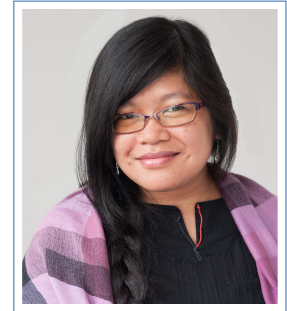


Dr. Armelle Reca Remedio

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Research interests

regional climate systems, regional climate change assessments, extreme events

Education

2008–2013 **PhD**, *Universität Hamburg and the International Max Planck Research School for Earth System Modelling*, Hamburg, Germany.

title *Connections between low level jets and mesoscale convective systems in South America*

supervisors Prof. Dr. Hartmut Graßl and Prof. Dr. Daniela Jacob

2006–2007 **Diploma on Earth System Physics**, *the abdu salam International Centre for Theoretical Physics*, Trieste City, Italy.

title *Detection of climate change using the extreme precipitation events from 1961 to 1998 in the Philippines*

supervisor Dr. Claudio Piani

1997–2003 **Bachelor of Science in Physics with Computer Engineering**, *Ateneo de Manila University*, Quezon City, Philippines, University and government scholar.

thesis *Study on interfacing a mass comparator using a computer*

supervisor Carlos M. Oppus

thesis *Study on global positioning system (GPS) application on climate variability in Metro Manila*

supervisor Fr. Jose Ramon T. Villarin, PhD

Stipends/Awards

2006–2007 **ICTP Diploma Scholarship**, *the abdu salam International Centre for Theoretical Physics*, Trieste City, Italy.

1997–2003 **University Scholarship**, *Ateneo de Manila University*, Quezon City, Philippines.

1997–2002 **Department of Science and Technology–Science Education Institute Scholarship**, *Ateneo de Manila University*, Quezon City, Philippines.

Work Experience

- 2021–present **Scientist**, *Climate Service Center Germany*, Hamburg City.
Investigates coupled ocean-atmosphere simulations over southern Africa within the BMBF-funded SASSCAL2.0 Project on TIPPING Points Explained by Climate Change (TIPPECC). Provides user-relevant climate indices for stakeholders in the areas of food security, water security and biodiversity conservation through a process of co-production, co-development and targeted research in southern Africa.
Works on a Helmholtz InnoPool project on the risk workflow for compounding and cascading hazards in coastal areas (CASCO).
Served as a Scientific Coordinator in the now-defunct WCRP Coordination Office for Regional Activities (CORA)
- 2020–2021 **Parental leave**.
- 2015–2020 **Scientist**, *Climate Service Center Germany*, Hamburg City.
Actively participated in the WCRP Initiative on CORDEX and CORDEX-CORE especially in contributing climate simulations, as well as data distribution and processing of REMO output in various domains (e.g. Europe, Africa, South America, Southeast Asia, Australia, North America, Central-, East- and South Asia).
Contributed in the Nonhydrostatic Climate Modelling 2 (NHCM-2) Project.
Worked in the The Future of Extreme Precipitation Events in the Alpine Region under High End Climate Change Conditions (HighEnd:Extremes) Project.
 - WP4: User-relevant climate indices in the Alpine Region.
- 2013–2014 **Postdoctoral fellow**, *Climate Service Center Germany*, Hamburg City.
Worked in the EU FP7 Pan-European Gas-Aerosols-climate interaction Study (PEGASOS) Project.
 - WP12: quantification of interactions in the air quality-climate system;
 - WP14/15: model projections of air quality and climate change.
- 2008–2013 **Scientific researcher**, *Max Planck Institute for Meteorology*, Hamburg City.
Assisted in the EU FP7 Hydroclimate and Society in La Plata Basin (CLARIS-LPB) Project.
 - WP5: regional climate simulations for climate change assessments;
 - WP6: analysis on extreme events.
- 2007–2008 **Scientific research assistant**, *Manila Observatory*, Quezon City.
Assisted in downscaling climate change scenario simulations in the Philippines and surrounding areas.
Assisted in the climate and weather-related risk mapping of the project entitled “Monitoring the Impacts of Disaster Risk in Albay Province: Towards Risk-Sensitive Development”.
Assisted in teaching graduate students in the Atmospheric Science Program of the Ateneo de Manila University, Philippines.
- 2003–2006 **Scientific research assistant**, *Manila Observatory*, Quezon City.
Assisted in the modeling of climatological rainfall over the Philippines.
Assisted in the development and verification of typhoon forecasting system in the Philippines using numerical models.
Assisted in the modeling of air pollution and transboundary air transport.
Assisted in the quality control, quality assurance, and interpretation of air pollution data.
- 2002–2003 **Science Research Specialist II**, *National Metrology Laboratory*, Taguig City.
Assisted in the research for the upgrade and development of the laboratories.

Teaching and Supervision Experience

- 2017–present **PhD, masters and guest scientist supervision**, *Climate Service Center Germany (GERICS)*, Hamburg City.
Supervised a few PhD, masters and guest scientists from China, Africa, India, and Germany
- 2016–2021 **Guest lecturer**, *HafenCity Universität*, Hamburg City.
Taught data processing using python for oceanography and served as a co-lecturer for introduction to Physical Oceanography for Masters students in Geomatics

Languages

- Filipino** Fluent in reading and writing
English Fluent in reading and writing
German Advance, completed **B2** level

Computer skills

- OS** Linux, Windows
Programming Fortran, Python, C/C++
RCMs REMO, MM5, RegCM
Tools cdo, unix shell scripting, NetCDF-Tools
Visualization PyRemo, jupyter, GrADS

Memberships

- o American Geophysical Union, member 2015
- o Young Earth System Scientists community, member 2010
- o European Geophysical Union, member 2009
- o Asia Oceania Geosciences Society, member from 2006 to 2009
- o Samahang Pisika ng Pilipinas (Physics Society of the Philippines), member from 2003 to 2006

Interests

- yoga Isha Yoga meditator
others travelling, reading, dancing, Taichi, playing board games

Publications

- [1] Armelle Remedio, Torsten Weber, Francois Engelbrecht, Sophie Biskop, Jessica Steinkopf, Jonathan Padvatan, Cornelis van der Waal, Theo Wassenaar, Kawawa Banda, Keabile Tlhalerwa, and Jeremy Perkins. Projected climate change signals for selected hotspot regions using regional climate simulations in southern africa. January 2025. <http://dx.doi.org/10.5194/egusphere-egu24-16077>.
- [2] Jeewanthi Sirisena, Armelle Remedio, Cecilia Nieves, Giuseppe Aronica, and Laurens Bouwer. Uncertainties in flood damage assessment under projected future extreme rainfall conditions: a case study in northeastern sicily. January 2025. <http://dx.doi.org/10.5194/egusphere-egu24-9721>.

- [3] Alain T. Tamoffo, Torsten Weber, William Cabos, Dmitry V. Sein, Alessandro Dosio, Diana Rechid, Armelle R. Remedio, and Daniela Jacob. Mechanisms of added value of a coupled global ocean-regional atmosphere climate model over central equatorial africa. *Journal of Geophysical Research: Atmospheres*, 129(3), January 2024. <http://dx.doi.org/10.1029/2023JD039385>.
- [4] Manas Pant, Namendra Kumar Shahi, Armelle Reza Remedio, R. K. Mall, Shailendra Rai, and R. Bhatla. Representing rainfall extremes over the indo-gangetic plains using cordex-core simulations. *Climate Dynamics*, 62(5):3721–3742, February 2024.
- [5] Armelle Remedio, Jeewanthi Sirisena, and Laurens Bouwer. Estimating compounding heat waves and rainfall extremes under projected climate change over the island of sicily, italy. May 2023. <http://dx.doi.org/10.5194/egusphere-egu23-9277>.
- [6] Filippo Giorgi, Erika Coppola, Daniela Jacob, Claas Teichmann, Sabina Abba Omar, Moetasim Ashfaq, Nikolina Ban, Katharina Bülow, Melissa Bukovsky, Lars Bunttemeyer, Tereza Cavazos, James Ciarlo, Rosmeri Porfirio da Rocha, Sushant Das, Fabio di Sante, Jason P. Evans, Xuejie Gao, Graziano Giuliani, Russell H. Glazer, Peter Hoffmann, Eun-Soon Im, Gaby Langendijk, Ludwig Lierhammer, Marta Llopart, Sebastial Mueller, Rosa Luna-Nino, Rita Nogherotto, Emanuela Pichelli, Francesca Raffaele, Michelle Reboita, Diana Rechid, Armelle Remedio, Thomas Remke, Windmanagda Sawadogo, Kevin Sieck, José Abraham Torres-Alavez, and Torsten Weber. The CORDEX-CORE EXP-i initiative: Description and highlight results from the initial analysis. *Bulletin of the American Meteorological Society*, 103(2):E293–E310, feb 2022.
- [7] Javier Diez-Sierra, Maialen Iturbide, José M. Gutiérrez, Jesús Fernández, Josipa Milovac, Antonio S. Cofiño, Ezequiel Cimadevilla, Grigory Nikulin, Guillaume Levavasseur, Erik Kjellström, Katharina Bülow, András Horányi, Anca Brookshaw, Markel García-Díez, Antonio Pérez, Jorge Baño-Medina, Bodo Ahrens, Antoinette Alias, Moetasim Ashfaq, Melissa Bukovsky, Erasmo Buonomo, Steven Caluwaerts, Sin Chan Chou, Ole B. Christensen, James M. Ciarlò, Erika Coppola, Lola Corre, Marie-Estelle Demory, Vladimir Djurdjevic, Jason P. Evans, Rowan Fealy, Hendrik Feldmann, Daniela Jacob, Sanjay Jayanarayanan, Jack Katzfey, Klaus Keuler, Christoph Kittel, Mehmet Levent Kurnaz, René Laprise, Piero Lionello, Seth McGinnis, Paola Mercogliano, Pierre Nabat, Barış Önal, Tugba Ozturk, Hans-Jürgen Panitz, Dominique Paquin, Ildikó Pieczka, Francesca Raffaele, Armelle Reza Remedio, John Scinocca, Florence Sevault, Samuel Somot, Christian Steger, Fredolin Tangang, Claas Teichmann, Piet Termonia, Marcus Thatcher, Csaba Torma, Erik van Meijgaard, Robert Vautard, Kirsten Warrach-Sagi, Katja Winger, and George Zittis. The worldwide c3s cordex grand ensemble: A major contribution to assess regional climate change in the ipcc ar6 atlas. *Bulletin of the American Meteorological Society*, 103(12):E2804–E2826, December 2022.
- [8] Nikolina Ban, Cécile Caillaud, Erika Coppola, Emanuela Pichelli, Stefan Sobolowski, Marianna Adinolfi, Bodo Ahrens, Antoinette Alias, Ivonne Anders, Sophie Bastin, Danijel Belušić, Ségolène Berthou, Erwan Brisson, Rita M. Cardoso, Steven C. Chan, Ole Bøssing Christensen, Jesús Fernández, Lluís Fita, Thomas Frisius, Goran Gašparac, Filippo Giorgi, Klaus Goergen, Jan Erik Haugen, Øivind Hodnebrog, Stergios Kartsios, Eleni Katragkou, Elizabeth J. Kendon, Klaus Keuler, Alvaro Lavin-Gullon, Geert Lenderink, David Leutwyler, Torge Lorenz, Douglas Maraun, Paola Mercogliano, Josipa Milovac, Hans-Juergen Panitz, Mario Raffa, Armelle Reza Remedio,

Christoph Schär, Pedro M. M Soares, Srnec Lidija, Birthe Marie Steensen, Paolo Stocchi, Merja H. Tölle, Heimo Truhetz, Jesus Vergara-Temprado, Hylke de Vries, Kirsten Warrach-Sagi, Volker Wulfmeyer, and Mar Janne Zander. The first multi-model ensemble of regional climate simulations at kilometer-scale resolution, part i: evaluation of precipitation. *Climate Dynamics*, 57(1-2):275–302, Apr 2021.

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- [10] Erika Coppola, Francesca Raffaele, Filippo Giorgi, Graziano Giuliani, Gao Xuejie, James M. Ciarlo, Taleena Rae Sines, José Abraham Torres-Alavez, Sushant Das, Fabio di Sante, Emanuela Pichelli, Russell Glazer, Sebastian Karl Müller, Sabina Abba Omar, Moetasim Ashfaq, Melissa Bukovsky, E.-S. Im, Daniela Jacob, Claas Teichmann, Armelle Remedio, Thomas Remke, Arne Kriegsmann, Katharina Bülow, Torsten Weber, Lars Bunttemeyer, Kevin Sieck, and Diana Rechid. Climate hazard indices projections based on cordex-core, cmip5 and cmip6 ensemble. *Climate Dynamics*, 57(5–6):1293–1383, March 2021.
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- [14] James M. Ciarlo', Erika Coppola, Adriano Fantini, Filippo Giorgi, XueJie Gao, Yao Tong, Russell H. Glazer, Jose Abraham Torres Alavez, Taleena Sines, Emanuela Pichelli, Francesca Raffaele, Sushant Das, Melissa Bukovsky, Moetasim Ashfaq, Eun-Soon Im, Thanh Nguyen-Xuan, Claas Teichmann, Armelle Remedio, Thomas Remke, Katharina Bülow, Torsten Weber, Lars Bunttemeyer, Kevin Sieck, Diana Rechid, and Daniela Jacob. A new spatially distributed

added value index for regional climate models: the euro-cordex and the cordex-core highest resolution ensembles. *Climate Dynamics*, 57(5–6):1403–1424, August 2020.

- [15] Jason P. Evans, Giovanni Di Virgilio, Annette L. Hirsch, Peter Hoffmann, Armelle Reca Remedio, Fei Ji, Burkhardt Rockel, and Erika Coppola. The cordex-australasia ensemble: evaluation and future projections. *Climate Dynamics*, 57(5–6):1385–1401, September 2020.
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- [19] Jingwei Xu, Nikolay Koldunov, Armelle Reca C. Remedio, Dmitry V. Sein, Xiefei Zhi, Xi Jiang, Min Xu, Xiuhua Zhu, Klaus Fraedrich, and Daniela Jacob. On the role of horizontal resolution over the Tibetan Plateau in the REMO regional climate model. *Climate Dynamics*, 51(11-12):4525–4542, dec 2018.
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- [23] Armelle Reca C. Remedio. *Connections of low level jets and mesoscale convective systems in South America*. PhD thesis, University of Hamburg, 2013.
- [24] Silvina A. Solman, E. Sanchez, P. Samuelsson, R. P. da Rocha, L. Li, J. Marengo, N. L. Pessacg, A. R C Remedio, S. C. Chou, H. Berbery, H. Le Treut, M. de Castro, and D. Jacob. Evaluation of an ensemble of regional climate model simulations over South America driven

by the ERA-Interim reanalysis: Model performance and uncertainties. *Climate Dynamics*, 41(5-6):1139–1157, 2013.

- [25] Claas Teichmann, Bastian Eggert, Alberto Elizalde, Andreas Haensler, Daniela Jacob, Pankaj Kumar, Christopher Moseley, Susanne Pfeifer, Diana Rechid, Armelle Remedio, Hinnerk Ries, Juliane Petersen, Swantje Preuschmann, Thomas Raub, Fahad Saeed, Kevin Sieck, and Torsten Weber. How Does a Regional Climate Model Modify the Projected Climate Change Signal of the Driving GCM: A Study over Different CORDEX Regions Using REMO. *Atmosphere*, 4(2):214–236, jun 2013.
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- [27] Daniela Jacob, Alberto Elizalde, Andreas Haensler, Stefan Hagemann, Pankaj Kumar, Ralf Podzun, Diana Rechid, Armelle Reca Remedio, Fahad Saeed, Kevin Sieck, Claas Teichmann, and Christof Wilhelm. Assessing the Transferability of the Regional Climate Model REMO to Different COordinated Regional Climate Downscaling EXperiment (CORDEX) Regions. *Atmosphere*, 3(4):181–199, feb 2012.
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