

# Anna Pirani

## Senior Science-Policy Advisor

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[Google Scholar Citations](#)

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## Professional Experience

### Senior research associate

#### **Euro-Mediterranean Centre for Climate Change (CMCC), 2023-present**

Research on international, European, national and local climate policies, in particular adaptation, and climate risk assessment. Support and analysis of climate policy development for the Italian Ministry for the environment and energy security (MASE). Research, assessment of climate risks at the regional scale, and development of the CLIMAAAX toolbox for the Horizon Europe project "CLIMate risk and vulnerability Assessment framework and toolboX (CLIMAAAX)". Assessment of local climate risks for the LIFE project "CLIMate Adaptation for the PO river basin district (CLIMAX-PO)". Research on European climate risk assessment, in particular the development of storylines on climate risks that require European-scale coordination and management for the EEA project "European Climate Risk Assessment (EUCRA)".

### Head Working Group I Technical Support Unit

#### **Intergovernmental Panel on Climate Change (IPCC), 2016-present**

Executive editor of the 2018 IPCC Special Report on Global Warming of 1.5°C and the AR6 Working Group I 2021 Climate Report. Head of the Working Group I Technical Support Unit. Leadership and inclusive management of a team co-located in France and China of operations, science, data, communications, graphics, IT, with external contractors. Strategic and scientific assessment oversight, including design and successful running of the "groundbreaking" first ever virtual IPCC approval session. Strategic communications, visual design, and outreach tailored to international, regional and national stakeholders, experts and the public. Data provision, including the first ever IPCC Interactive Atlas - a data exploration tool accessed by over half a million users around the world to-date.

### International CLIVAR Project

#### **Deputy Executive Director, USA/Italy**

**2014-2016**

Coordination of CLIVAR activities on ocean model development, decadal climate variability and predictability, climate dynamics. Assisting the Executive Director to ensure the successful implementation of the CLIVAR project. Oversight of the International CLIVAR Monsoons Project Office (ICMPO) in Pune, India. Editor, CLIVAR Exchanges.

### International CLIVAR Project

#### **Science Officer, USA**

**2007-2014**

Coordination of CLIVAR activities on global climate modeling, seasonal to interannual prediction, ocean model development, African climate research and climate change detection and indices.

## **Research Scientist**

**Météo-France, France**

**2004-2006**

Development of a new air-sea turbulent flux parameterisation as part of the MERSEA European Integrated Project for ocean forecasting, and its implementation into an ocean general circulation model and adopted by the Météo-France CNRM climate model.

## **Education**

**Ph.D. Physical Oceanography**

**National Oceanography Centre, UK**

**2000-2004**

Thesis on ocean dynamics and El Niño.

**M.Sc. Oceanography**

**National Oceanography Centre, UK**

**1998-1999**

**B.Sc. Environmental Sciences**

**University of East Anglia, UK**

**1995-1998**

## **Community Service**

**Coordinating Lead Author**

**MedECC Special Report on Coastal Risks in the Mediterranean**

**2021-2023**

- Co-leading Chapter 1 on the the context, background and key dimensions, and the risk framework, of this assessment.

**Rapporteur EU Horizon Europe**

**2022-2023**

- Reporting on climate change, adaptation and mitigation knowledge gaps for future strategy development for EU funding priorities.

**Expert Reviewer (incl. European Commission, CINEA, PRACE, TWAS, NERC)**

**2012-present**

- EU strategic research agenda
- Super-computing and climate change
- International development, gender equity

**Strategic Board Member**

**Office for Climate Education**

**2018-present**

- Representation of the IPCC, a key OCE partner.
- Climate literacy and teaching resources tailored to regional contexts.

## Languages

Bilingual in English-Italian, proficient in French, intermediate in Spanish.

## Publications

Forster, P., Pirani, A., Rosen, D., Rogelj, J., and J. Cook, 2022. COP26 was a success for climate science, we need to build from this. *Environmental Research: Climate*. *Under revision*.

Huard, D., Pirani, A., Chen, R., Gutiérrez, J. M., Jukes, M., Krey, V., Spinuso, A., and M. Stockhouse, 2022: The IPCC Data and Intellectual Property: TG-Data Recommendations, Supporting Material, Intergovernmental Panel on Climate Change Task Group on Data Support for Climate Change Assessments (TG-Data). 8 pp, doi: 10.5281/zenodo.7197274

Iturbide M., Fernández, J., Gutiérrez, J. M., Pirani, A., Huard, D., et al. 2022. Implementation of FAIR principles in the IPCC: the WGI AR6 Atlas repository. *Sci Data* 9, 629, <https://doi.org/10.1038/s41597-022-01739-y>

Pirani, A., Alegria, A., Al Khourdajie, A., Gunawan, W., Gutiérrez, J. M., Holsman, K., Huard, D., Jukes, M., Kawamiya, M., Klutse, N., Krey, V., Matthews, R., Pascoe, C., van der Shrier, G., Spinuso, A., Stockhouse, M., Xing, X., 2022. The implementation of FAIR data principles in the IPCC AR6 assessment process. <https://doi.org/10.5281/zenodo.6504469>

Pirani, A., Matthews, R., Sitz, L., 2022: AR6 Working Group I FAIR Supplementary Material (Version 1). Zenodo. <https://doi.org/10.5281/zenodo.6451137>

Liverman, D., von Hedemann, Nying'uro, N. P., Rummukainen, M., Stendahl, K., Gay-Antaki, M. Craig, M., Aguilar, L., Bynoe, P., Call, F., Connors, S., David, L., Ferrone, A., Hayward, B., Jayawardena, S., Mai Touray, L., Parikh, J., Pathak, M., Perez, R., Pirani, A., Prakash, A., Textor, C., Tibig, L., Tignor, M., Tu?aç, Ç., Vera, C., Wagle, R., 2022. Survey of gender bias in the IPCC. *Nature*, Vol 602, 30-32, doi.org/10.1038/d41586-022-00208-1

IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, In press, doi:10.1017/9781009157896.

IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3?32, doi:10.1017/9781009157896.001.

Arias, P.A., *et al.*, 2021: Technical Summary. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 33, doi:10.1017/9781009157896.002.

Morelli, A., Johansen, T.G., Pidcock, R. Harold, J., Pirani, A., Gomis, M., Lorenzoni, I., Haughey, E., Coventry, K., 2021. Co-designing engaging and accessible data visualisations: a case study of the IPCC reports. *Climatic Change* 168, 26. doi.org/10.1007/s10584-021-03171-4

Pidcock, R., Heath, K., Messling, L., Wang, S., Pirani, A., Connors, S., Corner, A., Shaw, C., and Gomis, M., 2021. Evaluating effective public engagement: local stories from a global network of IPCC scientists. *Climatic Change* 168, 21. doi.org/10.1007/s10584-021-03230-w

Stockhause, M., Juckes, M., Chen, R., Moufouma Okia, W., Pirani, A., Waterfield, T., Xing, X. and Edmunds, R., 2019. Data Distribution Centre Support for the IPCC Sixth Assessment. *Data Science Journal*, 18(1), p.20. DOI: <http://doi.org/10.5334/dsj-2019-020>

Stockhause, M., Al Khourdajie, A., Alegria, A., Chen, R., Huard, D., Juckes, M., Pascoe, C., Pirani, A., Matthews, R., Poloczanska, E., Vicuna, S., Xing, X., Yelekçi, Ö., 2020. IPCC Sixth Assessment approaches towards FAIR data and an enhanced data reuse. *ESS Open Archive*. doi: 10.1002/essoar.10504799.1

IPCC, 2019: Summary for Policymakers. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegria, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.). Cambridge University Press, pp. 3-35. <https://doi.org/10.1017/9781009157964.001>.

IPCC, 2018: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.). Cambridge: Cambridge University Press. doi:10.1017/9781009157940

IPCC, 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3-24, doi:10.1017/9781009157940.001.

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Tompkins, A. M., et al., 2017: The Climate-system Historical Forecast Project: providing open access to seasonal forecast ensembles from centers around the globe, *BAMS*, doi: 10.1175/BAMS-D-16-0209.1.

Griffies, S. M., et al, 2016: Experimental and diagnostic protocol for the physical component of the CMIP6 Ocean Model Intercomparison Project (OMIP), *Geosci. Model Dev.*, 9, 3231–3296, <https://doi.org/10.5194/gmd-9-3231-2016>.

Danabasoglu, G. et al., 2016: North Atlantic Simulations in Coordinated Ocean-ice Reference Experiments phase II (CORE-II). Part II: Variability. *Ocean Modelling*, 97, 65–90, doi:10.1016/j.ocemod.2015.11.007.

M. E. Shongwe, A. Pirani and S. Bekele, 2014: Addressing Climate-Related Challenges and Information Needs in Africa: Africa Climate Conference 2013; Arusha, Tanzania, 15-18 October 2013. *Eos Trans. AGU*, 95(22), DOI:10.1002/2014EO220006.

Danabasoglu, G. et al., 2013: North Atlantic Simulations in Coordinated Ocean-ice Reference Experiments phase II (CORE-II). Part I: Mean States, Ocean Modelling, 3, 76-107, doi:10.1016/j.ocemod.2013.10.005.

The Steering Committee of the Africa Climate Conference 2013, 2013-present (living document): Africa Climate Science Frontiers: Addressing Priority Research Gaps to Inform Adaptation Decision-Making in Africa. Frontiers in African Climate Science Research and Applications. <http://africa-climate.org/frontiers-paper/>

Clement, A., B. Kirtman and A. Pirani, 2011: Climate Literacy as a Foundation for Progress in Predicting and Adapting to the Climate of the Coming Decades, BAMS, 92, 633--635.

A. Pirani and C. Jones, 2010: Report of the WCRP Workshop on Regional Climate: Facilitating the Production of Climate Information and its Use in Impact and Adaptation Work, WCRP Informal Report No. 9/2010.

Griffies, S. M., et al., 2010: Problems and Prospects in Large-Scale Ocean Circulation Models, Proceedings of the OceanObs-09 Conference: Sustained Ocean Observations and Information for Society, Venice, Italy, 21-25 September 2009, Volume 2, Eds. J. Hall and D.E. Harrison and D. Stammer, ESA Publication WPP-306.

D. Legler and A. Pirani, 2009: WCRP Drought Interest Group (DIG) Coordinates Drought Research for Better Prediction of Regional Drought, CLIVAR Exchanges, 51, 4-3.

Griffies, S. M., et al., 2009: Sampling Physical Ocean Fields in WCRP CMIP5 Simulations, WCRP Informal Report No. 3/2009, ICPO Publication Series No.137.

Griffies, S. M. et al., 2009: Coordinated Ocean-ice Reference Experiments (COREs). Ocean Modelling, 26, 1--46.

B. Kirtman and A. Pirani, 2009: The State of the Art of Seasonal Prediction Outcomes and Recommendations from the First World Climate Research Program (WCRP) Workshop on Seasonal Prediction, BAMS, DOI: 10.1175/2008BAMS2707.1

B. Kirtman and A. Pirani, 2008: WCRP Position Paper on Seasonal Prediction, WCRP Informal Report No. 3/2008, ICPO Publication No. 127.

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