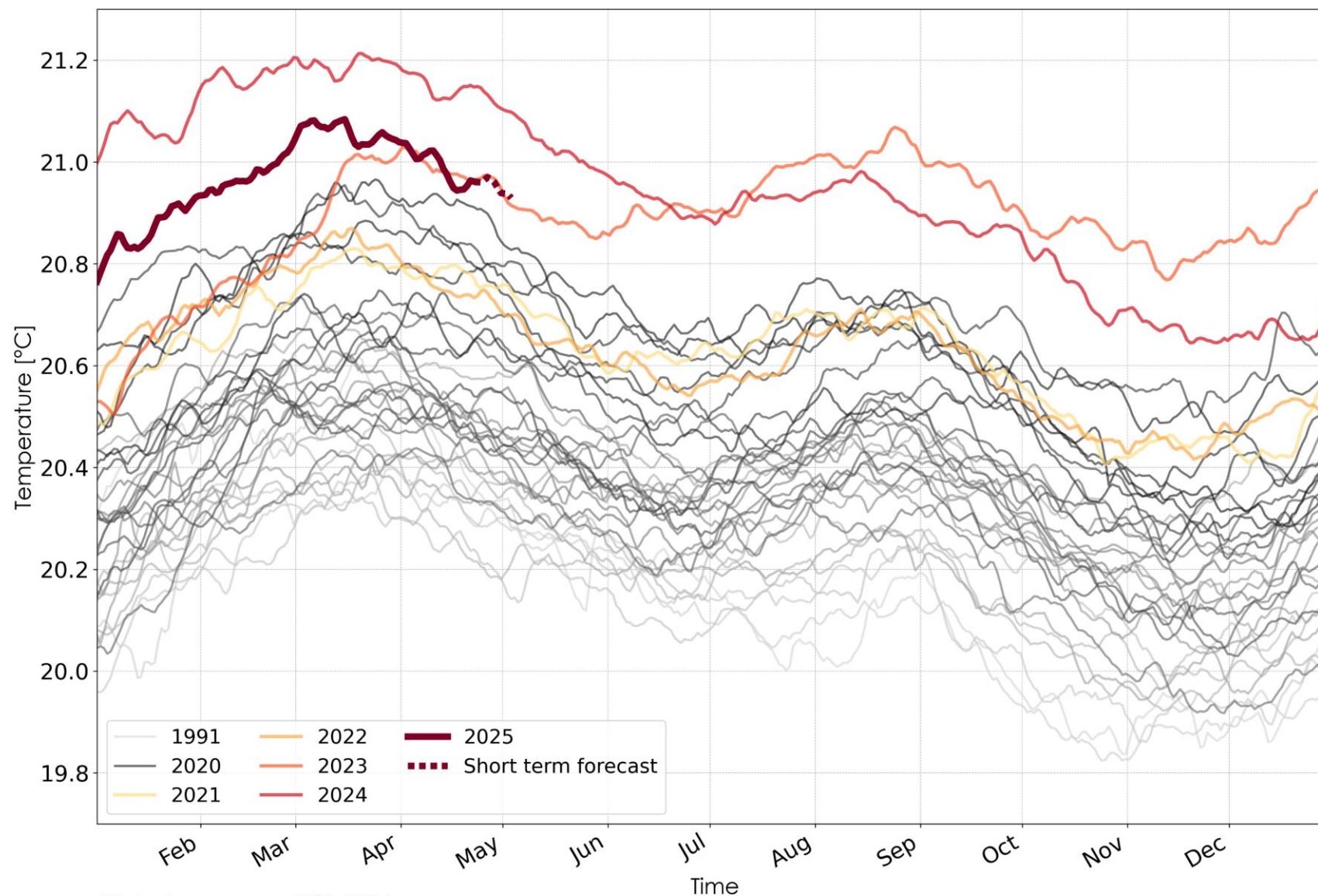
Data: ERA5 1979–2024 • Credit: C3S/ECMWF



PROGRAMME OF THE
EUROPEAN UNION



Sea Surface Temperature average over 60°S-60°N



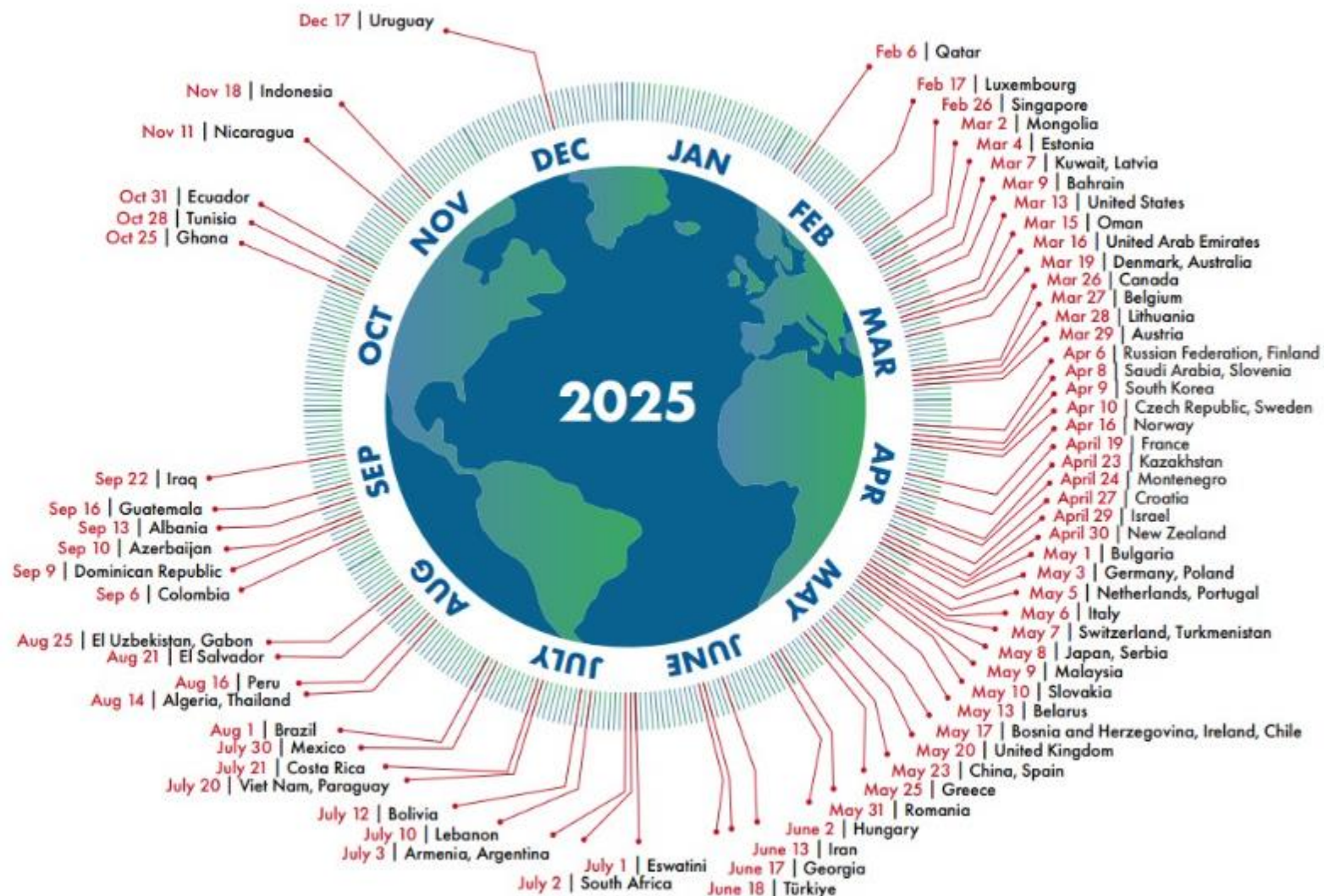
Global zone over 60°S-60°N

Grey shades represent ESA CCI data between 1991-2020

Coloured shades represent Mercator Ocean GLO12 analysis and forecast

Country Overshoot Days 2025

When Earth Overshoot Day would land if all the people around the world lived like...

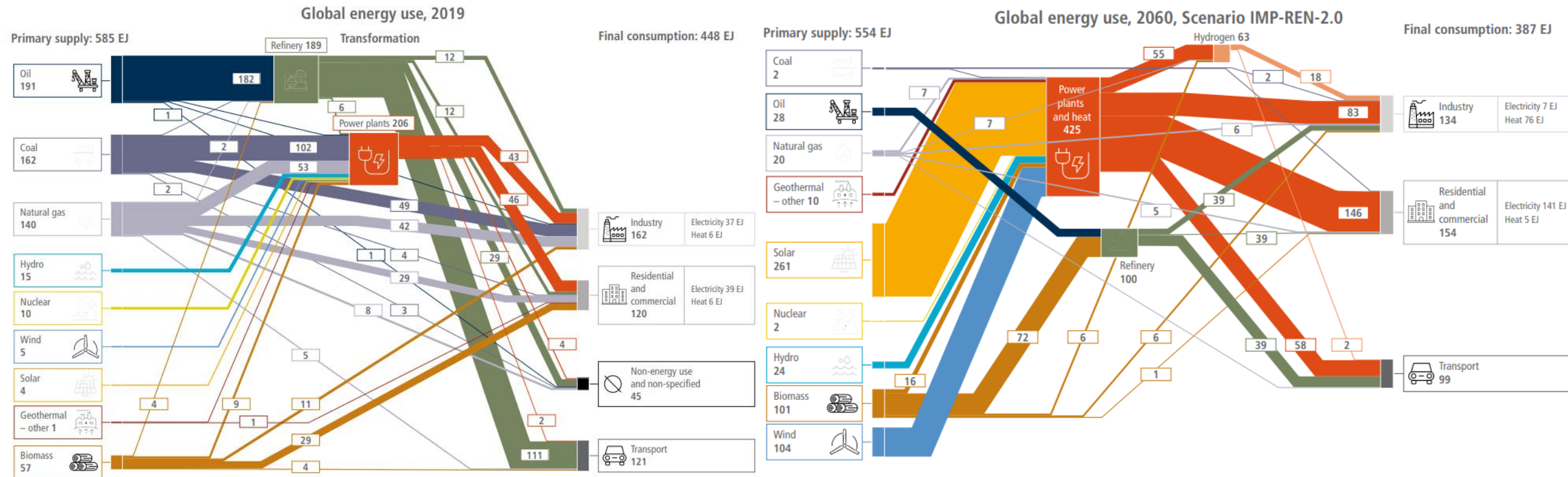
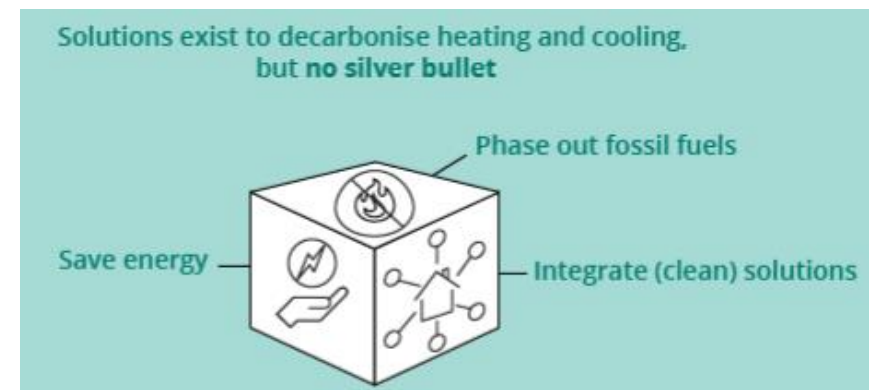


For more information, visit:
<https://overshootday.org/newsroom/country-overshoot-days/>

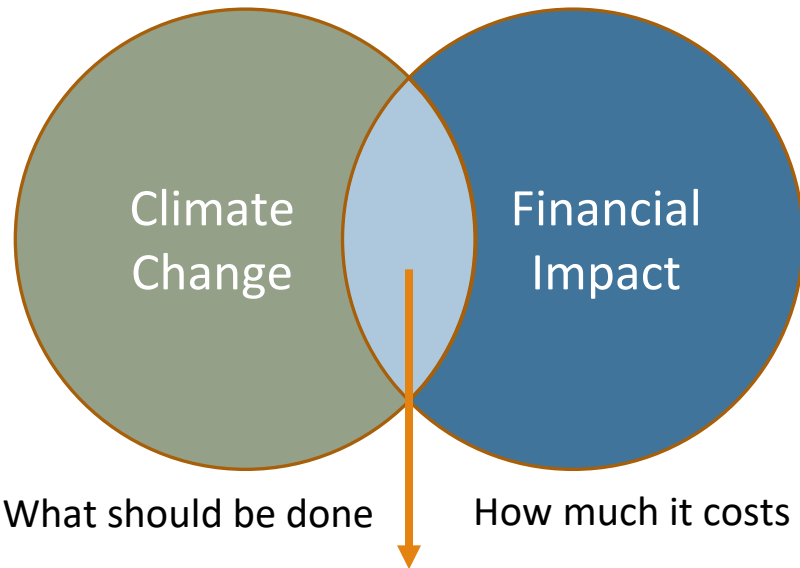
Source: National Footprint and Biocapacity Accounts, preliminary 2025 Edition
York University, FoDaFo, Global Footprint Network, data.footprintnetwork.org



What do we need to do?



Economics of adaptation



What should be done How much it costs

What we agree to do

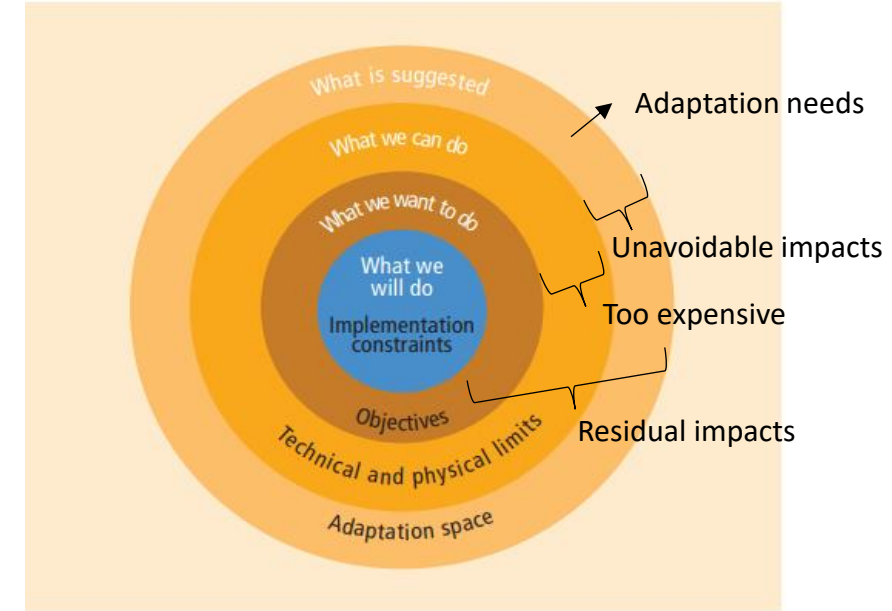
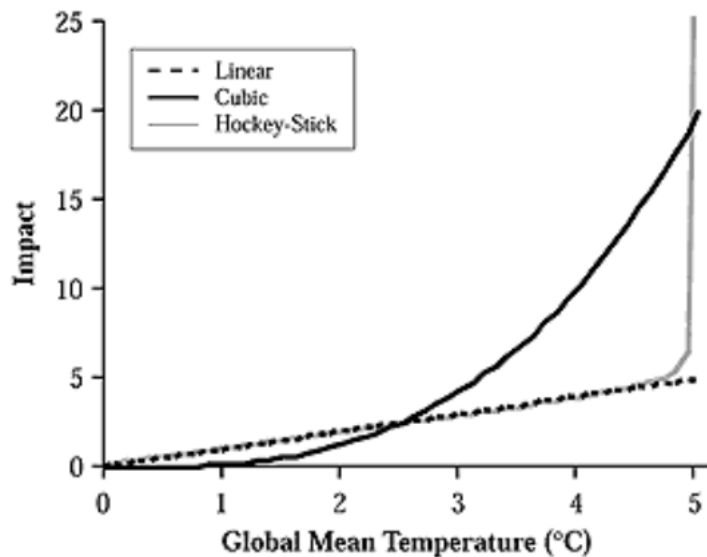
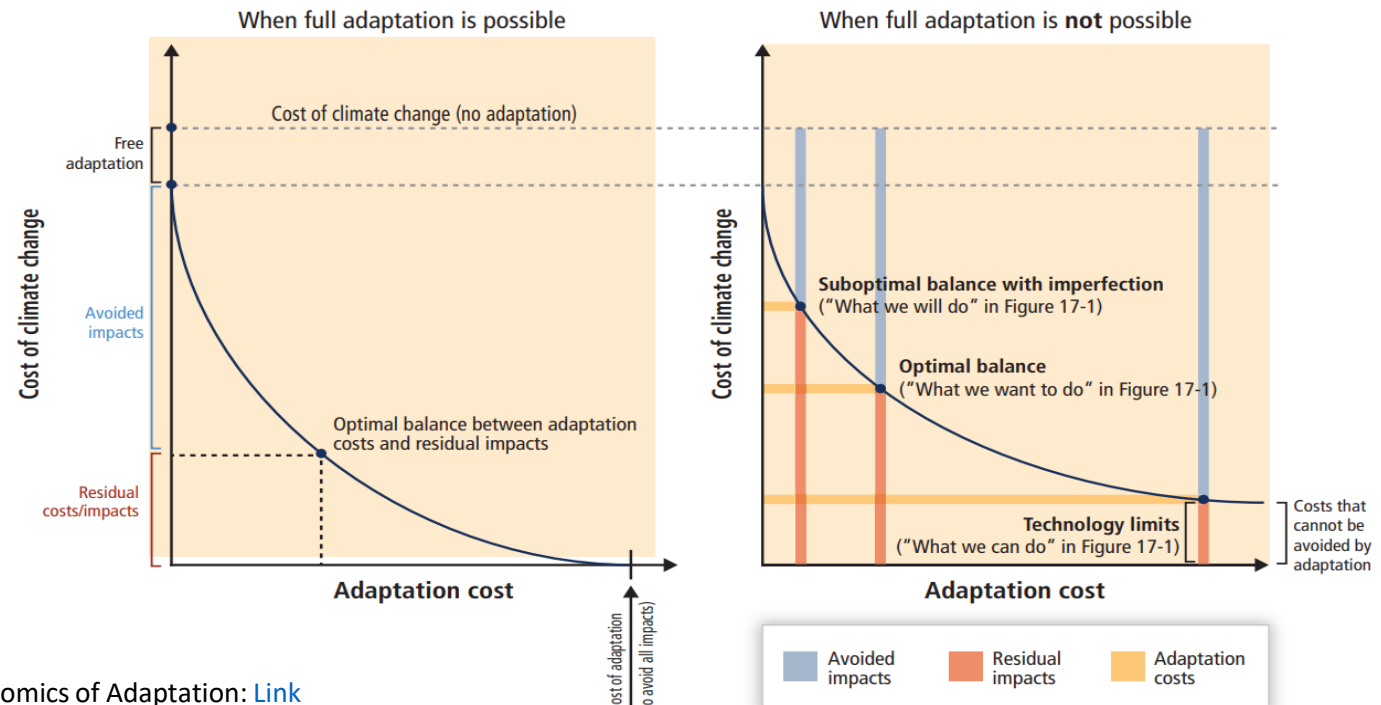



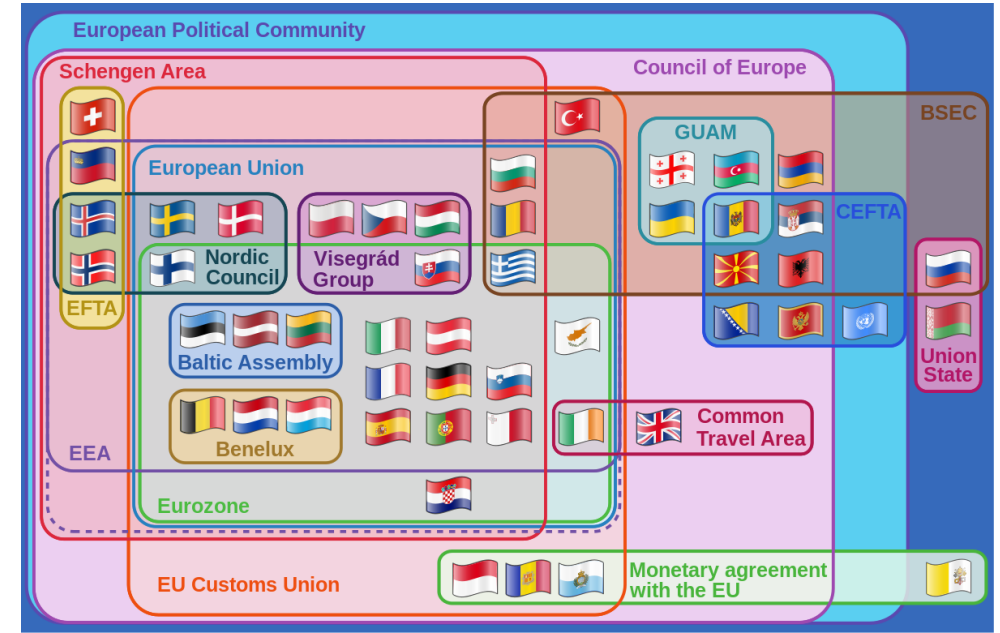
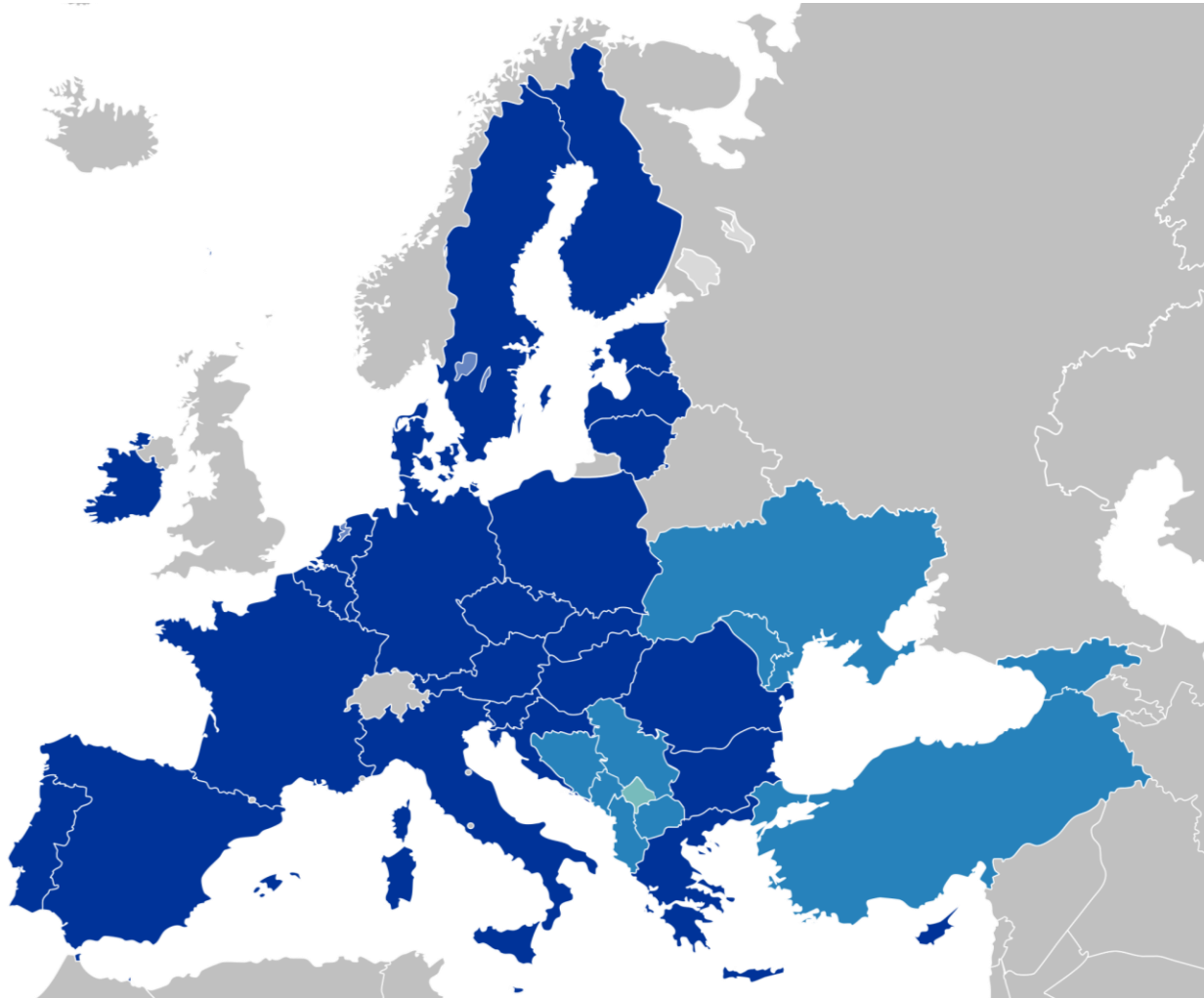
Figure 17-1 | The narrowing of adaptation from the space of all possible adaptations to what will be done. Forces causing the narrowing are listed in black.





What comes to your mind when talking about policies and the European Union?

The European Union: the most ambitious project



Horizon Europe: EU Member States, overseas countries and territories, Associated Countries, Countries automatically eligible for funding: The [full list](#) of Countries Associated to Horizon Europe.

Albania, Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Iceland, Israel, Kosovo, Moldova, Montenegro, Morocco*, North Macedonia, Norway, Serbia, Tunisia, Türkiye, Ukraine, United Kingdom, Canada*, Switzerland*, New Zealand*

EU Budget

Single Market, Innovation and Digital

149.5 (+ 11.5 from NGEU)

Cohesion, Resilience and Values

426.7 (+ 776.5 from NGEU)

Natural Resources and Environment

401 (+ 18.9 from NGEU)

Migration and Border Management

25.7

Security and Defence

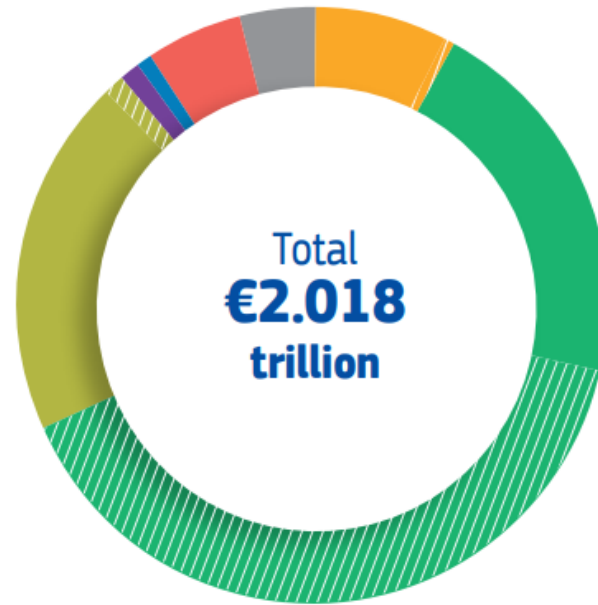
14.9

Neighbourhood and the World

110.6

European Public Administration

82.5



Total: €2.018 trillion



NextGenerationEU

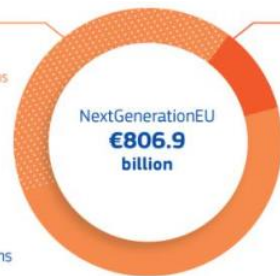
806.9

Recovery and Resilience Facility

€723.8 billion

● €338.0 billion in grants ● €385.8 billion in loans

- POWER UP**
Clean technologies and renewables
- RENOVATE**
Energy efficiency of buildings
- RECHARGE AND REFUEL**
Sustainable transport and charging stations
- CONNECT**
Roll-out of rapid broadband services
- MODERNISE**
Digitalisation of public administration
- SCALE UP**
Data cloud and sustainable processors
- RESKILL AND UPSKILL**
Education and training to support digital skills



NextGenerationEU contribution to other programmes
€83.1 billion

REACT-EU
€50.6 billion

JUST TRANSITION FUND
€10.9 billion

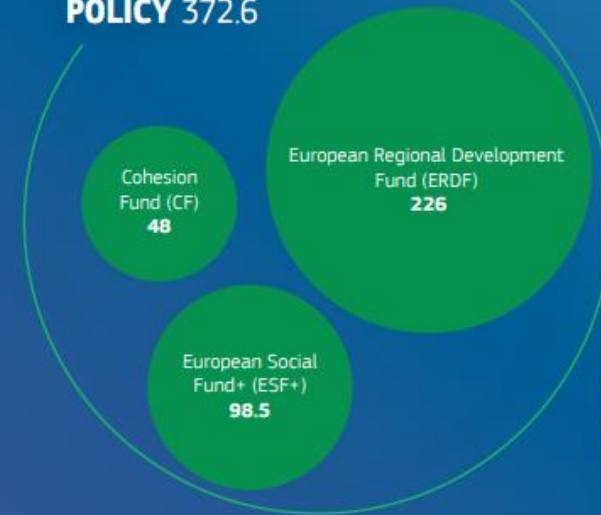
RURAL DEVELOPMENT
€8.1 billion

INVESTEU
€6.1 billion

HORIZON EUROPE
€5.4 billion

RESCEU
€2.0 billion

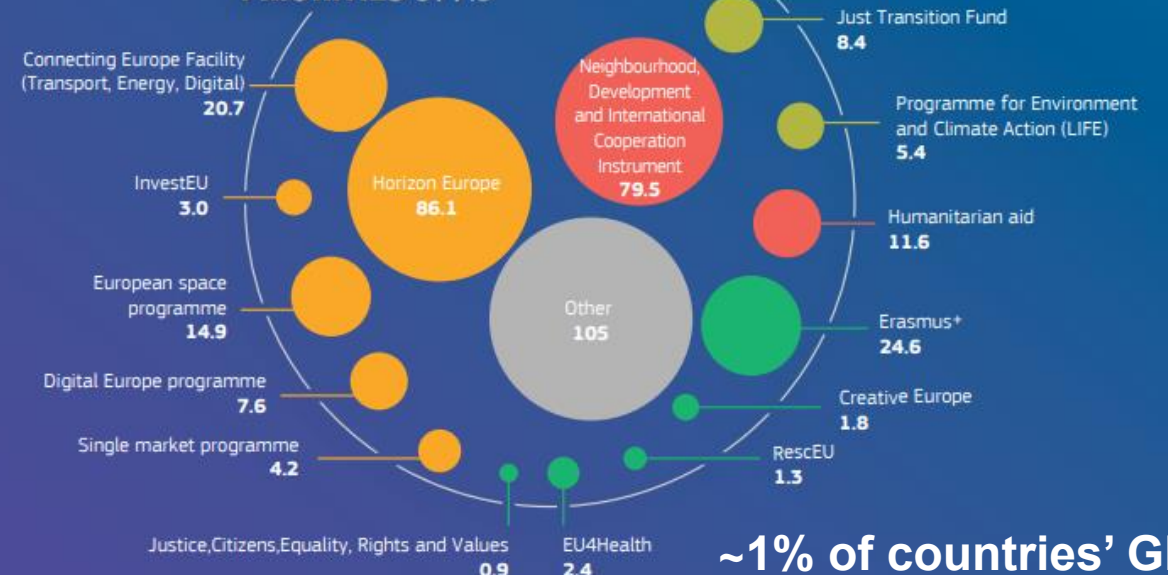
COHESION POLICY 372.6



COMMON AGRICULTURAL POLICY (CAP) 378.5



NEW AND REINFORCED PRIORITIES 377.3



~1% of countries' GDP

Shared 56%
Direct 37%
Indirect 7%

European Institutions



The **European Commission** is the EU's **executive** arm, responsible for proposing and implementing EU legislation and the **day-to-day running of the EU**. It uses its 'right of initiative' to **propose new legislation**. It also manages **EU policies** (apart from the common foreign and security policy) and the EU **budget** and ensures that countries apply the EU law correctly.

President: Ursula von der Leyen



The **European Parliament** represents the **interests of EU citizens**. The Parliament **approves the EU budget and controls** how the funds are spent. It also **elects the President of the European Commission, appoints its Commissioners** and holds them accountable. It manages a network of liaison offices in the EU capitals, London, Edinburgh and Washington D.C.

President: Roberta Metsola



The **European Council** (level of heads of state), determines the general **political direction and priorities** of the European Union. It is headed by the president, who is elected for a term of 2.5 years. The European Council does not issue legislative acts except for possible amendments to the EU Treaty. At least 4 meetings / year.

President: Charles Michel

The **Council of the European Union** (level of national ministers), representing the **interests of the countries**, formulate proposals of the Commission and, if they agree, approve them. The ministers meet in different compositions depending on the subject to be discussed. The Council of the EU takes decisions on European **legislation** together with the European Parliament. 70-80 meetings / year in 10 topics.

Court of Justice of the
European Union

European Central Bank

European Court of
Auditors

Executive Agencies

The European Commission has set up 6 executive agencies for a limited period of time to manage specific tasks associated with EU programmes.

[European Education and Culture Executive Agency \(EACEA\)](#) manages funding for education, culture, audiovisual, sport, citizenship and volunteering.

[European Innovation Council and Small and Medium-sized Enterprises Executive Agency \(EISMEA\)](#) supports innovation made in Europe from ideas to global markets, through the Innovation Council and support to SMEs.

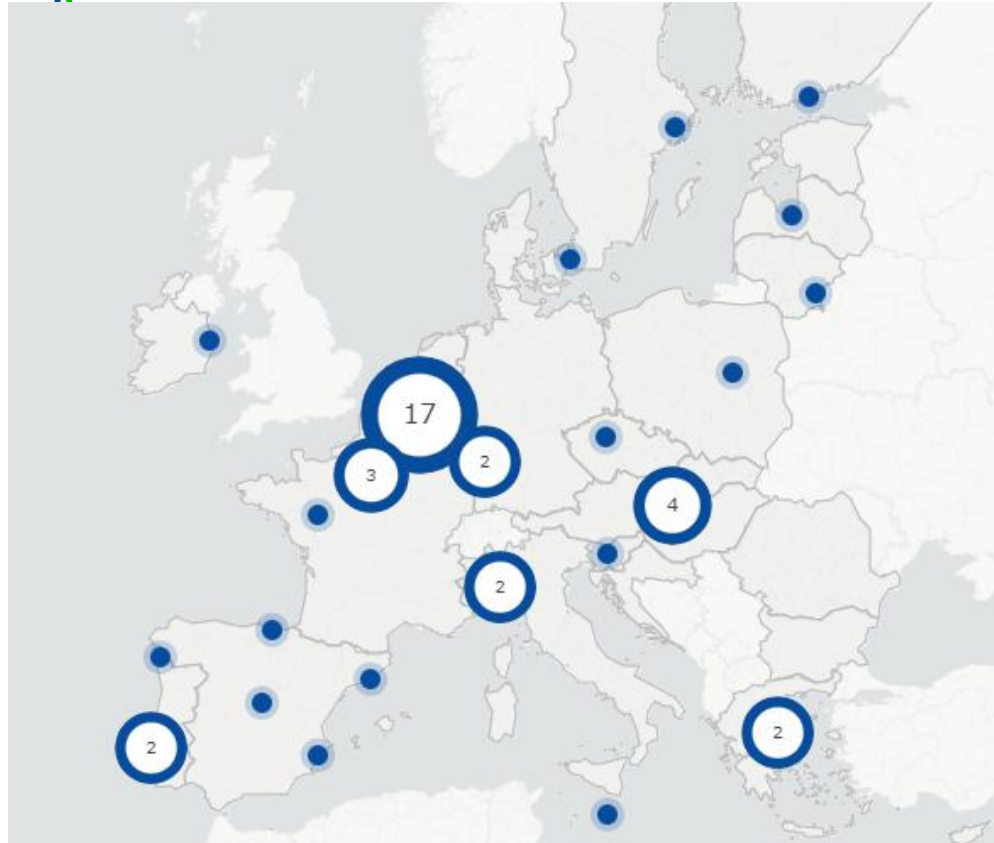
[European Research Council Executive Agency \(ERCEA\)](#) manages EU programmes on research for frontier and bottom-up research in all fields of science.

[European Climate, Infrastructure and Environment Executive Agency \(CINEA\)](#) manages the European Commission programmes contributing to decarbonisation, sustainable growth and infrastructure












[European Health and Digital Executive Agency \(HADEA\)](#) addresses the ambition to help rebuild a post-COVID-19 Europe, which will be greener, more digital, more resilient and better fit for the current and forthcoming challenges.

[European Research Executive Agency \(REA\)](#) is a funding body for research and innovation. It manages EU research grants in Horizon Europe, MSCA, RFCS, and horizontal services (participant validations and expert management).

Decentralised Agencies



 ACER - member Agency for the Cooperation of Energy Regulators	 ECHA - member European Chemicals Agency	 EPPO - observer The European Public Prosecutor's Office
 BEREC Office - member Agency for Support for BEREC (the BEREC Office)	 EDA - observer European Defence Agency	 ESMA - member European Securities and Markets Authority
 CBE JU - member Circular Bio-based Europe Joint Undertaking	 EEA - member European Environment Agency	 ETF - member European Training Foundation
 CdT - member Translation Centre for the Bodies of the European Union	 EFCA - member European Fisheries Control Agency	 eu-LISA - member European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice
 CEDEFOP - member European Centre for the Development of Vocational Training	 EFSA - member European Food Safety Authority	 EU-OSHA - member European Agency for Safety and Health at Work
 CEPOL - member The European Union Agency for Law Enforcement Training	 EIGE - member European Institute for Gender Equality	 EU-Rail - member Europe's Rail Joint Undertaking
 Clean Hydrogen JU - member Clean Hydrogen Joint Undertaking	 EIOPA - member European Insurance and Occupational Pensions Authority	 EUAA - member European Union Agency for Asylum
 Clean Aviation JU - member Clean Aviation Joint Undertaking	 EIT - member European Institute of Innovation & Technology	 EUIPO - member European Union Intellectual Property Office
 CPVO - member Community Plant Variety Office	 ELA - member European Labour Authority	 EUISS - member European Union Institute for Security Studies
 EASA - member European Aviation Safety Agency	 EMA - member European Medicines Agency	 EUROFOUND - member European Foundation for the Improvement of Living and Working Conditions
 EBA - member European Banking Authority	 EMCDDA - member European Monitoring Centre for Drugs and Drug Addiction	 EuroHPC - member European High-Performance Computing Joint Undertaking
 ECDC - member European Centre for Disease Prevention and Control	 EMSA - member European Maritime Safety Agency	 EUROJUST - member European Union Agency for Criminal Justice Cooperation
 ENISA - member European Union Agency for Cybersecurity		

 ERA - member European Union Agency for Railways	 FRA - member European Union Agency for Fundamental Rights	 SatCen - member European Union Satellite Centre
 Europol - member European Agency for Law Enforcement Cooperation	 Frontex - member European Border and Coast Guard Agency	 SESAR 3 JU - member SESAR Joint 3 Undertaking
 EUSPA - member European Union Agency for the Space Programme	 IHI - member Innovative Health Initiative Joint Undertaking	 SRB - member Single Resolution Board
 F4E - member European Joint Undertaking for ITER and the Development of Fusion Energy	 Chips JU - member Chips Joint Undertaking	

Job opportunities in other international organisations

United Nations (UN)

- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- United Nations Industrial Development Organization (UNIDO)
- Intergovernmental Oceanographic Commission (IOC)

World Bank

The World Bank hires engineers for projects related to infrastructure development, energy, water resources, and urban planning. They work on projects aimed at reducing poverty and promoting sustainable development.

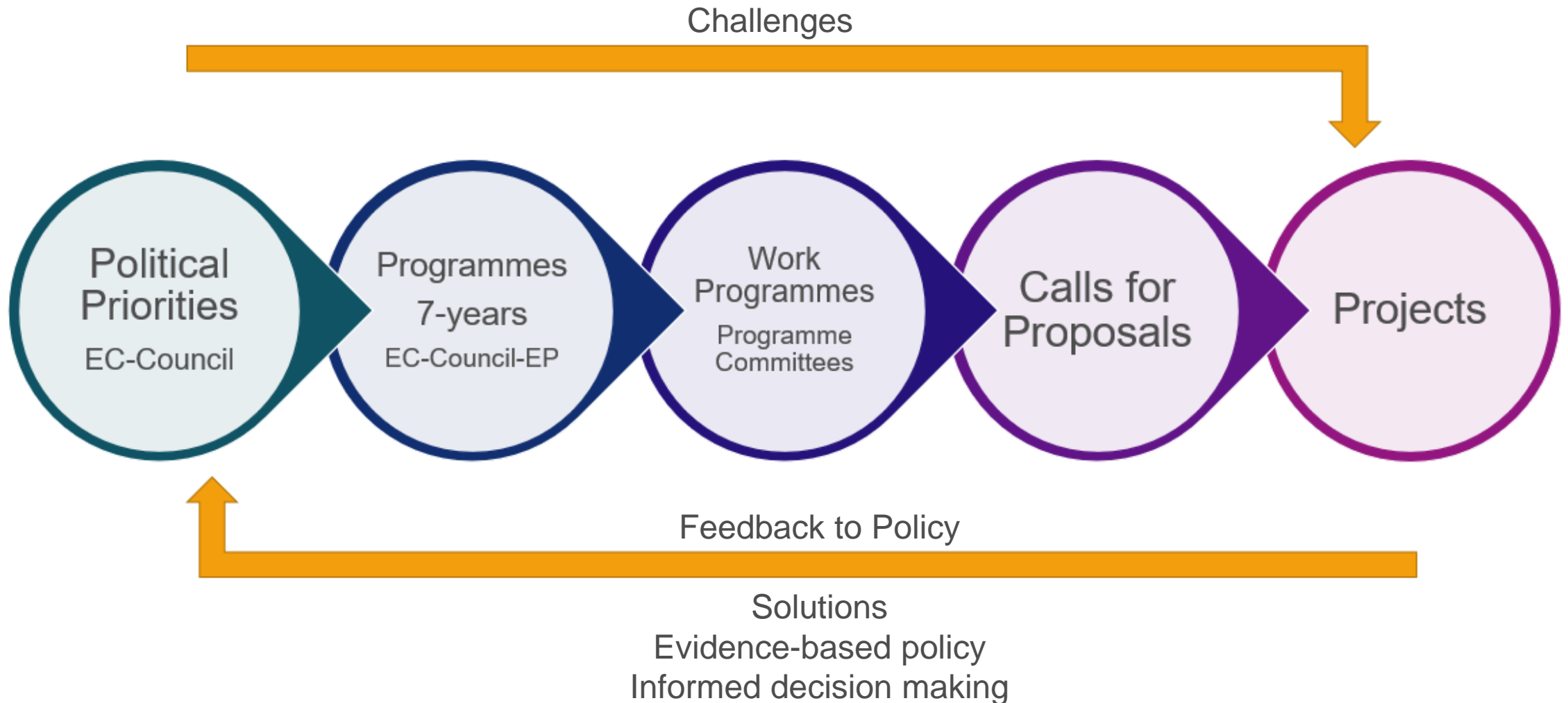
Organisation for Economic Co-operation and Development (OECD)

The OECD offers opportunities for engineers to contribute to policy analysis and development in areas such as sustainable development, energy, environmental technologies, and innovation

World Health Organization (WHO)

The WHO employs engineers for roles related to health infrastructure, biomedical engineering, and environmental health.

Who decides what is funded and why we need research projects?



Why European research funding is important?

- Tackling European & Global Challenges
- Promoting international and regional cooperation
- Transferring know-how among countries, regions and organisations
- Open to all researchers independently of nationality and sector
- Fostering mobility of researchers
- Supporting the operating of European Research Area
- Funding of bottom-up research
- Independent and high-quality evaluation of proposals
- Recognising and awarding high-quality and excellence
- Sharing of best practices in project management, recruiting, supervision
- Providing visibility of the project and the results at international level
- Providing tools and means for the exploitation of the results
- Establishing of networks for further collaborations

**Funding is complementary to National funding
and aims at leveraging private investments**

European Green Deal: A new growth model



Key figures

The first climate-neutral continent
by 2050

At least 55% less
net greenhouse gas emissions by
2030, compared to 1990 levels

3 billion
additional trees to be planted in the
EU by 2030

European Green Deal as a roadmap encompasses various initiatives and policies across sectors such as energy, transport, agriculture, and industry, supported by significant financial investments (1/3 of the total EU budget).

Fit for 55 Package: set of legislative initiatives to align EU policies with the goal of reducing net greenhouse gas emissions by at least 55% by 2030.

European Green Deal: Overarching policy

- Climate Adaptation
- Farm 2 Fork
- Common Agricultural Policy / Common Fisheries Policy
- Sustainable Blue Economy
- Biodiversity Strategy / Nature restoration
- Renewable Energy Directive
- Renovation Wave / REPowerEU
- New European Bauhaus
- Sustainable mobility
- EU Emissions Trading System (EU ETS)

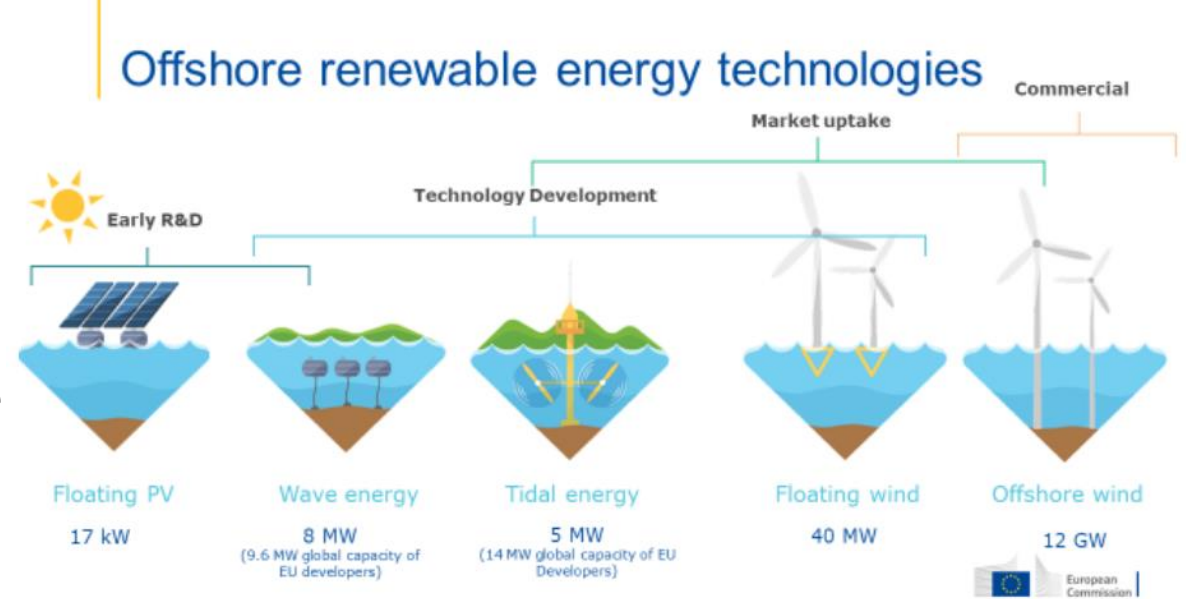
EU Offshore Renewable Energy Strategy

In October 2020, the EU published a Strategy to harness the potential of offshore renewables for a climate neutral future.
+ Maintain Europe's leadership in MRE and create more jobs

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0741>

Actions:

- ✓ Encourage Member States to integrate objectives of offshore renewable energy in their national maritime spatial plans, in line with national energy and climate plans - NECPs
- ✓ Report on the implementation of the MSP Directive for the long-term development of offshore renewable (2022)
- ✓ Co-design with Member States and regional organisations a common approach and pilot projects on MSP at sea-basin level looking at risks at sea, the compatibility with nature protection and restoration
- ✓ Promote a dialogue on offshore renewable between public authorities, stakeholders and scientists in the form of a community of practice
- ✓ Facilitate cross-border cooperation with Connecting Europe Facility
- ✓ Leverage private investments



Source: JRC

	2020	2030	2050
Offshore wind	12GW	60GW	300GW
Ocean energy	0.013GW	1GW	40GW

Challenges:

- ✓ €800 billion investments needed by 2050
- ✓ Maritime Spatial Planning; permits
- ✓ Grid connection and storage
- ✓ Skills gap

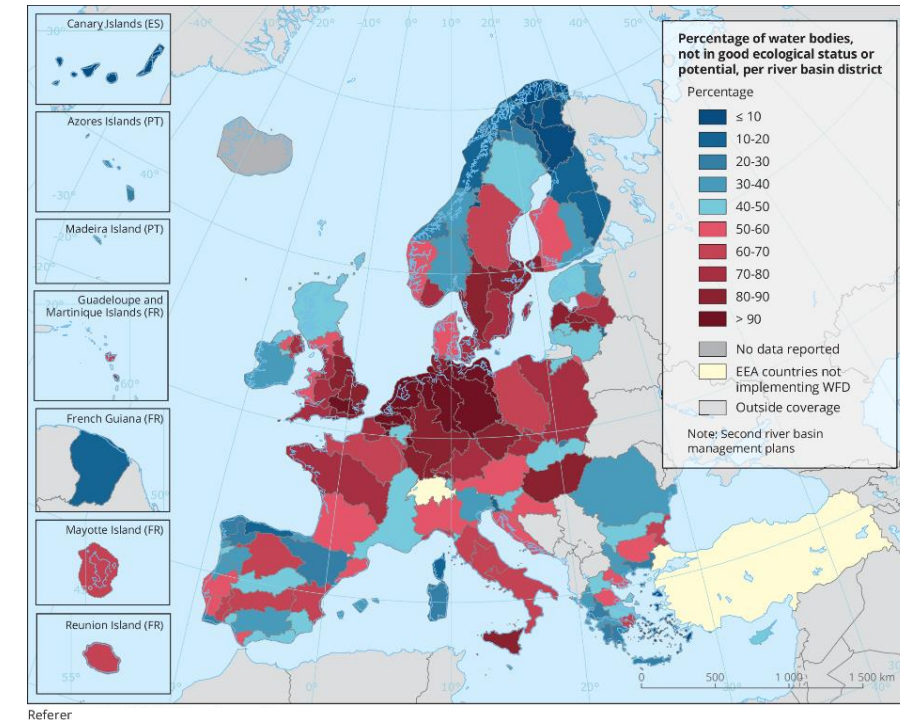
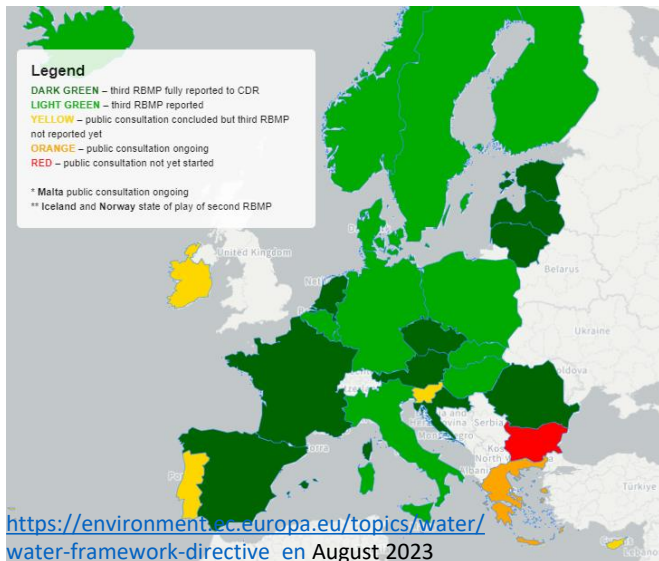
Water Framework Directive (Directive 2000/60/EC)

Objectives:

- Protection: Establish rules to prevent the degradation of water bodies in the EU.
- Improvement: Achieve good status (qualitative and quantitative health) of rivers, lakes and groundwater in Europe
 - protect of all forms of water bodies (inland, groundwater, transitional and coastal surface waters)
 - restore ecosystems in and around these water bodies to support wildlife and human needs
 - reduction of pollution in water ecosystems
 - Ensure sustainable use of water by individuals and businesses

Main elements:

- Adopted in 2000 and incorporated into national legislation in 2003 by Member states
- Comprises the main law for the protection of water bodies
- Competent authorities and Member States must:
 - identify their river basins
 - analyze the characteristics of river basin districts
 - analyze the impacts of human activities
 - monitor the state of the waters in each river basin
 - to designate river basin management authorities in accordance with EU rules
 - register the protected areas
 - develop and implement River Basin Management Plans (RBMPs)
 - ensure that the cost of water services is recovered (efficient use of resources and polluter pays principle)
 - provide information to the public and carry out consultations



EEA: <https://www.eea.europa.eu/ims/ecological-status-of-surface-waters>

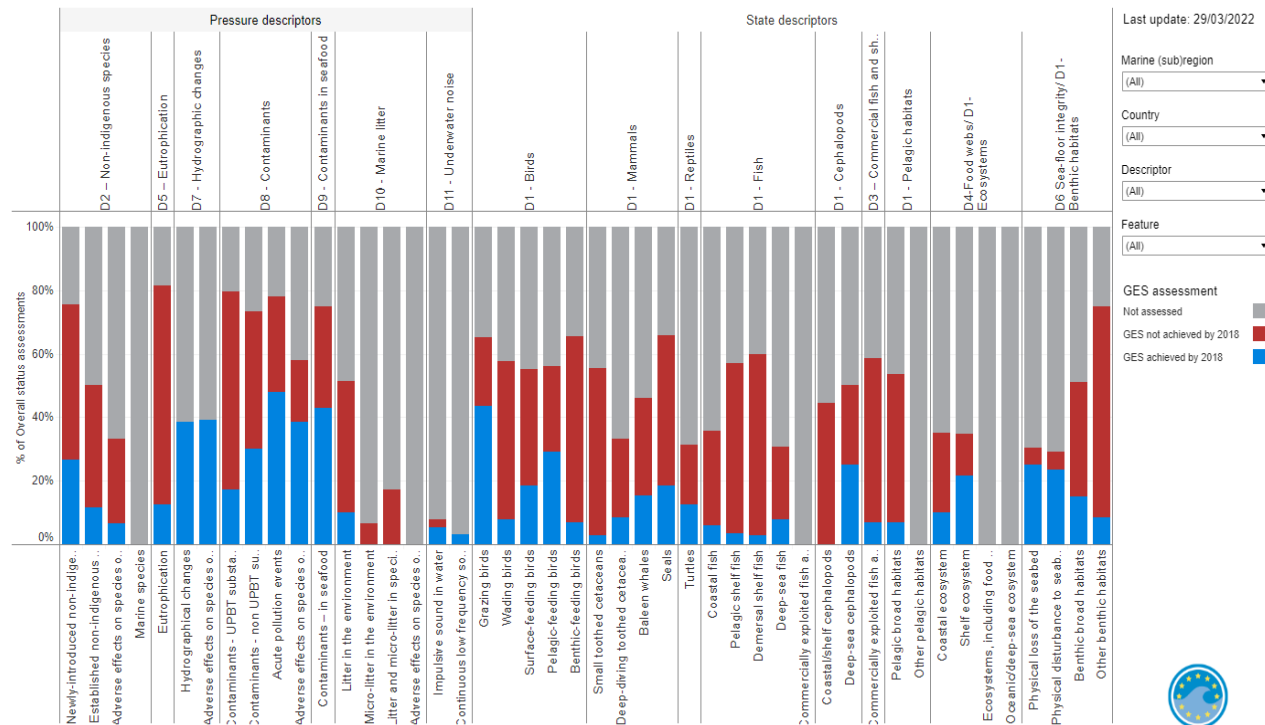
WFD:
<https://eur-lex.europa.eu/eli/dir/2000/60/oj>

Marine Strategy Framework Directive

Objectives:

- **Protection:** Achieve and maintain good condition and health of the EU's coasts, seas and oceans.
- **Sustainability:** Achieve sustainable use of marine resources for economic and social activities.

2018 reporting of MSFD Article 8 - Overall status per features



Notes and data sources
This graph shows the overall status of the features reported for each descriptor, expressed as the percentage of reports in each of the 'GES achieved' categories (i.e. whether GES had already been achieved by 2018 or by when it is expected to be achieved). Member States reported on varying numbers of features within each descriptor. By using the filters, the data can be displayed by marine region/subregion, country, Descriptor and feature.

WISE: <https://water.europa.eu/marine/data-maps-and-tools/msfd-reporting-information-products/ges-assessment-dashboards>

Main elements:

- Adopted in 2008 and implemented in 6-year cycles with feedback loop
- Built on existing directives and strategies and is linked with many of them in a holistic framework (Water Framework Directive, Birds and Habitats Directives, Common Fisheries Policy, Blue Economy, Maritime Spatial Planning, REACH, Waste Framework Directive...)
- The directive sets 11 quality indicators (descriptors) to define good environmental status (GES) (e.g. biodiversity maintained, eutrophication reduced, fish populations maintained)
- Member States asked to develop national strategies (targets, observation, measures) to achieve GES by 2020
- Coordination and cooperation with neighboring States
- Development of a network of protected areas (MPAs)
- 2012 first report by state on the state of its seas, establishment of targets etc
- 2023 second report and recommendations

MSFD legal text: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0056>

MSFD overview: https://environment.ec.europa.eu/topics/marine-environment_en

Just Transition

EU Just Transition Mechanism

- The [EEA analysis](#) demonstrated that climate change impacts affect disproportionately more vulnerable groups (children, elders, low income, health issues)
- The adaptation measures may increase the inequalities if the preexisting vulnerabilities are not taken into account
- Inequalities may increase with energy transition to renewable energy, e.g., new appliances, new cars, energy efficient buildings, higher cost of carbon footprint etc
- Just transition can be achieved by prioritising public funds for regions and communities that cannot become climate resilient (e.g., urban green areas in poorer neighbourhoods)
- The EU '[Just Transition Mechanism](#)' plans to invest €55 billion (2021-2027) for more vulnerable regions and those regions effected socio-economically from the Green transition.

Energy poverty means that someone cannot afford heating

Climate Justice (IPCC,2022)

- Spreading the climate impacts across individuals, countries, sectors and generations
 - Participatory approach and representation in decision making
 - Recognising local traditions and characteristics when finding solutions
- => Climate-resilient society while 'leaving no one behind'



C3S - Copernicus Climate Change Service

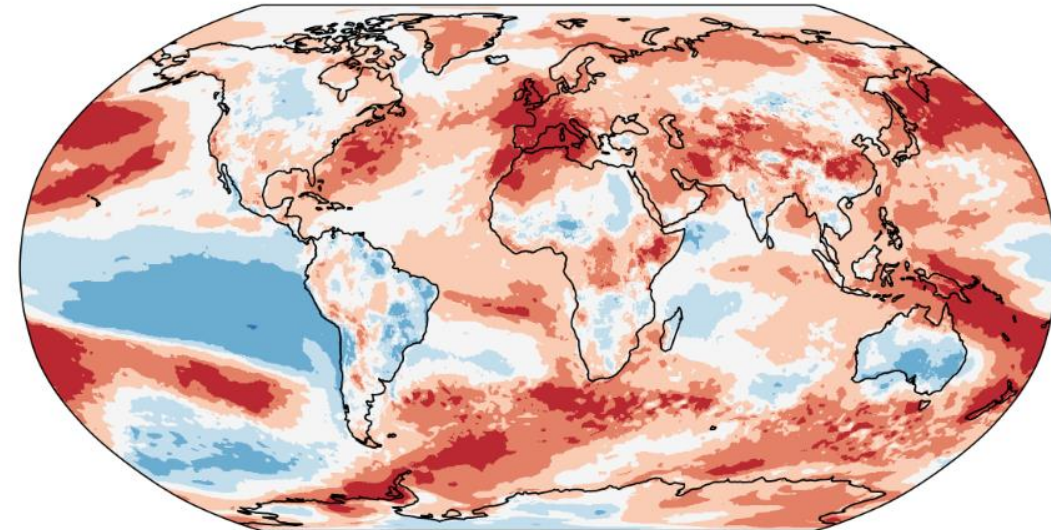
- Copernicus programme: European programme for earth observation with satellites and ground stations. It is coordinated by the European Commission and it is a collaboration of Member States, ESA, EUMETSAT, ECMWF, Mercator Ocea, EMSA etc.
 - Open access to data and analyses with the objective to foster research and new applications, products, services and markets
 - C3S: One of the 6 services which is managed by ECMWF
- It provides data, tools and support to user for climate mitigation and adaptation and information to policy makers
- 200K users – 607 million queries for data – 137 TB of data
 - Annual reporting on the State of the Climate(2017-2022)

ESOTC 2023: <https://climate.copernicus.eu/esotc/2023>



Surface temperature percentiles for 2022

Data: ERA5 1950-2022 • Reference period: 1991-2020 • Credit: C3S/ECMWF



Copernicus website: <https://www.copernicus.eu/el>

Copernicus C3S website: <https://climate.copernicus.eu/>

EU Missions



- ✓ Protect and restore the seas and inland waters of the EU by 2030 through research and innovation, investments and public participation
- ✓ Linked with many policies
 - EU Biodiversity Strategy 2030
 - Nature Restoration Law
 - Zero Pollution action plan
 - Sustainable blue growth (circular and climate neutral)
- ✓ Digital Ocean (DOT) and Water Knowledge System (WISE)
- ✓ Main targets until 2030:
 - Increase Marine Protected Areas to 30% of EU seas
 - Restore 25,000 km of rivers
 - 50% reduction of plastic and 30% of microplastic pollution
 - 50% of nutrients that cause eutrophication
 - Climate-neutral shipping, fishing and aquaculture



- ✓ Support at least 15 European regions and communities to become climate resilient by 2050
- ✓ Implement the EU Adaptation strategy in practice
 - ✓ Better understanding the climate risk for the future (vulnerabilities and risk cascade from other regions and sectors)
 - ✓ Develop pathways to prepare and better cope with climate change
 - ✓ Test and deploy innovation on the ground
 - ✓ Assist counties implement
- ✓ Linked to
 - ✓ European Climate Risk Assessment (EUCRA) by EEA, 2024
 - ✓ European Green Deal
 - ✓ National Adaptation Plans & National Energy and Climate Plans
 - ✓ Trans-European Networks for transport and energy
- ✓ Started in 2021 counting 308 signatories of the Mission Charter from 25 EU counties and 17 more from associated countries. Declare willingness and mobilise resources to achieve adaptation goals

EU Missions



- ✓ Develop 100 climate-neutral and smart cities by 2030 to work as laboratories for innovations and pilot applications that can be replicated to all EU cities by 2050
- ✓ Why cities?
 - ✓ 75% of EU population lives in cities
 - ✓ 65% of global energy is consumed in cities producing 75% of GHGs
 - ✓ Co-benefits for citizens: clean air, safer transport, better life quality
- ✓ Stakeholder participation for intersectoral and interdisciplinary solutions
 - ✓ Universities and research centres
 - ✓ Local authorities
 - ✓ Businesses
 - ✓ Local authorities (+ Covenant of Mayors)
 - ✓ Citizens
- ✓ Started in 2021 with a platform for knowledge exchange <https://netzerocities.eu/> for successful pathways. EU Funding of € 1.8 for the first 4 years with additional funds from the EIB



Other EU tools and services

- **IATE** (Interactive Terminology for Europe) is the EU's terminology management system for the collection, dissemination and management of EU-specific terminology. The project was launched in 1999 with the aim of providing a web-based infrastructure for all EU terminology resources, enhancing standardization.

- EU Legislation portal



- Public consultations

Welcome to Have your say Public Consultations and Feedback

Citizens and businesses can share their views on new EU policies and existing laws.

EU law
> Treaties
Legal acts
Consolidated texts
International agreements
Preparatory documents
EFTA documents
Lawmaking procedures
Summaries of EU legislation
> Browse by EU institutions
Browse by EuroVoc

EU case-law
Case-law
Reports of cases
Directory of case-law

National law and case-law
National transposition
National case-law
JURE case-law

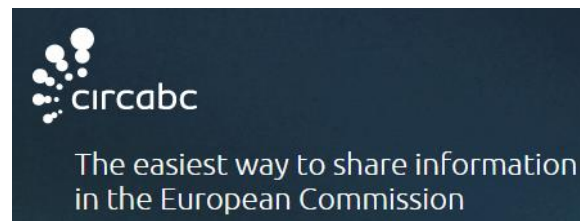
Information
Themes in focus
EUR-Lex developments
Statistics
> ELI register
EU budget online



Number of terms
6 945 832
<small>* including redirections</small>



Translate text Translate documents My translation



EMODnet



EU Ocean Data Webinar Series - Data for the UN Ocean Decade – A European focus

19.06.2024 to 19.06.2024
Online Event



Takeaways

- Since the 90s climate change came into the public debate
- In the past 10 years, international agreements, which are binding are adopted
- The EU is leading by example in Climate Action with the European Green Deal as a growth model
- The GHG emissions are slowing down, but still increase
- The scientific community has proposed Shared Socio Economic pathways, linked to policies and emission scenarios
- For policies to be effective, vulnerable groups must be prioritise and achieve just transition
- Beyond the policies, the EU is an ecosystem of stakeholders, services and tools
- EU Climate Action goes beyond Europe through investments, support, climate diplomacy

MASTER IN RENEWABLE ENERGY IN THE MARINE
ENVIRONMENT



Climate change policies & Career paths for engineers

Dr Thomas Vyzikas, Bilbao 18 June 2025



What would you like to do after the master?



Contents

- European research funding landscape
- MSCA Programme
- How to apply for funding
- Where to find job vacancies
- The tasks of a Project Officer
- Career opportunities in the EU
- Workshop on job hunting and skills development

Horizon Europe structure

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications



Pillar I EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



Pillar III INNOVATIVE EUROPE

European Innovation
Council

European Innovation
Ecosystems

European Institute of
Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

EU R&I Framework Programmes

Horizon 2020:

- ✓ 2014-2020
- ✓ €77 billion budget
- ✓ €6.1 billion for MSCA

Horizon Europe

- ✓ 2021-2027
- ✓ €95.5 billion budget
- ✓ €6.6 billion for MSCA



MSCA: A world reference for research and training

Key features of the MSCA



**Researchers'
training, skills &
career development
(all career stages)**



**Excellent research in
all domains (bottom-
up approach)**



**International,
cross-sectoral
& interdisciplinary
mobility**



**Attractive working
& employment
conditions**



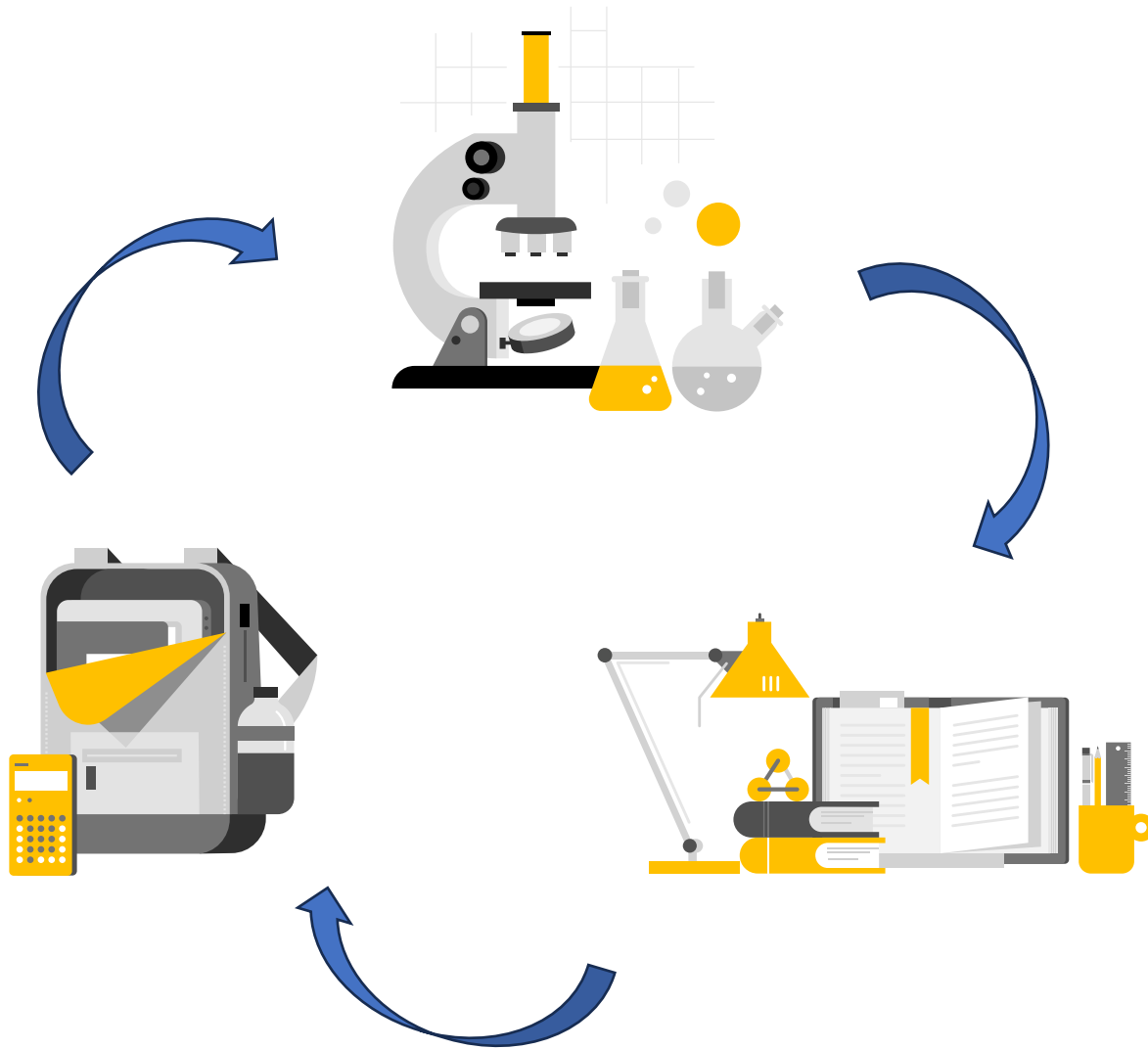
**Structuring impact
on organisations
through excellent
programmes**



**Strong collaboration
with industry & SMEs**

MSCA: What is it?

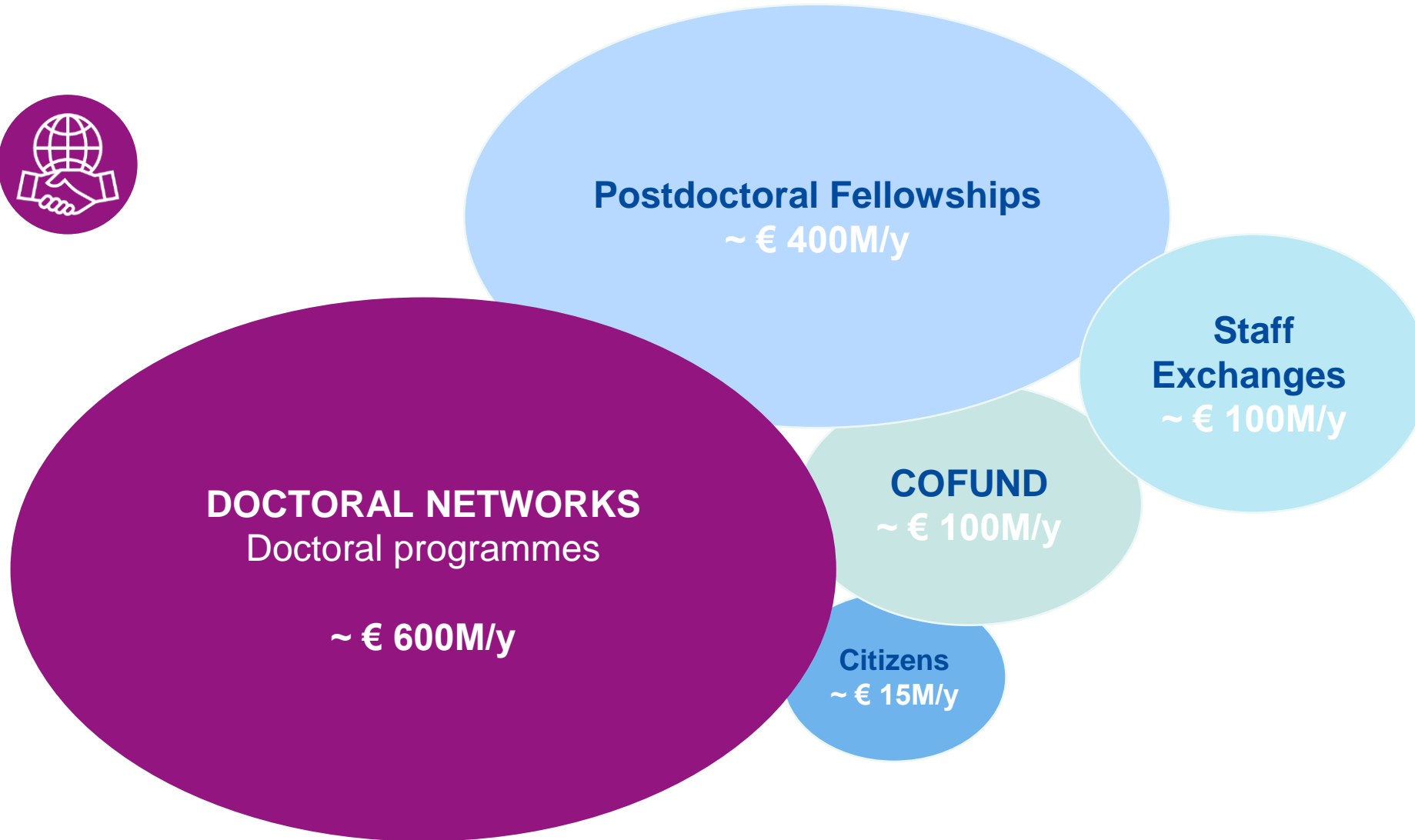
EU funding for



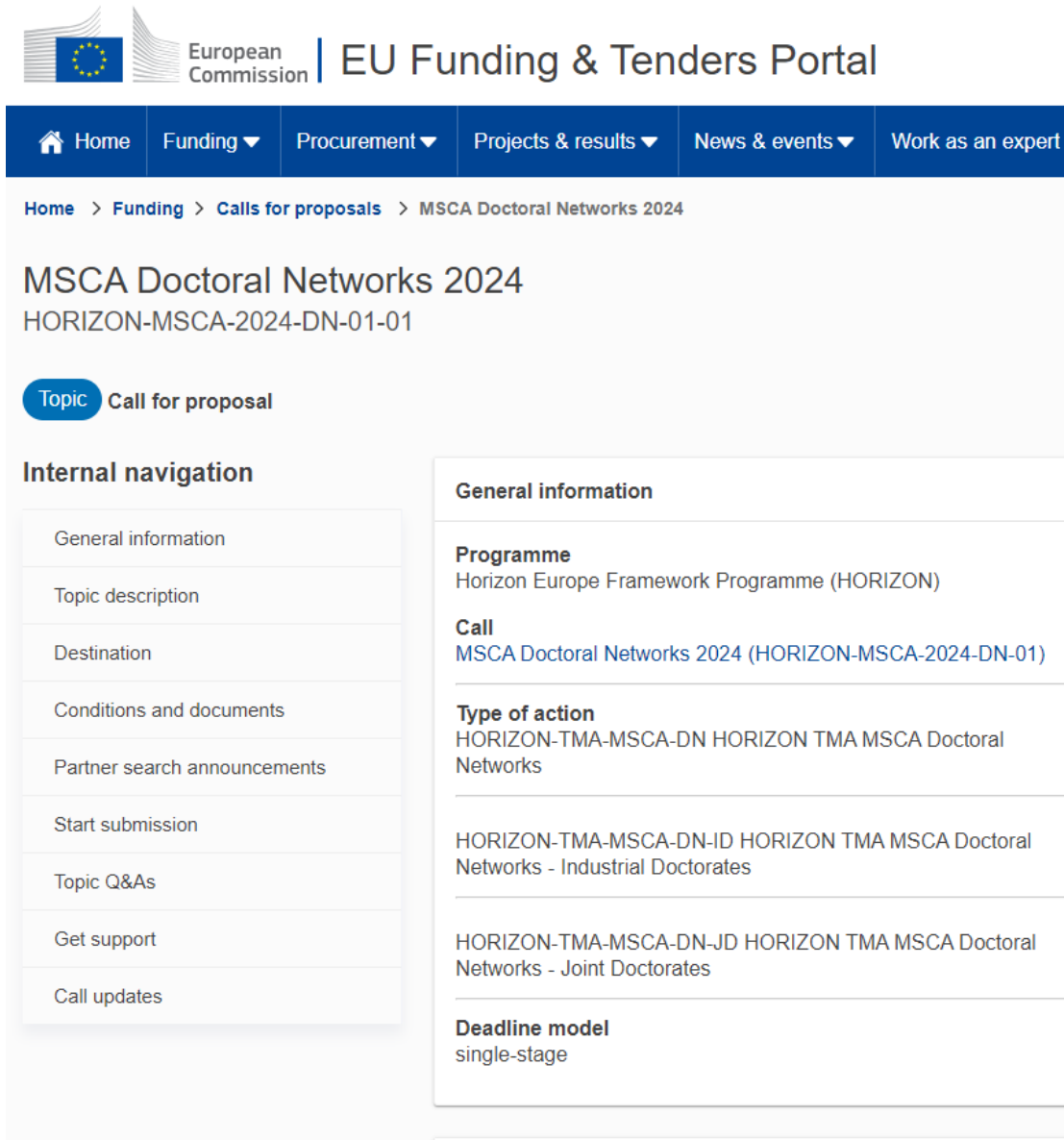
Bottom-up



MSCA Actions



Doctoral Networks – How to apply for a project as consortium?

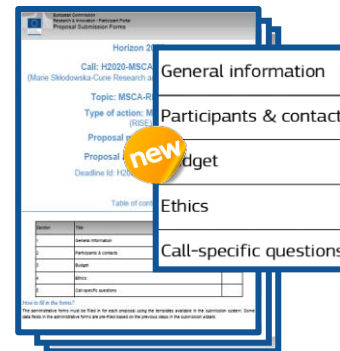


The screenshot shows the EU Funding & Tenders Portal interface. At the top, the European Commission logo is on the left, and the text 'EU Funding & Tenders Portal' is on the right. Below this is a navigation bar with links: Home, Funding, Procurement, Projects & results, News & events, and Work as an expert. The breadcrumb trail reads: Home > Funding > Calls for proposals > MSCA Doctoral Networks 2024. The main heading is 'MSCA Doctoral Networks 2024' with the identifier 'HORIZON-MSCA-2024-DN-01-01'. A 'Topic' button is labeled 'Call for proposal'. On the left, an 'Internal navigation' sidebar lists: General information, Topic description, Destination, Conditions and documents, Partner search announcements, Start submission, Topic Q&As, Get support, and Call updates. The main content area is titled 'General information' and includes sections for 'Programme' (Horizon Europe Framework Programme (HORIZON)), 'Call' (MSCA Doctoral Networks 2024 (HORIZON-MSCA-2024-DN-01)), 'Type of action' (HORIZON-TMA-MSCA-DN HORIZON TMA MSCA Doctoral Networks), and 'Deadline model' (single-stage). It also lists specific calls: 'HORIZON-TMA-MSCA-DN-ID HORIZON TMA MSCA Doctoral Networks - Industrial Doctorates' and 'HORIZON-TMA-MSCA-DN-JD HORIZON TMA MSCA Doctoral Networks - Joint Doctorates'.

Useful documents

- MSCA Work Programme
- Horizon Europe annexes
- Guide for Applicants
- Proposal templates
- Frequently Asked Questions
- DN 2024 infoday:
https://www.youtube.com/watch?v=8AskfbhT_j0

Part A (structured data) Part B (description of action)



Part B1: 30 pages
Part B2: no limit

Doctoral Networks – How to apply for a PhD fellowship?

The leading portal for the research community

Are you a researcher ready to take your career to the next level by moving to another country?
Do you represent a research performing organisation in search of top talent?
Look no further! Join the EURAXESS network to access free personalised information and assistance.



SEARCH OUR DATABASE

EURAXESS IN A NUTSHELL



The largest database of job, funding and hosting offers in Europe

With 43 European countries and 9 worldwide hubs, EURAXESS is the largest pan-European initiative to foster researchers' mobility and career development. We strengthen scientific collaboration between Europe and the global community, opening doors to endless possibilities for researchers worldwide.

[Job, Funding and Hosting Opportunities >](#)



Expert career guidance

Enhance your career with practical insights, free tools and resources to shape your professional path. Connect with our knowledgeable staff to help you achieve your goals.

[Find out more >](#)



EURAXESS Service Centres

More than 600 Service Centres located in 43 European countries offer free personalised assistance to researchers and research performing organisations on a variety of relevant topics, from relocation to career development services.

[Find a EURAXESS Service Centre >](#)

EURAXESS: “Researchers in Motion”

Established 20 years ago as an initiative of the European Research Area (ERA).

The network includes:

- 43 member countries
- more than 610 service centres
- tailored information on 18 topics of support (VISA, pension, taxes etc.)
- 9 international around the world
- 14.000 registered organisations and an average of 62.000+ jobs, funding and hosting opportunities/ year

Search Jobs and Opportunities

Take advantage of EURAXESS and find your job, funding or hosting opportunity. Browse through thousands of vacancies and fellowships from Europe and around the world.

Filter by

Offer Type

Job Offer

Country

Select

Research Field

Civil engineering

Researcher Profile

First Stage Researcher (R)

Search results (2)

Showing results 1 to 2

Hide Filters

Simple view

Sort results

JOB

UNITED KINGDOM

University of Greenwich

Posted on: 4 June 2024

MSCA Post-Doctoral Fellowship 2024 Submission - Better decision making to reduce earthquake losses through Operational Earthquake Forecasting, Game Theory and Bayesian inference

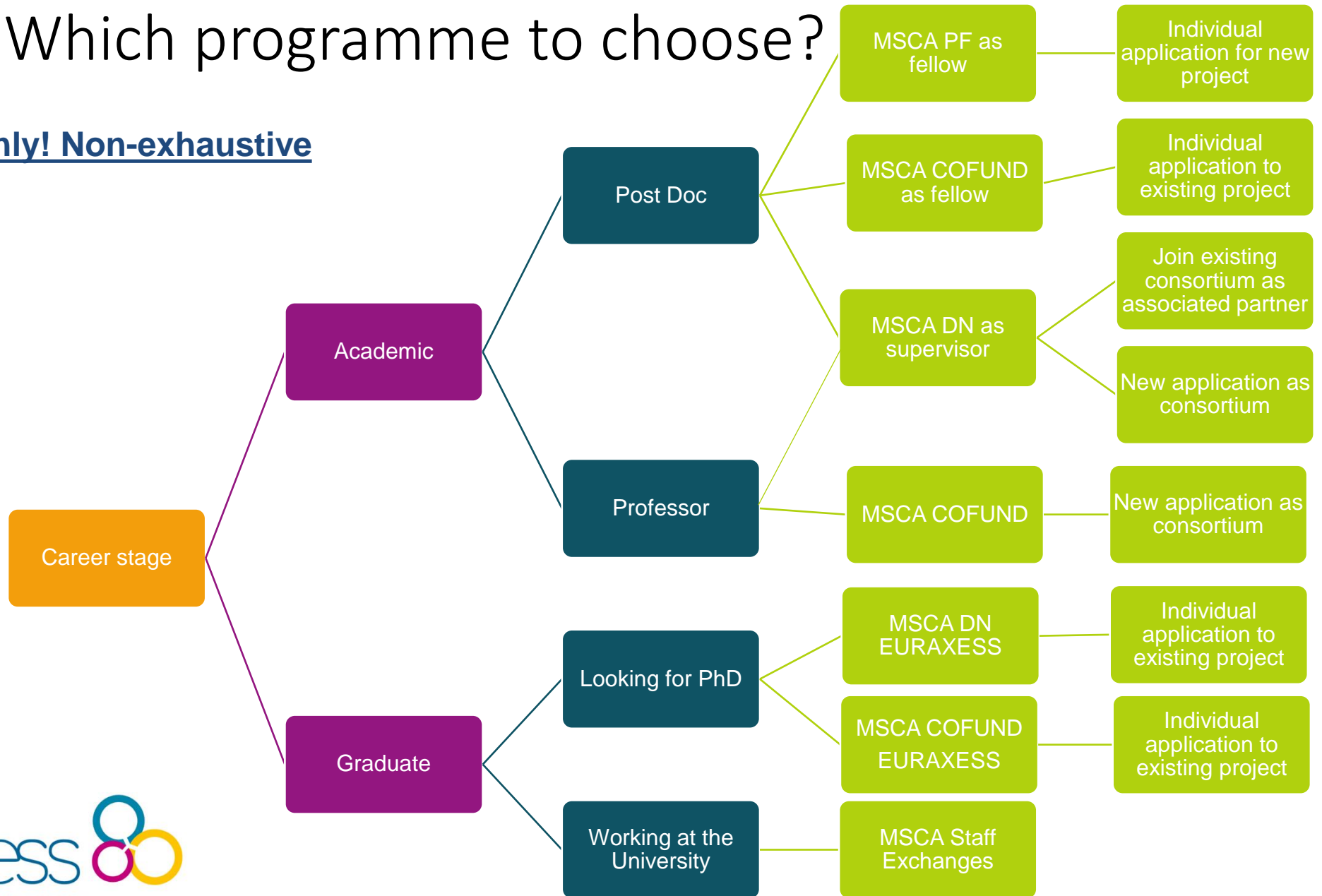
We are looking for a highly qualified candidate to join our research team who should have a PhD to submit a ready written proposal for submission to the MSCA Postdoctoral Fellowships 2024 (Marie Skłodowska-Curie Actions) by September 11th. If you hold a PhD and have experience in the fields of...

Department:

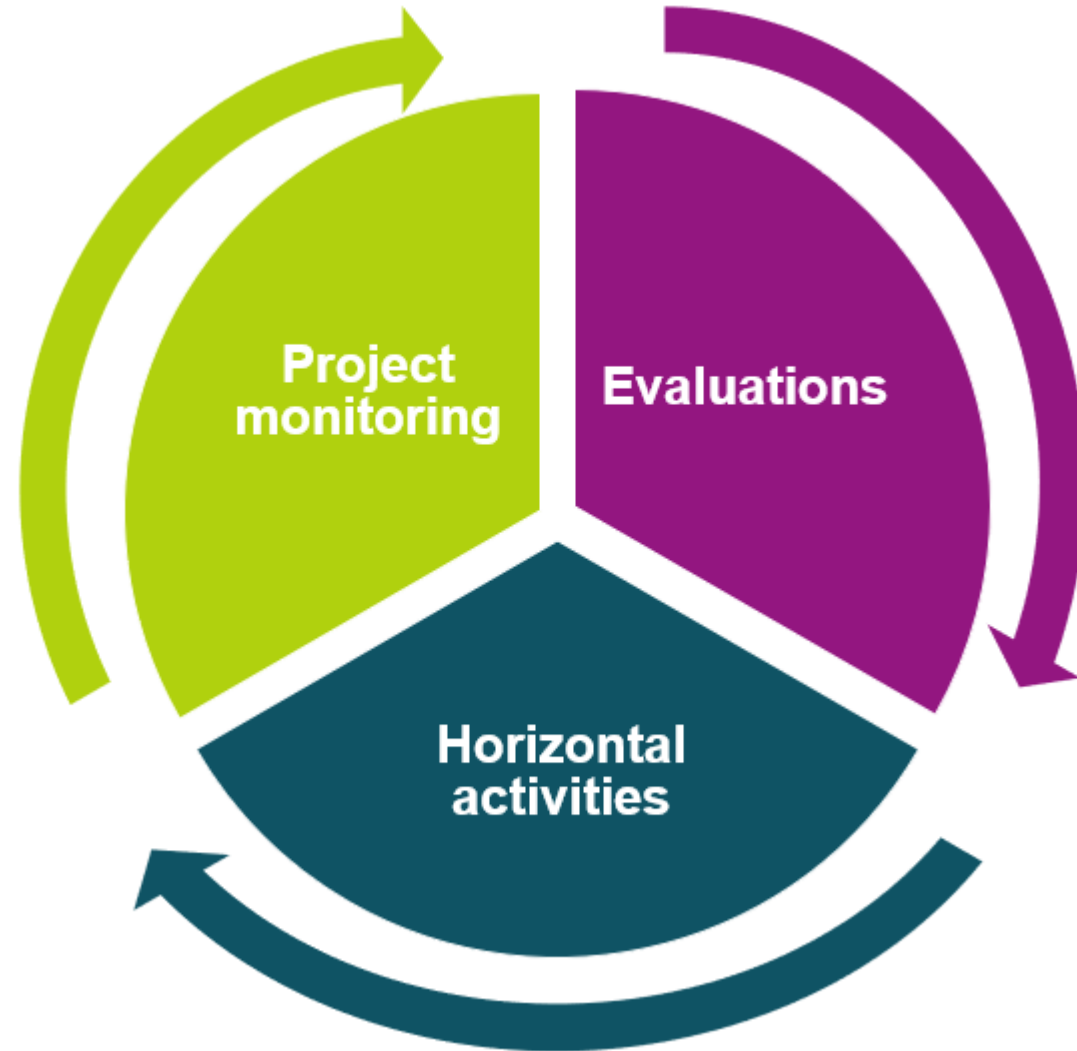
Research Enterprise and Regional Affairs

MSCA: Which programme to choose?

*Example only! Non-exhaustive

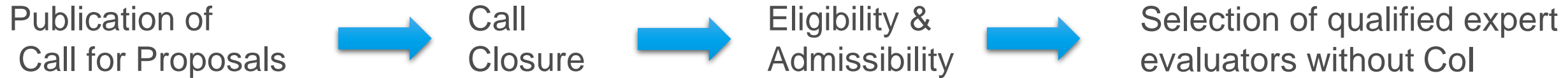


The daily work of a Project Officer

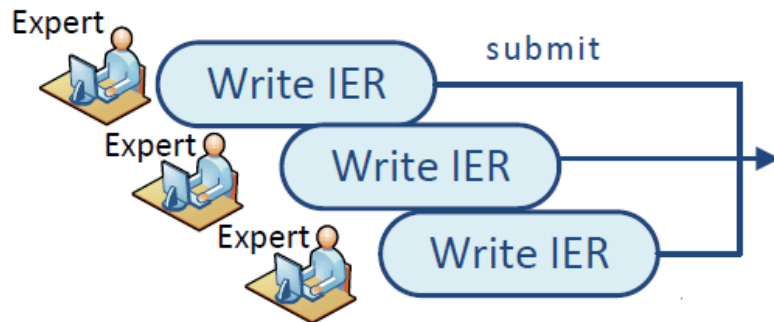


Evaluation of proposals

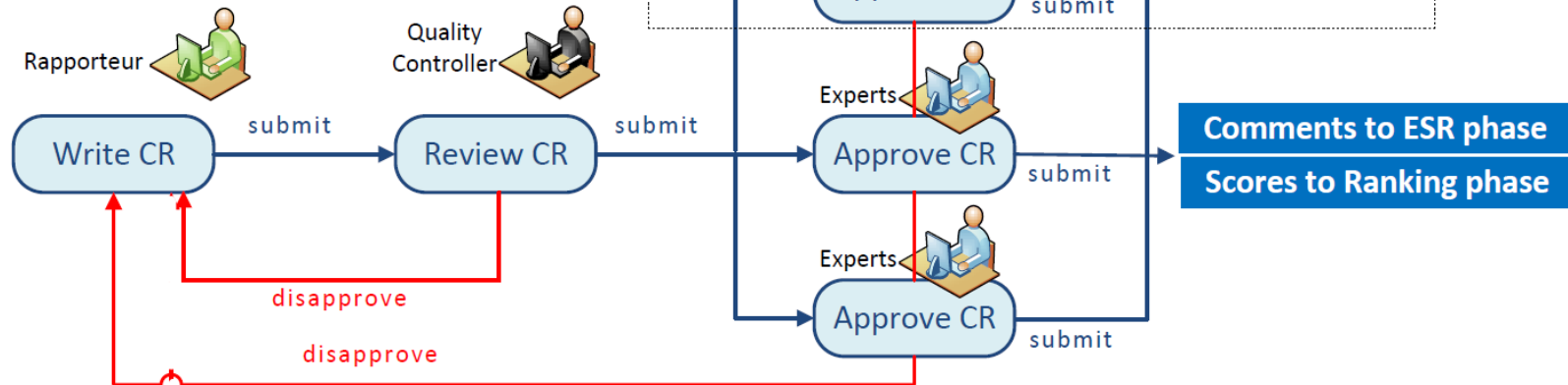
Independent evaluation with external experts



IER phase



CR phase



+ Independent Observer

Reporting and useful links

Applying for funding

Find a call

Find partners

Register an organisation

Submit a proposal

Evaluation & Grant signature

Admissibility and eligibility check

Evaluation of proposals

Grant preparation

Grant signature

Grant management

Keeping records

Amendments

Reports & payment
requests

Deliverables &
milestones

Dissemination &
exploitation

Communicating
your project

Acknowledgement
of EU funding

Checks, audits,
reviews &
investigations

[Participant
register](#)

[Reference
documents](#)

[Partner
search](#)

[Funding &
tender
opportunities
portal](#)

[Project &
results](#)

[Online
manual](#)

[IT How to](#)

[IT How to](#)

Inter-sectoral collaboration, research and mobility

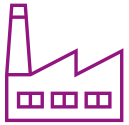
Researchers stepping **outside academia** develop **skills in industry and business**, get acquainted with different **practices and cultures**, create **personal and professional networks** and increase their employability.

How to effectively engage with the industry?

[Best practice report](#)



IPR: Ownership of intellectual property is critical for industry/business. The Consortium Agreement should have the necessary provisions for background and foreground IP. There should be a balance between publication expectations and IPR protection.



Understand the industry's needs: The consortium should analyse and clearly understand the incentives of industry/business to participate and engage early and continuously to ensure that mutual interests are pursued.



SMEs: The reporting can be demanding for small companies. More experienced beneficiaries can support with templates and a dedicated project manager.

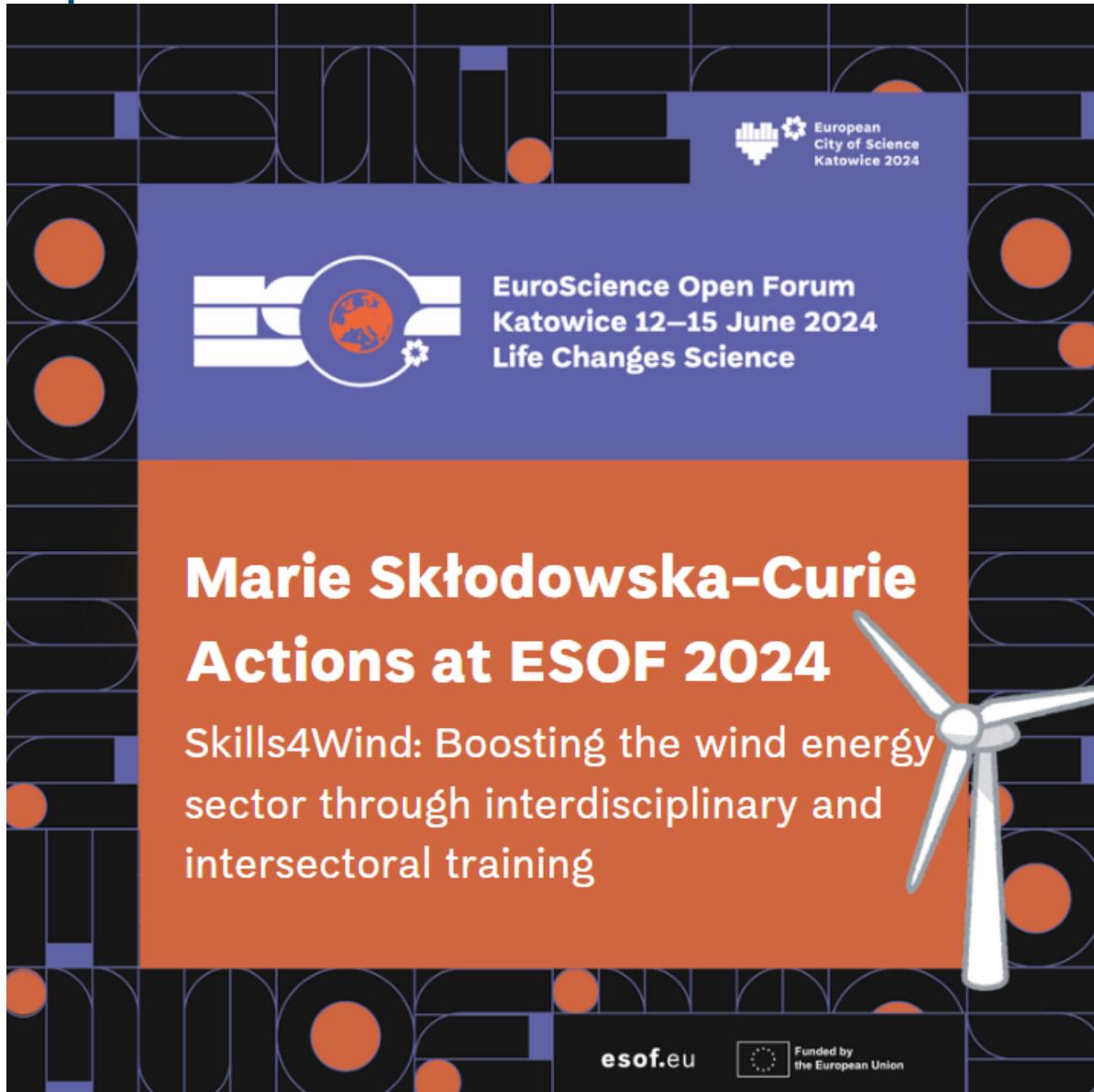


Training: Entrepreneurship training to create an innovation and provide researchers with strong technical and high entrepreneurial skills, with appropriate career development plans.



Synergies: Project and /or programme synergies should be incorporated into dissemination & communication and exploitation plans as they can lead to positive unexpected connections and benefits.

Synergies among projects




European City of Science Katowice 2024

EuroScience Open Forum Katowice 12–15 June 2024
Life Changes Science

Marie Skłodowska-Curie Actions at ESOF 2024

Skills4Wind: Boosting the wind energy sector through interdisciplinary and intersectoral training

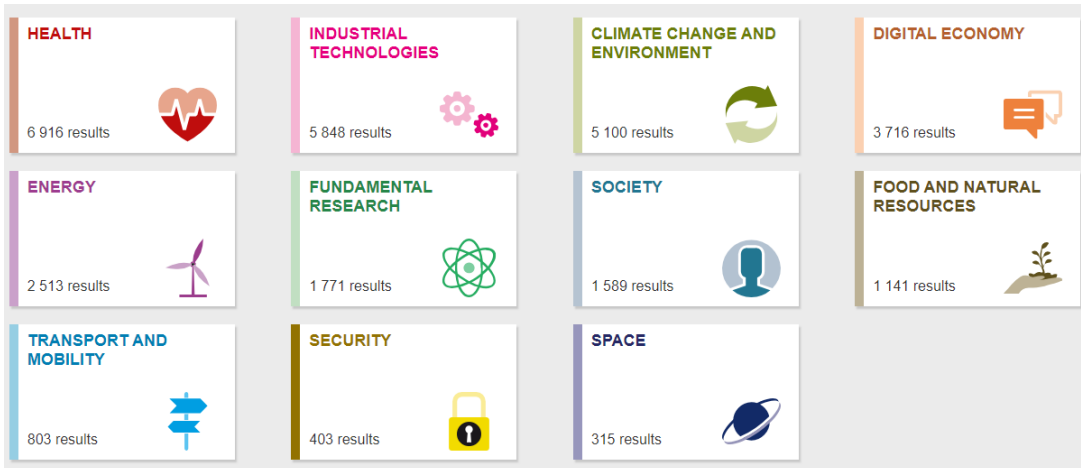
esof.eu  Funded by the European Union



Career opportunities for researchers and engineers

In EU-funded projects

- For various career stages as participant in consortia
- Erasmus+
- Staff Exchanges
- Competing for funding
 - Individual (MSCA PF, ERC)
 - Consortium (Calls, Tenders, COST)
- Participation in ongoing projects
 - Apply in open positions as:
 - Researcher
 - Project manager / consultant
 - Hosting other researchers as partner in a project



The screenshot shows the European Commission's 'Funding & tender opportunities' website (SEDIA). The header includes the European Commission logo and navigation links: HOME, SEARCH FUNDING & TENDERS, HOW TO PARTICIPATE, PROJECTS & RESULTS, WORK AS AN EXPERT, and SUPPORT. A dropdown menu for 'SEARCH FUNDING & TENDERS' is open, showing options: Search funding & tenders, Funding updates, and Archived funding (FP7-CIP). Below the navigation is a search bar with the placeholder text 'Search calls for proposals and tenders by keywords, programmes...' and a 'Search' button. The main content area is titled 'EU Programmes' and displays a grid of 24 program categories, each with a brief description and a link to more information.

Programme	Programme	Programme	Programme	Programme	Programme
Asylum, Migration and Integration Fund (AMIF)	Border Management and Visa Policy Instrument (BMVI)	Citizens, Equality, Rights and Values Programme (CERV)	Connecting Europe Facility (CEF)	Creative Europe Programme (CREA)	Customs Control Equipment Instrument (CCEI)
Customs Programme (CUST)	Digital Europe Programme (DIGITAL)	Erasmus+ (ERASMUS+)	EU External Action (RELEX)	EU4Health Programme (EU4H)	Euratom Research and Training Programme (EURATOM)
Europe Direct (ED)	European Defence Fund (EDF)	European Maritime, Fisheries and Aquaculture Fund (EMFAF)	European Parliament (EP)	European Social Fund + (ESF)	European Solidarity Corps (ESC)
Fiscalis Programme (FISC)	Horizon Europe (HORIZON)	Information Measures for the EU Cohesion policy (IMREG)	Innovation Fund (INNOVFUND)	Internal Security Fund (ISF)	Interregional Innovation Investments Instrument (I3)
Just Transition Mechanism (JTM)	Justice Programme (JUST)	Neighbourhood, Development and International Cooperation Instrument – Global Europe (NDICI)	Pilot Projects and Preparation Actions (PPPA)	Programme for the Environment and Climate Action (LIFE)	Programme for the Protection of the Euro against Counterfeiting (PERICLES IV)
Promotion of Agricultural Products (AGRIP)	Research Fund for Coal & Steel (RFCS)	Single Market Programme (SMP)	Social Prerogative and Specific Competencies Lines (SOCPL)	Technical Support Instrument (TSI)	Union Anti-fraud Programme (EUAf)
Union Civil Protection Mechanism (UCPM)	Union Renewable Energy Financing Mechanism (RENEWFM)				

Career opportunities in EU institutions

EU institutions and services

- Directorate Generals (e.g., JRC, RTD, ENER, MARE)
- Executive Agencies (e.g., REA, CINEA, ERCEA, EACEA)
- Decentralised Agencies (e.g., EEA, EIT - KICs)
- European Partnerships (e.g., HPC, KDT, Rail)
- Committees of the European Parliament (e.g., ENVI, ITRE)
- Council of the EU Preparatory Bodies (e.g., Integrated Maritime Policy)
- European Committee of the Regions

*UN Environment Programme:

Ocean, seas and Coasts, Energy; SDGs

Types of positions in the EU

- Blue Book Traineeship (5 months)
- Interimaire (1 month - ...)
- Contract Agent (up to 6 years*)
- Temporary Agents (up to 6 years*)
- Officials (permanent)
- Seconded National Experts

Duties: project/programme management, policy development and evaluation, knowledge management, administration

Job vacancies

[Permanent staff](#) [Non-permanent contracts \(European Commission\)](#) [Temporary staff \(Other EU bodies\)](#) [Contract staff \(Other EU bodies\)](#) **[Seconded national experts](#)** [Other contracts](#)

Are you looking for an EU career?

Below you can find vacancies for [Seconded national experts](#) in the EU institutions, bodies and agencies.

Seconded National Experts (SNEs) are qualified civil servants from EU Member States who bring their expertise to the EU for a fixed period of time.

Find out more about these categories and the procedures you need to follow if you want to apply for them on our [How to apply](#) page.

Please note that below you will find only a selection of current job opportunities.

We also invite you to visit the job pages of the [EU institutions and bodies](#) and the [job vacancies](#) page of the EU Agency Network (EUAN).


Domain(s)	Institution/EU body	Location(s)	
<input type="text" value="All"/>	<input type="text" value="All"/>	<input type="text" value="- Any -"/>	<input type="button" value="Search"/>

Title	Domain(s)	Grade	Institution/EU body	Location(s)	Deadline
Seconded national expert (SNE)	European Public Administration	FG IV	European Commission	Brussels (Belgium)	18/12/2023 - 23:59
Seconded national expert (SNE)	Information Technology		(ENISA) European Union Agency for Cybersecurity	Athens (Greece), Brussels (Belgium)	31/12/2023 - 23:00


Application procedure:


- Blue Book Traineeship: 2 intakes / year; CV, motivation letter, interviews
- Contract Agents: CAST multiple choice and interviews (competency + field)
- Temporary Agents: written tests and interviews (competency + field)
- Officials: competition for generalists/specialists*:
application → eligibility → talent screener* → assessment centre
Multiple Choice: verbal, numerical, abstract reasoning;
Written test or case study
Interviews for general competencies and field related
- Spontaneous applications at the Units of interest

Work as expert


European Commission

Funding & tender opportunities
Single Electronic Data Interchange Area (SEDIA)

English 

Register 


Home | SEARCH FUNDING & TENDERS | HOW TO PARTICIPATE | PROJECTS & RESULTS | **WORK AS AN EXPERT** | SUPPORT

• Legal Entity and Bank Account validations tasks will experience issues in the Grant Management Services on Monday, 21.03.2022, between 20:00 and 21:30 CET.
• The Identity, Bank Account, Contracts & Payments functionalities in the Experts Area of the F&T Portal will be unavailable on Monday, 21.03.2022, between 20:00 and 21:30 CET.

Need help?

Work as an expert

The European Union Institutions appoint external experts to assist in the evaluation of grant applications, projects and tenders, and to provide opinions and advice in specific cases.



Being an expert for the European Commission... Watch Later Share

In particular, experts assist in:

- **Evaluation** of proposals, prize applications and tenders
- **Monitoring** of actions, grant agreements, public procurement contracts

In addition, experts provide opinion and advise on:

- **Preparation, implementation and evaluation of EU programmes and design of policies.**

In order to select experts, the European Union Institutions publish regularly calls for expression of interest (see list below) detailing the selection criteria, the required expertise, the description of the tasks, their duration and the conditions of remuneration.

Interested? Please join the database of external experts!

Register as expert

As **new expert**, you will be first requested to create your EU login account and register your profile.

Registered experts can update the profile via the My Expert Area after **login**.

News

24 Feb, 2022

Research Fund for Coal and Steel (RFCS) - Call for experts!

The Research Fund for Coal and Steel is looking for expert evaluators. A call for experts for RFCS has been published on the RFCS website. IMPORTANT: Interesse...


14 Oct, 2021

CINEA Innovation Fund – Call for experts

The European Climate, Infrastructure and Environment Executive Agency (CINEA) is looking for experienced technical and Life Cycle assessment (GHG) experts, as ...

All news >

Quick Links

-  Standard briefing slides for experts (HE)
- FAQ for Experts
- Lists of contracted experts

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/work-as-an-expert>

The general competency framework

1. Critical thinking, analysing & creative problem-solving

Thinks holistically and translates complex information into creative and innovative solutions.

2. Decision-making & getting results (delivering quality and results)

Takes decisions in a shifting environment, translates them into action and works towards tangible results.

3. Information management (digital and data literacy)

Translates knowledge and skills through digital tools and technologies, optimises ways of working by utilising the digital environment

4. Self-management (prioritizing and organizing, resilience)

Organises own tasks, demonstrates responsibility and a constructive attitude at all times.

5. Working together (working with others)

Demonstrates cross-functional cooperation and fosters diversity and inclusion. Cooperates well by seeking compromise, sharing knowledge and assisting others.

6. Learning as a skill (learning and development)

Actively manages own learning, growth and self-improvement.

7. Communication

Conveys information and opinions clearly, generates buy-in by facilitating interaction and engaging effectively with others.

8. Intrapreneurship (leadership)

Drives change, inspires and empowers others in implementing change and offers guidance at all levels.

Competencies are demonstrated based on **examples** from past experience or through **situational-based** scenarios

My personal adaptation from academia to EU public administration



Transferable skills

- Project management



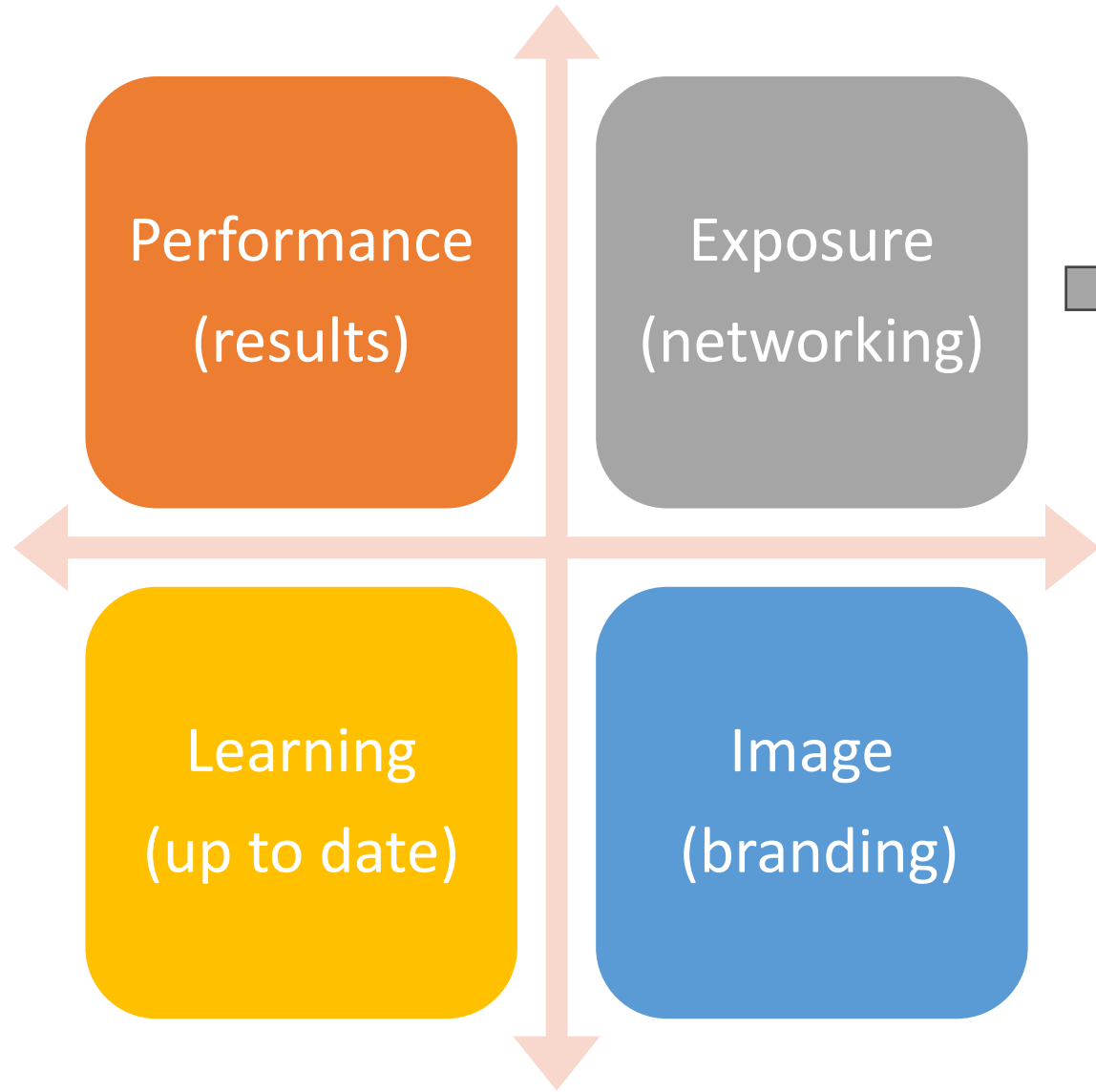
- Working in large international and multicultural groups
- Coordinating multiannual exercises
- Managing teams
- Managing demanding stakeholders from different sectors
- Adhering to hierarchy
- Navigating through legal and financial constraints
- Learn policy and social dimensions
- Cutting corners (80-20 rule)

Regular/linear career vs mobility changing

- Try to calculate salary with linear relation plus step increases
- Add uncertainty and fluctuation, gaps, cost of mobility
- Show skills at the end and assets

Factors for selecting a job -> What is success?

What will give me a successful career?



What is your impression of networking?
Do you like it?

Cultivating professional relationships

It's not who you know, but who knows you

Expand your network in a strategic way

Keeping your network is not always time consuming

5-minute help to others

Make a positive genuine comment

Start weak links → future investment

It's not always about competition

Network: a web of gifts and mutual growth

To be a Giver or a Taker?

It's not about selling and buying, it's about giving and receiving
(Marcel Mauss – French anthropologist)

Workshop

Look for a job vacancy in Euraxess or at EU Careers

- What skills / knowledge do you need to develop to get it?
- What skills will you develop after 3 years in the job?
- How does it contribute to your longer-term career path and how can it influence it?

Job	Sector	Skills required	Skills gained	Long-term plan

Workshop technical & soft-skills

Technical skills		Soft skills	

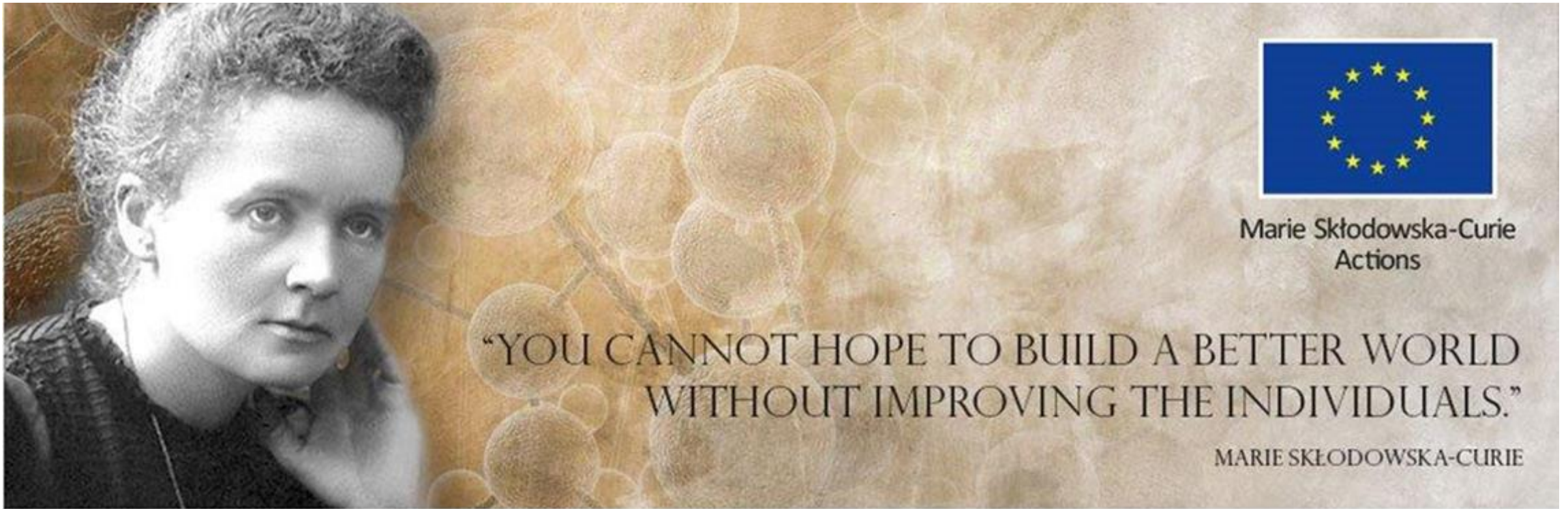
A decorative element consisting of two vertical lines, one blue and one green, positioned on the left side of the slide.

What made an impression to you?

1 phrase to keep

Takeaways

- The European funding landscape is broad covering various sectors and career stages
- One can request individual funding or participate in consortia
- Engineers and scientists are needed in the EU institutions for project management and policy
- The European Research and Innovation programmes (and education and mobility) are world reference for the development of science and technology having great return on investment. However, they should not be taken for granted and they need strong advocates
- Career paths are not linear and there is personal and professional growth from intersectoral and interdisciplinary mobility
- Perhaps the greatest challenge for the green transition is the “skills gap”
- Lead your way in a strategic manner during your career



Questions?



Thomas
Vyzikas