

PARIS REINFORCE



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Delivering on the Paris Agreement in a fragmenting world
PARIS REINFORCE final event, Sorbonne, Paris, November 15, 2022

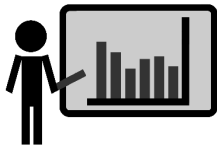
The I2AM PARIS Platform

Alevgul Sorman (*BC3 Basque Centre for Climate Change*)



www.paris-reinforce.eu

- The Current Panorama of Climate Science and Policy
- The 10 I²AM PARIS Platform Promises
- Our Challenges and Lessons Learnt

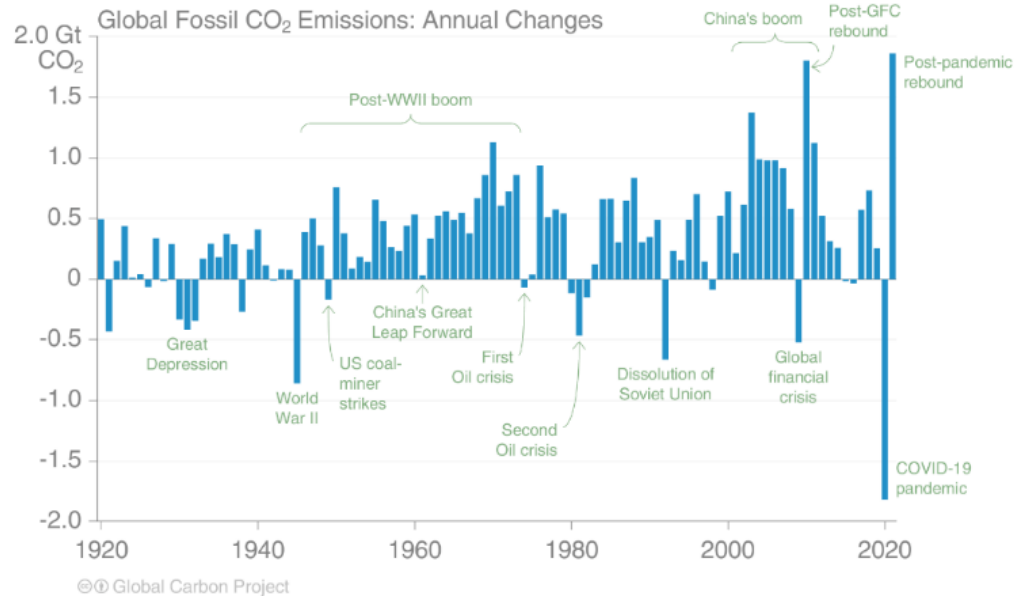


PARIS
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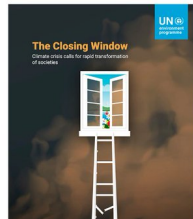
The PARIS REINFORCE project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 820846.

The Current Panorama of Climate Science and Policy

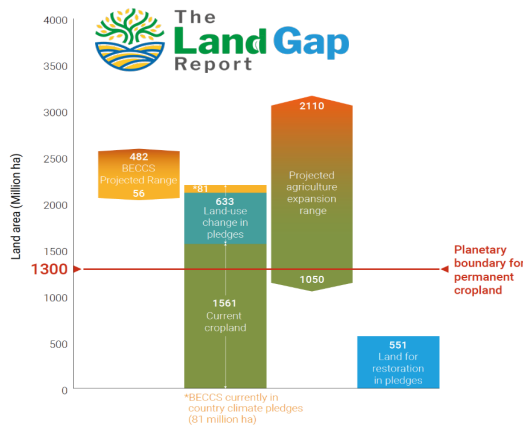


27 OCTOBER 2022 | REPORT Emissions Gap Report 2022

Authors: UNEP



As growing climate change impacts are experienced across the globe, the message that greenhouse gas emissions must fall is unambiguous. Yet the *Emissions Gap Report 2022: The Closing Window – Climate crisis calls for rapid transformation of societies* finds that the international community is falling far short of the Paris goals, with no credible pathway to 1.5°C in place. Only an urgent system-wide transformation can avoid climate disaster.



Sources: FAOSTAT 2022, Rishi et al., 2022, Willett et al., 2019



Loss and Damage Collaboration (L&DC)

@LossandDamage

A stack of new reports before #COP27

- @UNFCCC #NDCs synthesis report
- @UNEP #EmissionsGap report
- @WMO Greenhouse Gas Bulletin
- @IEA World Energy Outlook
- @ClimateActionTr #StateOfClimateAction
- @IISD_Energy Navigating Energy Transitions
- @LancetCountdown #LancetClimate22

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3:26 AM · Oct 31, 2022 · Twitter Web App

The PARIS REINFORCE Project

- What relevant Policy Questions can our models answer/deliver?
 - Supporting the design and assessment of climate policies
 - Improving Integrated Assessment Models (IAMs)

Why the I2AM PARIS Platform?

- To improve **communication** between the public, users of information and climate experts
 - Public support is a key determinant of policy change in democratic countries (Burstein, 2003; Page & Shapiro, 1983)
 - Climate action is hindered by a disconnect between those who create climate knowledge and those who use it (Howarth et al., 2022)



#1 Originality...

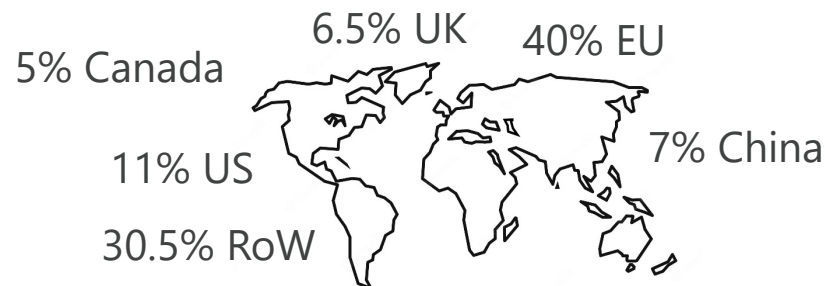
<https://www.i2am-paris.eu/>



Previous attempts: AR 5 - harmonized model documentation and underlying assumptions of IAMs EU ADVANCE project
<http://www.fp7-advance.eu/>

Novel & Open-Access

- The platform has been used by **4.3k unique visitors** (Nov, 2022)
- **8.4k sessions**, 5.5m per session



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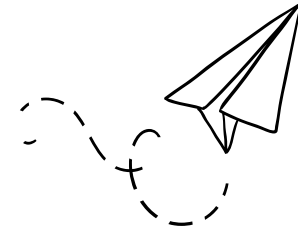
#2 Inclusivity...

Open Call

Connecting modelling groups across the world in I²AM PARIS!

Integrated assessment and energy system modellers are welcome to submit documentation of their models. The template to fill in the required information can be found [here](#), and an example based on the GCAM model can be found [here](#). Please e-mail the template filled in for your model to

iam@paris-reinforce.eu



- Open to Consortium and Non consortium models as the Project evolved
- 19 of the original PR consortium models; **currently at 44 models documented**



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#3 Sustainability...

- Links to four other projects... And perhaps others in the future
- The platform is further supported by H2020 **NDC-ASPECTS** and **ENCLUDE**, and Horizon Europe projects **IAM COMPACT** and **DIAMOND**.



<https://www.ndc-aspects.eu/>



<https://encludeproject.eu/>



<https://www.iam-compact.eu>

<https://www.climate-diamond.eu>

- Lifetime extension +5 years (at least)
- No graveyard; No need to reinvent the wheel of documentation and information
- Combining Modelling, Policy and Citizen Pathways



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#4 Comprehensibility...

Overall Capabilities – AT A GLANCE

The screenshot displays the IAM PARIS platform interface. At the top, there is a navigation bar with the IAM PARIS logo, a 'Layout' button, and a 'Back' button. The main content area is divided into several sections:

- Models:** A grid of model buttons. The 'GCAM' button is highlighted in green. Other models include 42, ALADIN, CHANCE, CLEWs, CONTO, DICE, E3ME, E3ME-FTT, EGMM, EnergyPLAN, EPMM, ETCU-RICE, Calliope, EU-TIMES, EXPANSE, FORECAST, GEMINI-E3, HEB, HU-TIMES, ICES, LEAP, MANAGE, MAPLE, MARKAL-India, MEDEAS, MENA-EDS, MicroGridsPy, MUSE, NATEM, NEMESIS, and OseMOSYS.
- Geographic Coverage of GCAM:** A world map showing the geographic coverage of the GCAM model. Below the map are five map projection options: Equirectangular, Mercator, Miller, Eckert 6, and Orthographic.
- Sectors:** A row of icons representing different economic sectors.
- Emissions:** A row of icons representing various greenhouse gases and pollutants: CH₄, CO₂, F₂, CO₂*, N₂O, (V)OC, NH₃, NO_x, PM₅, and SO_x.
- Mitigation-Adaptation Measures:** A grid of icons representing different measures for reducing emissions and adapting to climate change.
- Policy:** A row of icons representing various policy areas, including CO₂, GDP, and others.
- Socio-Economics:** A row of icons representing socio-economic indicators and factors.
- SDGs:** A row of icons representing the Sustainable Development Goals.

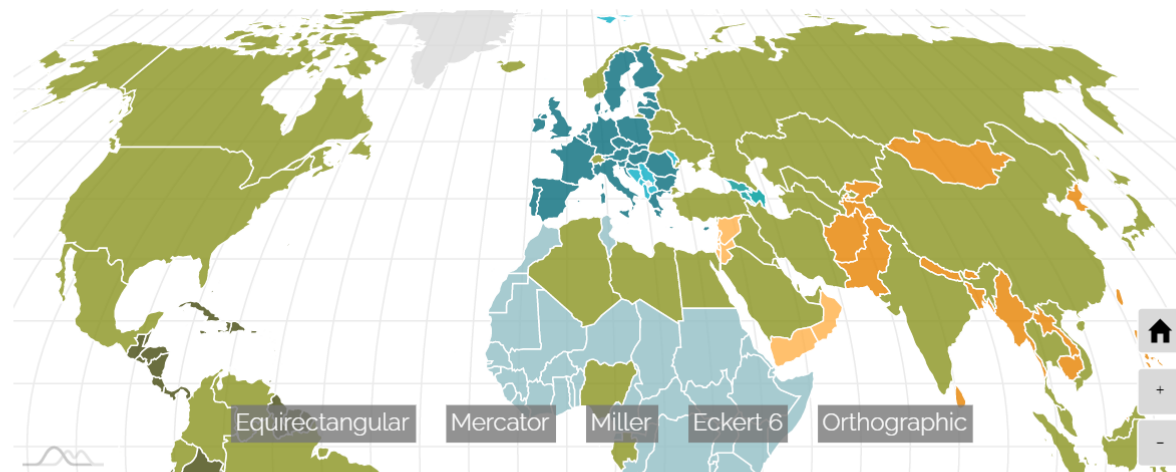


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#5 Diversity...

Extensive Regional Coverage

- To include different regional landscapes and countries from the Global South –
- An Entire WP (WP6) dedicated analysing current and more ambitious NDCs of major and less emitting countries



Note: Hover over the map to see the model's spatial coverage.

● Grey indicates non-availability (i.e. areas not covered).

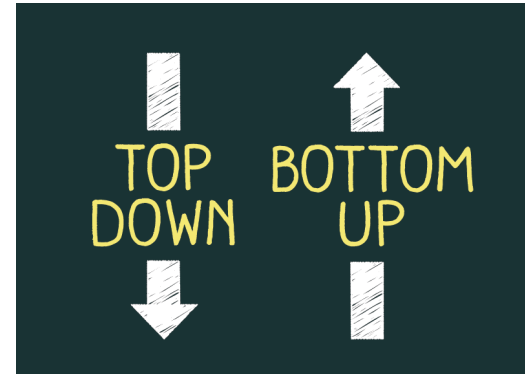
● Green colour indicates national coverage (i.e. countries represented at the country-level).



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#6 Heterogeneity...

- In terms of Approximations/Tools/Models
- Not just IAMs but sectoral, energy system models...



Why do we need a multitude of models?

- Exploring many different pathways of where emissions are headed based on temporalities, rising ambitions (NDCs) to 2030, 2050...?
- Looking at the role of energy innovation: The future of hydrogen, electrification of transport, and carbon capture and storage...
- Are these viable solutions? A means for Self Reflexivity



#7 Variety...

RESULTS

Choose among the following workspaces



Where is the world headed?

A multi-model analysis of long-term emissions and warming implications of current global mitigation efforts



Where is the EU headed?

A stakeholder-driven model inter-comparison assessing where the EU is headed given its current climate policy



Recovery Policy DB

This workspace includes the CINEA Climate Neutrality WGII Shared Recovery Policy Database for modelling research.



Regional feasibilities to net-zero

A global analysis of current policies, NDCs, and net-zero targets, with a focus on regional feasibilities



Index decomposition analysis

An assessment of current policy and net zero emissions scenarios through an index decomposition and sectoral benchmarking exercise



COVID-19 recovery packages

An analysis of climate–employment co-benefits of green recovery packages in six major emitting regions



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#8 Transparency...

- Exhibiting model capabilities
- Making the assumptions behind models visible



Overview and Comparative Assessment

- Global Models
- National/ Regional Models for Europe
- National/ Regional Models for countries outside Europe



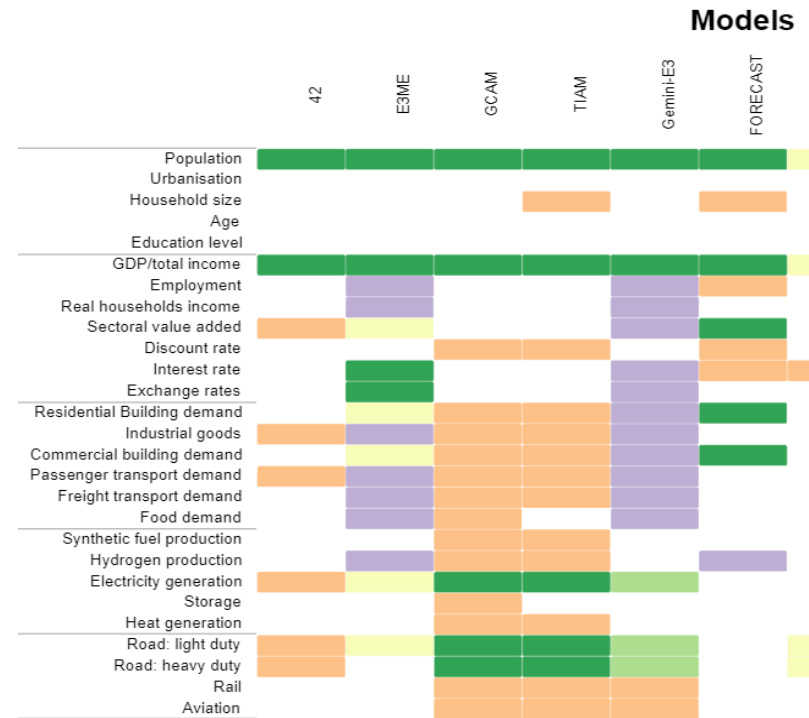
Detailed Model Documentation

A detailed documentation of each one of the global, regional and national models of the PARIS REINFORCE modelling ensemble



Variable Harmonisation Heatmap

This tool creates on-demand heatmaps that indicate how different variables are handled across the different models within the Paris Reinforce consortium.



Not harmonized



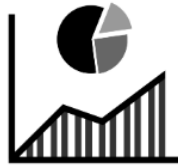
Extractable model output



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#9 Versatility...

- Results displayed depending on **user profile** and **preference**



Where is the EU headed?

An advanced, scientific overview of selected results, and access to all datasets, produced in the analysis of this workspace.



Cool... what does that mean?

A user-friendly, public interface featuring a summary of, and insights from, the multi-model analysis for all interested audiences.

- à-la-carte** or **summary**

Fossil Energy CO₂ emissions

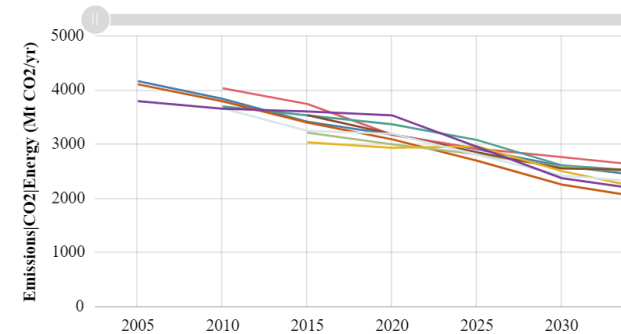
The chart on the right will present the CO₂ Emissions up to 2100 for all selected models.

Models

All selected



Run



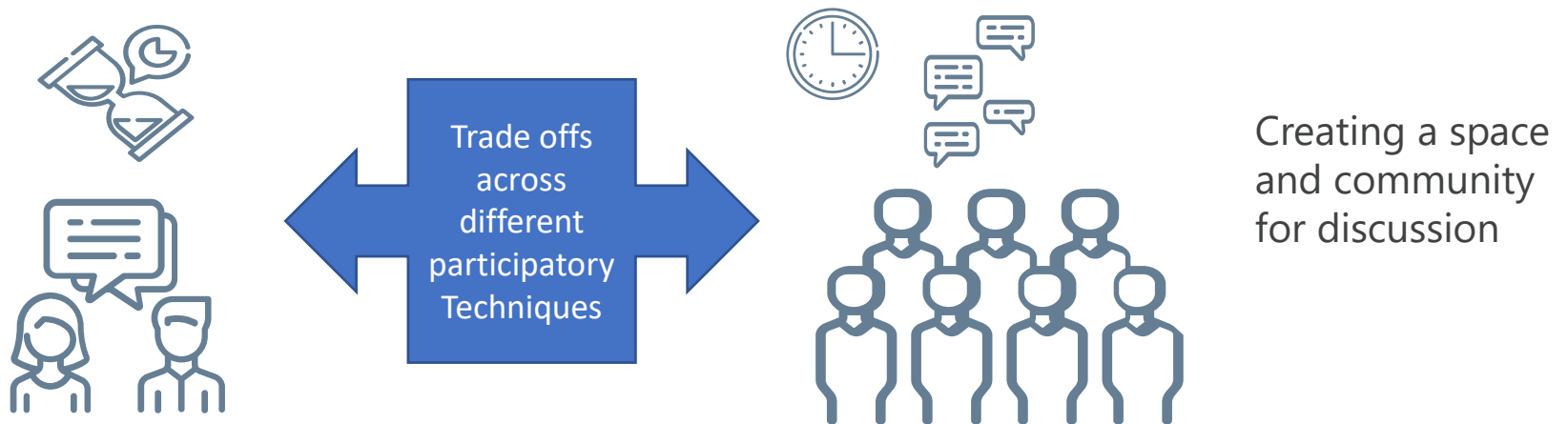
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#10 Community...

- 23 Workshops hosted by the PR Consortium:
 - 2 EU Regional
 - 10 European National
 - 11 Non-European National

The different tools for participation

Mixed varieties of setting: Online vs. Offline, Small Groups vs. Large Workshop format



- What is the 'co' in co-production of climate action? (Howarth et al., 2022)
- Everyone interprets it differently – not everyone has a shared understanding of co-production/co-creation (Galende-Sanchez and Sorman, 2020). There is not even a standard term that we use.
- Reflexive governance - deliberation central to reflexive governance to resolve tensions across diversity versus consensus (Whitmarsh et al, 2021)



Technical problems

- Load times, Centring the workload on to HOLISTIC
 - Partially, overcome by following IPCC Reporting format and standardizing data streamlining (IPCC AR6 Template)
 - Summarizing main results and policy questions by authors of papers

Too much information (TMI)!!!

- Information overload effecting navigation of platform
 - Live demo of the I2AM PARIS prototype - during our first stakeholder dialogue, Brussels, November 2019
 - A How To Video for the future?



Conducting (participatory) research in times of COVID & War

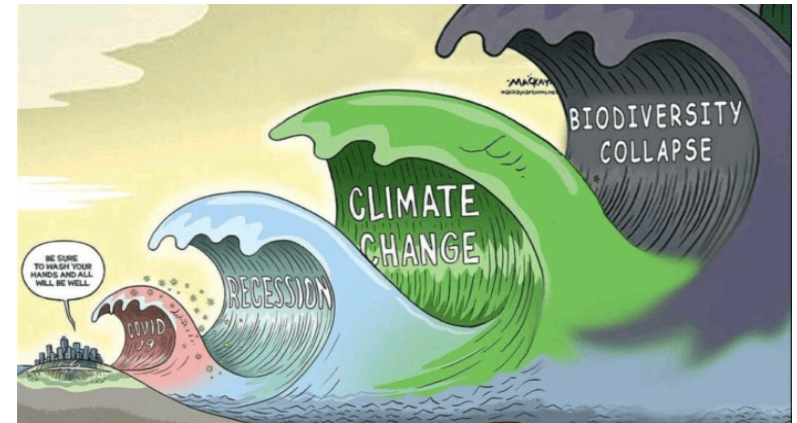
- In terms of organizing events, changing scenarios and variables and partnerships, stakeholder fatigue
- Novelty of trying different online techniques, reaching out to many actors

Are we really ready for Inter-Multi-Trans Disciplinarily?

- Communicating within our disciplinary silos, harmonizing variables but also beyond?
- Reflexivity once again within and beyond the consortium

Mind Your Language

- Language and Communication
 - We get it, how do we make sure everyone else does?
 - 1.5C is NOT a target or goal. It is a LIMIT!
 - Narrating and disseminating the story is extremely important

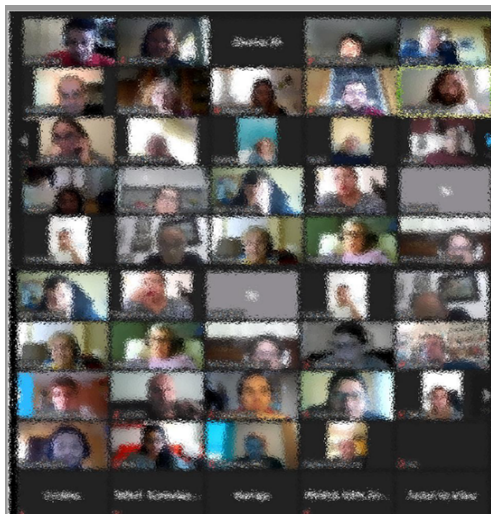


Re-adaptation from the original by Graeme MacKay's Editorial Cartoon Archive



How diverse is climate science?

- Opening up conversations to Europe and beyond
- Give voice to a multitude of different experts; Regional experts and actors narrating *their* climate priorities
- Giving space to different citizens



**Connecting climate science &
research to policy and
people**





Thank you!

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