

Prof. Dr. Daniela Jacob

Born 20 June 1961, married, one daughter



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Affiliations

Climate Service Center Germany (GERICS)

Helmholtz-Zentrum Geesthacht

Fischertwiete 1

20095 Hamburg

Phone: +49 40 226338 406

Fax: +49 40 226338 163

Email: D.Jacob@hzg.de

Web: www.climate-service-center.de

Visiting professor

at Leuphana Universität Lüneburg,

Faculty of Sustainability

Scharnhorststr. 1

21335 Lüneburg

H-Index of 43 (Scopus, citations received since 2002), 08.01.2019

Academic education and professional employment

Since 2016	Visiting professor at Leuphana Universität, Faculty of Sustainability, Lüneburg, Germany
Since 2015	Director of Climate Service Center Germany, Hamburg, Germany
1995 – 2015	Founder and leader of the wind energy consultant <i>anemos-jacob</i>
1993 - 2015	Scientist, Max-Planck-Institute for Meteorology, Hamburg, Germany
2014 - 2015	Acting Director, Climate Service Center 2.0, Hamburg, Germany
2013 - 2014	Deputy Director, Climate Service Center, Hamburg, Germany
2010 - 2014	Department head, Climate Service Center, Hamburg, Germany
2009 - 2013	Adjunct Professor for Regional Climate Change, University of Bergen, Norway (Professor II, Secondary employment)
1992	Visiting scientist with Dr. Terry Clark, NCAR, Boulder, USA, Simulation of snow storms with the Clark model using the two-way nesting technique
1991 - 1992	Post-Doc position, GKSS Research Center, Geesthacht
May 1991	Dissertation, University of Hamburg, Meteorology: "Numerische Simulation der Wolkenbildung in einer Land-Seewind-Zirkulation"
1986 - 1991	Ph.D student, GKSS Research Center, Geesthacht. supervisor: Prof. Dr. Hartmut Graßl
Nov. 1986	Diploma thesis: Simulation der Smog-Episode im Januar 1985
1980 - 1986	Studies of Meteorology at the Technical University Darmstadt

Community services and Contribution to working groups

Since 2019	Member of wissenschaftlicher Beirat Klimaschutz und Klimafolgenanpassung des Freistaats Thüringen
Since 2019	Chair of Deutsches Komitee für Nachhaltigkeitsforschung in Future Earth (DKN)
Since 2019	Member of Advisory Board Climate Change Graz
Since 2018	Member of Editorial Board of Future Earth's "State of our Planet"

- Since 2018 Member of Transdisciplinary Advisory Board (TAB) of the Joint Programming Initiative “Connecting Climate Knowledge for Europe” (JPI Climate)
- Since 2017 Member of Science Review Group (SRG) of the Met Office Hadley Centre (MOHC)
- Since 2017 Coordinating Lead Author, IPCC SR1.5
- Since 2017 Member of Deutsches Komitee für Nachhaltigkeitsforschung in Furture Earth (DKN)
- Since 2017 Member of Sachverständigenrat Klimaschutz NRW
- Since 2017 Member of the Expert Advisory Board of the Copernicus Roadmap for European Climate Projections
- Since 2017 Ex-officio member of the Earth League
- Till Sep. 2017 Member of the “Senatskommision für Wasserforschung“
- Since 2016 Member of the Scientific Advisory Board of the Helmholtz Centre for Environmental Research (UFZ)
- 2015 - 2019 Member of the “Thüringer Klimarat“
- Since 2015 Member of the Scientific Advisory Panel of Euro-Mediterranean Center on Climate Change (CMCC)
- Since 2015 Member of WASCAL Scientific Advisory Committee
- Since 2015 Member of the Peer Review Board of the Neumann Institute for Computing (NIC)
- Since 2015 Member of Science Advisory Committee of the 4th Adaptation Futures conference
- Since 2015 Founding Editor-in-Chief for Elsevier Journal: *Climate Services*
- Since 2014 Member of CORDEX Scientific Advisory Team (Extended to 2019)
- Since 2014 Member of “Wissenschaftlicher Beirat“ klimafakten.de
- Since 2011 Scientific Member of Kommission Wasserforschung (KOWA), DFG
- Since 2011 Coordinator (together with Eleni Katragkou, Aristotle University of Thessaloniki, and Stefan Sobolowski, Bjerknnes Centre for Climate Research) of the EURO-CORDEX initiative
- Since 2006 Scientific Advisory Board Member Wegener Center for Climate and Global Change, University of Graz, Austria
- Since 1994 Scientific leader of model development and application of the regional climate model REMO

- 2014 - 2015 Member of Expert Group for the EU Roadmap on Climate Services, European Commission
- 2014 - 2015 Nationale Plattform Zukunftsstadt (NPZ)
- 2007 - 2015 Review Panel Member of the European Research Council (ERC)
- 2012 - 2014 Member of the Jury "Renewable Energy Award"
- 2010 - 2014 Lead Author, IPCC WGII AR5
- 2010 - 2014 Founding Editor-in-Chief of the journal *Atmosphere*
<http://www.mdpi.com/journal/atmosphere/>
- 2006 - 2011 Scientific Director of COSMOS
- 2006 - 2011 Member of the IOW Scientific Advisory Board, Baltic Sea Research Institute, Warnemünde
- 2005 - 2010 BALTEX Science Steering Group Member (BSSG)
- 2009 Bundesamt für Bauwesen und Raumordnung, MORO Experten-Workshop: Regionale Klimamodellierung für Anpassungsstrategien – Anforderungen, Leistungsspektrum, Grenzen
- 2009 National Komitee für Global Change Forschung, NKGCF-Rundgespräch: Umgang mit der Unsicherheit regionalen Klimaprojektionen
- 2007 - 2009 Member of the UN Expert Group on Climate Change and Water WWAP
- 2004 - 2009 Member of the ENSEMBLES Management Board
- 2004 - 2009 Deputy Head of the Department „Atmosphere in the Earth System“ at MPI-M
- 2008 DFG-Rundgespräch Regionale Klimamodelle: Was können Sie leisten? Was sollten wir von ihnen erwarten? Was für Forschungsperspektiven eröffnen sie?
- 2007 - 2008 BALTEX, Co-Chair of the Working Group on BALTIC GRID
- 2007 Member of the Int. Science Advisory Council of the Netherlands National Research Programme Climate changes Spatial Planning
- 2007 Expert Reviewer for the Natural Sciences and Engineering Research Council of Canada (NSERC)
- 2003 - 2006 Project management COSMOS
- 2002 - 2005 DEKLIM-speaker for the area Baltic Sea
- 2001 - 2005 BALTEX, Chair of the BALTEX Working Group of Water and Energy Cycles

- 2000 - 2005 Associate Editor of the Magazine Environmental Fluid Mechanics in the publisher Kluwer. Editor-in-Chief: Benoit Cushman-Roisin
- 2002 - 2003 Member of the Scientific Steering Committee of ProMed, Project Mediterranean
- 2002 DFG-Rundgespräch Atmosphärische Vorhersage im Jahr 2020: Perspektive der deutschen Atmosphärenwissenschaften
- 1997 - 2000 Coordination Committee Member of CLIMPACT (Regional Climate Modelling and Integrated Global Change Impact Studies in the European Arctic) - an European Science Foundation Network
- 1996 - 2000 TFS-Arbeitsgruppe Evaluierung: Evaluierungsstrategie für Chemie-Transport-Modell-systeme mit Anwendung im Leitthema 1 des Förderschwerpunkts Troposphärenforschung
- 1999 Recognition by the Deutsche Meteorologische Gesellschaft as Consultant Meteorologist for the area wind energy
- 1999 BMBF-Arbeitskreis Modellierung im Rahmen des neuen Förderprogrammes zur Klimaforschung
- 1999 BMBF-Rundgespräch zu BALTEX im Rahmen des neuen Förderprogrammes zur Klimaforschung

Supervisor of diploma/master students

Completed:

- Jörn Alexander: Rückkoppelungseffekte der Vegetation auf das Klima der Barrentssee-Region im regionalen Modell REMO
- Tanja Blome: Simulationen zum Klima der Barents-See-Region: Heutiges Klima und mögliche Klimaänderungen durch eine abgeschwächte THC im Nordatlantik
- Bastian Eggert: Auswirkungen der Oberflächeneigenschaften in REMO auf die Simulation der unteren Atmosphäre.
- Stephanie Fiedler: Model Performance and Climate Change Assessment with REMO and REMO-HAM in East Asia
- Ivy Frenger: Untersuchung der Auswirkungen der Landnutzungsänderung / Landoberflächenänderung in Westafrika auf das Klima mit Hilfe des Regionalen Klimamodells REMO
- Katharina Klehmet: Klima in Ostafrika - Modellvalidierung und Untersuchung regionaler Charakteristika

Philip Lorenz:	Simulation von Starkniederschlägen während des Oderhochwassers 1997 mit REMO
Eva Mazurkewitz:	Jahresgang der Landoberflächendaten – Aufbereitung für den Mosaic-Ansatz
Juliane Petersen:	Rückwirkungen von Landnutzung und Bewässerung auf das simulierte lokale und regionale Klima der Metropolregion Hamburg
Susanne Pfeifer:	Validierung des regionalen Klimamodells REMO anhand eines extremen Schneefallereignisses im Dezember 1998 über Südschweden
Paula Poeppel:	Validierung der simulierten Wolkenstruktur an Hand von Beobachtungen aus der BBC Messkampagne
Ahmed Qureshi:	Sensitivity Study of Different Land Use Changes in the Elbe River Basin
Diana Rechid:	Untersuchung zur Parameterisierung von Landoberflächen im regionalen Klimamodell REMO
Thomas Remke:	On the variability in a regional climate model using dynamical downscaling with frequent reinitializations
Richard Schmitt:	Schneelast an Stromleitungen- Heute und in Zukunft.
Kira Schulz	Analyse von Gesundheitsindizes für Europa im wandelnden Klima

Supervisor of PhD students

Ongoing with working titles:

Gaby Landendijk:	High-resolution regional-to-local climate modelling for urban applications, with the regional climate model REMO
Shoupeng Zhu:	The influence of land use and land cover change on the regional climate.
Lennart Marien:	Einfluss komplexer Orographie auf die Niederschlagsklimatologie in REMO
Thomas Remke:	Welche Risiken bringt der Klimawandel für Windparks?
Marius Stankoweit:	Physical and Economic Vulnerability of the Electricity Grid to Climate Change

Completed:

Bastian Eggert:	Improvements and uncertainties in high-resolution climate simulations (2018, Leuphana, Lüneburg)
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- Susanne Bauer: Atmosphären-Chemiemodellierung mit dem Modell GESIMA (2001, University of Hamburg, co-advisor)
- Katharina Bülow: Zeitreihenanalyse von regionalen Temperatur- und Niederschlagssimulationen in Deutschland (2009, University of Hamburg)
- Alberto Elizalde: The Water Cycle in the Mediterranean Region and the Impact of the Climate Change (2011, University of Hamburg)
- Borbola Gálos: Analysis of forest-climate interactions, applying the regional climate model REMO (2009, University of West Hungary, Sopron)
- Holger Göttel: Einfluss der nicht-hydrostatischen Modellierung und der Niederschlagsverdriftung auf die Ergebnisse regionaler Klimamodellierung (2008, University of Hamburg)
- Renate Hagedorn: Ein gekoppeltes Atmosphären-Ozean-Modell für das Ostsee-Einzugsgebiet (2000, University of Kiel, co-advisor)
- Ruud Hurkmans: Effects of climate variability and land use changes on the water budget of large river basins (Wageningen University, Member of the committee for the examination, June 2009, external reviewer)
- Sven Kotlarski: A subgrid glacier parameterization for use in regional climate modelling (2007, University of Hamburg)
- Philip Lorenz: Einfluss der Zwei-Wege Nestung auf die Ergebnisse globaler und regionaler Klimasimulationen (2011, University of Hamburg)
- Carolyn Narayan: IMPRS-Stipendiatin, Atmosphärischer CO₂-Transport (2006, University of Hamburg, co-advisor)
- Joni-Pekka Pietikäinen: Aerosols and climate: from regional to global modelling (2015, University of Eastern Finland)
- Susanne Pfeifer: Modelling cold cloud processes with the regional climate model REMO (2006, University of Hamburg)
- Swantje Preuschmann: Regional surface albedo characteristics - analysis of albedo data and application to land-cover changes for a regional climate model (2012, University of Hamburg)
- Christine Radermacher: Causes for regional changes in heavy precipitation over Europe (2013, University of Hamburg)
- Thomas Raub: The Water and Heat Cycles in a Coupled Ocean-Atmosphere-Model for the Baltic Sea (2014, University of Hamburg)

- Diana Rechid: On biogeophysical interactions between vegetation phenology and climate simulated over Europe (2008, University of Hamburg)
- Armelle R. Remedio: Connections between the mesoscale convective systems and the regional scale flows in South America (2013, University of Hamburg)
- Andreas Roesch: Assessment of the Land Surface Scheme in Climate Models with Focus on Surface Albedo and Snow Cover (1999, ETH Zürich, co-advisor)
- Tido Semmler: Der Wasser- und Energiehaushalt der arktischen Atmosphäre (2002, University of Hamburg)
- Kevin Sieck: Internal Variability in the Regional Climate Model REMO (2013, University of Hamburg)
- Claas Teichmann: Climate and Air Pollution Modelling in South America with Focus on Megacities (2009, University of Hamburg)

Memberships

Deutsche Meteorologische Gesellschaft

European Geophysical Union

Third-party founded project

National

BMBF founded projects

- EU-ERA4CS: INNOVA - Innovation in Climate Service Provision Oct 2017-Sep 2020 help society manage the impacts of climatic changes and find innovative climate risk management solutions.
- EU-ERA4CS: Climate Services for the Water-Energy-Land Nexus (CLISWELN) Oct 2017-Sep 2020 to advance the provision of Climate Services (CS) for drought-related decision making, by using the water-energy-land nexus (WELN) to integrate the cross-sectoral links of drought-risk management with further synergistic co-benefits between the provision of climate services and long-term societal objectives.
- HZG wissens- und transferfonds bridging the Gap Sep 2017- Aug 2019

- Advanced Earth System Modelling Capacity (ESM) Apr 2017 – Mar 2019 to contribute solving grand challenges mankind is facing by developing and applying innovative Earth system modelling capacity.
- UseUCLim – Review of practical and user serviceability of an urban climate model to foster climate proof urban development Jul 2016 - Jun 2019 Review of practical and user serviceability of an urban climate model to foster climate proof urban development -Urban Climate under Change.
- im Förderschwerpunkt KLIMZUG: KLIMZUG-NORD 2009 – 2014, Querschnittsthema KLIMA, Robustheit von Klimaänderungsmustern und Rückwirkungen von Anpassungsmaßnahmen auf das regionale Klima
- GENUS-Einfluss des Klimawandels auf biogeochemische Zyklen und ökologische Prozesse im Schelfgebiet des Südostatlantiks, 2009 – 2012, Hochaufgelöste Simulationen der atmosphärischen Strömungsbedingungen über dem Benguela-Küstenauftriebsgebiet während der Kleinen Eiszeit, der Mittelalterlichen Wärmeperiode und von 1970 bis 2008
- zum Schwerpunktthema GLOWA-DANUBE, 2007 – 2010, Regionale Klimamodellierung: Entwicklung und Bereitstellung von REMO-Szenarien zum Klimawandel des Wasserkreislaufs im Einzugsgebiet der Oberen Donau
- zum Schwerpunktthema BIOTA-SÜD, 2003 – 2009, Interactions between land use changes and the local and regional climate
- zur Ostseeforschung, BALTIMOS, Koordination des DEKLIM-Verbundes 2001-2005, Entwicklung und Validierung eines gekoppelten Modellsystems in der Ostseeregion
- zur Quantifizierung von Unsicherheiten in der regionalen Klimamodellierung, IVECC, 2001 – 2005 innerhalb DEKLIM, Einfluss der Vegetation auf regionale Klima- und Klimaänderungssimulationen
- zum MAPP Demonstrationsprojekt, 2000 – 2001, Wolken- und Feuchteparameter aus MERIS-Daten zur Assimilation in mesoskalige Modelle und deren Validierung
- zum Schwerpunktthema GLOWA-ELBE, 2000 – 2003, Regionale Klimasimulationen zur Untersuchung der Niederschlagsverhältnisse in heutigen und zukünftigen Klimaten
- zur Modellierung von Rheinhochwassern, 1999 – 2000, Regionales Klimamodell zur meteorologischen und hydrologischen Vorhersage extremer Ereignisse am Beispiel des Rhein-Einzugsgebietes

- zum Troposphärenforschungsschwerpunkt (TFS), 1996 – 2000, Entwicklung und Anwendung einer Modellhierarchie zur Berechnung chemischer Prozesse in der Troposphäre unter heutigen und zukünftigen Emissionsbedingungen
- zum Schwerpunktthema Wasserkreislauf, 1994 – 1997, Modellierung und numerische Experimente für BALTEX

BMVBS funded projects

- KLIWAS, 2009 – 2013, Auswirkungen des Klimawandels auf Wasserstraßen und Schifffahrt – Entwicklung von Anpassungsoptionen

UBA funded projects

- UFOPLAN-Vorhaben 20441138, 2004 – 2007, Klimaauswirkungen und Anpassung in Deutschland- Phase1: Erstellung regionaler Klimaszenarien für Deutschland

DFG funded projects

- Consultant, deputy and sub project leader in Sonderforschungsbereich 512: Tiefdruckgebiete und Klimasystem des Nordatlantik, 1998 – 2010

Funding from EIFER (European Institute for Energy Research, Karlsruhe)

- ANKE, 2006 – 2009, Anpassungsstrategien an rezente und zu erwartende Klimatrends für EnBW

Funding from GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit)

- CONGO, 2010 – 2012, Klimawandelszenarien für das Kongobecken
- POTATO, 2008 – 2011, Participatory development and testing of strategies to reduce climate vulnerability of poor farm households in East Africa through innovations in potato and sweet potato technologies and enabling policies

Funding from Land Niedersachsen

- Im Forschungsverbund KLIFF 2009 – 2013, QT1: Dynamical Downscaling

International***EU funded projects***

FP4

- PEP, 1997 – 2000, Long Term Measurements and Modelling of Evaporation and Precipitation
- SFINCS, 1997 – 2000, Implementation and Validation of Improved Flux Parameterizations in Climate and Weather Forecasting Models
- NEWBALTIC I and II, 1996 – 2000, Numerical Studies of the Energy and Water Cycle of the Baltic Region

FP5

- BALANCE, 2002 – 2005, Climate Change Vulnerabilities in the Barents Region: Linking Arctic natural resources, climate change and economies
- PRUDENCE, 2001 – 2004, Prediction Uncertainties describing European Climate Change and Effects

FP6

- CLAVIER, 2006 – 2009, Climate Change and Variability: Impact on Central and Eastern Europe
- CIRCE, 2007 – 2010, Climate change and Impact Research: the Mediterranean environment
- NEWATER, 2005 – 2009, New Approaches to Adaptive Water Management under Uncertainty
- GEMS, 2004 – 2010, Global and regional Earth system monitoring using Satellite and in-situ data
- ENSEMBLES, 2004 – 2009, Ensemble-based Predictions of Climate Changes and their Impacts
- CLARIS, 2004 – 2007, A Europe-South America Network for Climate Change Assessment and Impact Studies

FP7

- IMPACT2C, 2011 – 2015, Quantifying projected impacts under 2°C warming
- CLIPC, 2013 – 2016, Climate Information Platform for Copernicus
- ECLISE, 2011 – 2014, Enabling Climate Information Services for Europe
- CARBO-EXTREME, 2009 – 2013, The terrestrial Carbon cycle under Climate Variability and Extremes a Pan-European synthesis
- Climate for Culture, 2009 – 2013, Damage risk assessment, macroeconomic impact and mitigation strategies for sustainable preservation of cultural heritage in the times of climate change

- COMBINE, 2009 – 2013, Comprehensive Modelling of the Earth System for Better Climate Prediction and Projection
- ATP, 2009 – 2012, Arctic Tipping Points
- HIGHNOON, 2009 – 2012, Adaptation to changing water resources availability in northern India with Himalayan glacier retreat and changing monsoon pattern
- SafeLand, 2009 – 2012, Living with landslide risk in Europe: Assessment, effects of global change, and risk management strategies
- LAIC, 2009 – 2011, Land-Atmosphere Interactions in China
- CCTAME, 2008 – 2013, Climate Change – terrestrial Adaptation and Mitigation in Europe
- ACQWA, 2008 – 2013, Assessing Climatic Change and impacts on the quantity and Quality of Water
- CLARIS-LPB, 2008 – 2012, A Europe-South America Network for Climate Change Assessment and Impact Studies in La Plata Basin

EU funded projects

- Copernicus Climate Change Service / ECMWF: PRINCIPLES May 2017-Apr 2021 to inform policy development in Europe regarding climate change, improve the planning of mitigation and adaptation strategies, and promote the development of new services for the benefit of society.
- Copernicus Climate Change Service / ECMWF: GLORIOUS Sep 2017-Feb 2019 a Climate Data Store which will make climate information freely available to users from 2018.
- Landesforschungsförderung Hamburg : Hybride - Chancen und Herausforderungen von neuen genomischen Kombinationen (Jul 2017 - Jun 2020)
- VirtualWaterValues May 2017 – Apr 2020 Multiscale Monitoring of Global Water Resources and Options for their Efficient and Sustainable Use (project acronym ViWa)
- HAPPI-DE Apr 2017-2018: Klima- und Klimafolgenprojektionen bei 1.5°C gegenüber 2°C Erwärmung im Rahmen der HAPPI-Initiative.
- MiKlip II – Mittelfristige Klimaprognosen II Nov 2015 - Oct 2019 MiKlip has made important research contributions and has developed an internationally competitive decadal climate prediction system.

- H2020: EU-MACS- European Market for Climate Services Nov 2017-Oct 2018 The project analyses the market structures and drivers, obstacles and opportunities from scientific, technical, legal, ethical, governance and socioeconomic vantage points.
- H2020: EU-MARCO- Market Research for Climate Services Observatory Nov 2017-Oct 2018 a Climate-related tools, products, data and services may greatly contribute to climate change mitigation and adaptation.
- H2020: IMPREX – Improving predictions and management of hydrological extremes Okt 2015- Sep 2019 IMPREX is designed to improve the forecasting capability of hydrological extremes and their impacts at synoptic to seasonal time scales.
- H2020: ClimateEurope European Climate Observations, Modelling and Services -2 Dec 2015 - Nov 2020 will coordinate and support Europe's knowledge base to enable better management of climate-related risks and opportunities thereby creating greater social and economic value.
- H2020: NAIAD - Nature Insurance Value: Assessment and Demonstration Dec 2016 - Nov 2019 aims to operationalize the insurance value of ecosystems to reduce the human and economic cost of risks associated with water.
- H2020:ERA4CS – European Research Area for Climate Services Jan 2016 - Dec 2020 the ERA4CS Consortium is aiming to boost, research for Climate Services (CS), including climate adaptation, mitigation and disaster risk management.
- Copernicus Climate Change Service / ECMWF: Clim4Energy - Sectoral Information System: Proof of Concept (Energy) Jan 2016 - Mar 2017 In this framework, a Sectoral Information System (SIS) will be established to provide access to tailored climate indicators, targeting primary users.
- Copernicus Climate Change Service / ECMWF: DECM – Data Evaluation for Climate Models (C3S_51 Lot 4) – Aug 2016 - Dec 2018 The purpose of C3S is to inform policy development in Europe regarding climate change, improve the planning of mitigation and adaptation strategies, and promote the development of new services for the benefit of society.
- Life: LOCAL ADAPT - Integration of climate change adaptation into the work of local authorities July 2016 - June 2019
- MiKlip Mittelfristige Klimaprognosen, 2009 – 2013 (1. Phase), 2013 – 2017 (2. Phase), Schaffung eines Modellsystems, um zu mittelfristigen Zeithorizonten verlässliche Aussagen zur Klimaentwicklung, der zu erwartenden Änderungen im Klima und seinen extremen Wetterausprägungen, zu gewinnen
- GLACINDIA, 2014 – 2016, Water related effects of changes in glacier mass balance and river run-off in western Himalaya, India: past, present and future

- Reklies-DE, 2013 – 2016, Verfeinerung der Analyse der globalen Modellierungsergebnisse für Deutschland und seine Bundesländer mit Schwerpunkt in der Auswertung des Szenarios RCP8.5, um die Klimaänderungen in Deutschland für dieses Hochemissionsszenario abschätzen zu können
- SASSCAL, 2013 – 2015, to conduct problem-oriented research in the area of adaptation to climate and change and sustainable land management and provide evidence-based advice for all decision-makers and stakeholders to improve the livelihoods of people in the region and to contribute to the creation of an African knowledge-based society
- The Future Okavango (TFO), 2010 – 2015, zur Untersuchung grenzübergreifenden Einzugsgebiet mit hoher internationaler Sichtbarkeit Ökosystemfunktionen und Dienstleistungen und ihrer Wechselwirkungen mit Landnutzung
- C3Grid – INAD Towards an Infrastructure for General Access to Climate Data, 2010 – 2013, zur Unterstützung des Workflows der Erdsystemforscher

Future Earth funded projects

- E3S, 2014 – 2016: Extreme Events and Environments from Climate to Society

Austrian Science funded projects

- HighEnd: Extremes, 2014 – 2017: The Future of Extreme Precipitation Events in the Alpine Region under High End Climate Change Conditions
- NHCM-2, 2013 – 2015: Non-Hydrostatic Climate Modelling, Part II

Teaching activities

- WS 18/19: Stadtklima im Klimawandel zwischen Klimaschutz und Anpassung. Leuphana University of Lüneburg
- WS 16/17: Stadtklima im Klimawandel zwischen Klimaschutz und Anpassung. Leuphana University of Lüneburg
- WS 15/16: Wie erhalten wir ein bioklimatisch lebenswertes Stadtklima? Leuphana University of Lüneburg
- October 2008: Autumn School on Climate change, causes and Impacts, Cyrus
- September 2007: 1st International Summer School on the MPI-M Earth System Modelling Framework. Introduction to Modelling, Hamburg

- WS 05/06: Simulation of Ecosystems at Hochschule für Angewandte Wissenschaften, Hamburg
- WS 04/05: Simulation of Ecosystems at Hochschule für Angewandte Wissenschaften, Hamburg
- Summer 2002: Teaching activity during the *Advanced Study Course IRISEN-II (Integrated Regional Impact Studies in the European North: Basic Issues, Methodologies and Regional Climate Models (IRISEN-II))*
- WS 1996/97: Seminar *Regional Modelling* University of Hamburg

Further activities

- Numerous Interviews for magazines, newspapers, radio and TV within the past years, increasing since release of IPCC SR 1.5°C in October 2018
- 2016 - 2018 Reviewer of the Project "RESOLW - Renewable Energy Forecast by new Solarradiation- and Windnowcastingsystems" at Joanneum Research Graz
- Since 2009 Participation in Innovations-Allianz Hamburg
- Since 2009 Reviewer for the Deutsche Forschungsgemeinschaft (DFG)
- Since 2006 Organisation of several workshops related to the use of regional climate model (REMO) data for impact studies for wind energy consultants, DWD, regional administrations and universities
- Since 2006 Several interviews for newspapers, magazines, the radio and TV
- Since 1997 Coordination Committee Member of CLIMPACT (Regional Climate Modelling and Integrated Global Change Impact Studies in the European Arctic) - a European Science Foundation Network
- Since 1995 Founder and leader of the wind energy consultant anemos-jacob
- 2009 Member of the editorial advisory board of the International Journal of Climate Change Strategies and Management
- 2009 Member of the editorial board of Atmosphere
- 2009 Reviewer for the Swedish Research Council
- 2009 Reviewer for the Austrian Climate Research Program
- 2009 Reviewer for Luxembourg National Research Fund
- 2008/2009 Participation in Rundgespräch: regionale Klimamodelle, Nationales Komitee für Global Change Forschung
- 2008 Member of the Scientific Committee of the on-line Conference "Climate 2008"

- 2008 Participation in the development of DAS (Deutsche Anpassungsstrategie an den Klimawandel)
- 2007 External reviewer for Natural Sciences and Engineering Research Council of Canada (NSERC)
- 2007 US State Department/ Bureau of Intelligence and Research, Workshop on Risky Climate: Disaster Preparedness and Foreign Policy in the 21st Century
- 2006 Reviewer for the Dutch Technology Foundation
- 2006 Reviewer for Canadian Foundation of Climate and Atmospheric Science
- 2006 Reviewer for the European Science Foundation
- 2004 Review for proposals of National Science Foundation (NSF)
- 2003 Reviewer for the Israel Science Foundation
- 2002 External examiner in the Licentiate seminar at the University of Göteborg
- 2001 Organisation of a national REMO workshop in Hamburg
- 1996 Organisation of a national REMO workshop in Hamburg
- 1993 Co-Editor for Energy and Water Cycles in the Climate System, Edited by Ehrhard Raschke, Daniela Jacob, Springer-Verlag Berlin
- 1991 Organisation of the NATO-ASI (Energy and Water Cycles in the Climate System) in Glücksburg
- 1990 Co-Founder and leader of the wing energy consultant anemos
- 1988 Organisation of the 4th Seminar of Mesoscale Simulation Models of the Atmosphere in Geesthacht

Reviews for international journals

- ACSYS (Arctic Climate System Study) book
- Annales Geophysicae
- Atmospheric Environment
- Atmospheric Chemistry and Physics
- Atmospheric Research
- Boreal Environment research
- Climatic Change

- Climate Dynamics
- Climate Research
- Contribution to Atmospheric Physics
- Global and Planetary Change
- Geophysical Research Letters
- International Journal of Climatology
- IPCC WG1 Third Assessment report
- IPCC WG1 Fourth Assessment report
- Journal of Atmospheric Science
- Journal of Biogeography
- Journal of Climate
- Journal of Geophysical Research
- Journal of Hydrology
- Journal of Hydrometeorology
- Meteorologische Zeitschrift
- Meteorology and Atmospheric Physics
- Monthly Weather Review
- Natural Hazards and Earth System Sciences
- Nordic Hydrology
- On-line Journal Ocean Science
- Physics and Chemistry of the Earth
- Quarterly Journal
- Regional Environmental Change
- Studia Geophysica et Geodaetica
- Tellus
- Theoretical and Applied Climatology

Contributions to the following conferences, among others

12th International Conference on Atmospheric Aerosols and Nucleation

21st Century Challenges in Regional-Scale Climate Modelling

DACH, DMG - Deutsche Meteorologische Gesellschaft

Deltas in times of climate change II

Deutsche IPCC-Tagung Frankfurt

DKT - Deutschen Klimatagung

EGU- European Geosciences Union General Assembly

EMS, EGS Conferences

EWEC

GEWEX- global energy and water exchange project

International Conference on Cloud Physics

International Conference on ESM

International Conference on Regional Climate – CORDEX 2013

IUGG General Assembly

Nordseesymposium

Our common future under Climate Change

Study conferences on BALTEX

Selected Lectures in 2006 to 2018**2018**

04.12. – ***COP 24, Katowice***

07.12. *6 talks on “IPCC: SR 1.5 °C”*

27.11. ***High Level Conference “EU research and innovation in our daily life”,
Brussels***

“IPCC: SR 1.5 °C”

22.11. **ÖWAV-Seminar „Anpassungen an den Klimawandel – Maßnahmen der Wasserwirtschaft“, Vienna**

“IPCC: SR 1.5 °C“

15.11. **Rundgespräch Klimaextreme, Berlin**

“Regionale Klimaextreme“

23.10. **Konferenz “Jedes Zehntelgrad zählt: Gemeinsam handeln!“, Berlin**

“ IPCC: Die Ergebnisse des Sonderberichts: Eine Übersicht“

18.10. **Friends of Europe: “Energy and Climate Summit 2018”**

“IPCC: SR 1.5 °C“

11.10. **High-level Event on IPCC findings, Geneva**

“IPCC: SR 1.5 °C“

09.08. **Wissenschaftssommer, Sylt**

“Mit Vollgas in den Klimawandel: In welcher Welt wollen wir leben?“

11.07. **CDU Harburg-Land**

„Klimawandel in Norddeutschland – was müssen wir wissen, und was können wir tun“

2017

- 08.11. **KfW-Symposium on „Climate Resilient Coastal Infrastructure Investments: Challenges and Opportunities”, Bonn (COP 23)**
“Challenges and options for climate-resilient infrastructure investments in coastal zones“
- 25.07. **Alpbach Technology Symposium, Alpbach/Tyrol**
“How does the 1.5 °C hotter World look like?“
- 17.07. **Konferenz Energielandschaften Norddeutschland „Modellierung erneuerbarer Energieressourcen“, Hamburg**
“Klimainformationen als Grundlage zur Anpassungsunterstützung von kritischer Energieinfrastruktur - Relevanz und Anforderungen an die Modellierung“
- 10.07. **Deutsches Krebsforschungszentrum (DKFZ), Heidelberg**
“Ensembles, Klimaprojektionen und Prognosen – Warum widersprechen sich die Ergebnisse?“
- 27.06. **Beraterstammtisch Energie und Umwelt „Anpassung an den Klimawandel in Hamburg“**
“Klimawandel - Chancen und Risiken für Unternehmen“
- 05.05. **Jahresversammlung der Braunschweigischen Wissenschaftlichen Gesellschaft**
“Klima und Meer - Globaler Wandel - Lokale Konsequenzen“
- 25.04. **European Geosciences Union General Assembly 2017, Wien**
“Prototype development of user specific climate services“
- 02.02. **Jahresempfang der Grünen Ratsfraktion, Kiel**
“100% Klimaschutz!?! Wie können sich Kommunen an die Herausforderungen und Chancen des Klimawandels anpassen?“

2016

- 08.11. **Sino-German Symposium, Hamburg**
"Climate Service: Innovation and Smart Solution"
- 02.11. **Regionalkonferenz „Klimawandel Norddeutschland“, Hannover**
""Das Pariser Klimaabkommen und seine regionale Bedeutung"
- 16.03. **Mitgliederversammlung des Niedersächsischen Städte- und Gemeinbundes, Rosengarten**
"Bedeutung des Klimawandels für Kommunen"
- 21.01. **BUE: „Klimawandel ist Realität – Chancen, Risiken und Maßnahmen für Hamburger Unternehmen“, Hamburg**
„Was kommt auf uns zu? Klimaprojektionen bis 2050 und 2100“
- 2015**
- 05.10. **DKRZ Festveranstaltung zur Einweihung des HLRE-3, Hamburg**
„Hochleistungsrechner und Datenspeicher - Grundlagen für den Klimageservice“
- 12.09. **Jahrestagung UNIVEG, Bremen**
"Entwicklung von Klimageservices für Wirtschaft, Politik und Gesellschaft"
- 08.07. **Our common future under climate change, Paris**
"Cross- sectoral analyses for Europe as summarized in the IPCC AR5 Europe Chapter and under 2°C global warming IMPACT2C"
- 17.03. **Launching Worskhop: A European Roadmap for Climate Services, Brussels**
"Dealing with the barriers in providing climate services - AMBASSADOR"

- 08.01. **KlimaCampus Kolloquium Hamburg,**
“Climate Services-Innovation for smart solutions”
- 2014**
- 16.10. **23. Zukunftsforum: Klimawandel – eine Herausforderung für die öffentliche Sicherheit, Zukunftsforum öffentliche Sicherheit e.V., Berlin**
“Klimawandel geht alle an”
- 06.10. **14th EMS Annual Meeting & 10th European Conference on Applied Climatology (ECAC), Prag**
“From consultation to co-production - the integration of user needs in the development of climate science”
- 07.07. **„Der Klimawandel in Niedersachsen“ Jugendtagung der Evangelischen Akademie Loccum, Rehburg-Loccum**
„Welche Auswirkungen wird der Klimawandel in den verschiedenen Regionen Niedersachsens haben? Welche Probleme ergeben sich daraus?“
- 19.05. **IPCC AR5 Report of WG II: A Comprehensive Background and next steps, Bonn**
“Climate change in Europe”
- 28.04. **European Geosciences Union General Assembly 2014, Wien**
“Climate Change Signals in the EURO-CORDEX Simulations”
- 28.04. **Bericht des Weltklimarats IPCC 2014, BMFWF**
“Klimawandel in Europa”
- 02/03.04. **Mittel- und norddeutsche Trockenregionen im Klimawandel, Leipzig**
“Neues aus WG2”
- 01.04. **DE-IPCC Veranstaltung zu WG2, Berlin**
„Regionale Aspekte des AG2-Berichts und ihre Bedeutung für Deutschland“
- 26.02. **DVGW Forum Sichere Wasserversorgung, Mülheim**
„Auswirkungen des Klimawandels auf die Wasserversorgung- Stand der Forschung“
- 24.02. **Internationalen Konferenz CLARR 2014 – ‘Auf dem Weg zu einer klimaangepassten und resilienten Region**

„Neues vom 5. Sachstandsbericht des IPCC: Zeit zum Handeln“

- 21.02. **NGO-Briefing: Vorbereitung auf Teil II und III des Weltklimaberichts, Berlin**
„Regionale Auswirkungen des Klimawandels in Deutschland/Europa“
- 13.02. **CSC-Jahrestagung, Potsdam**
„Zwischen Bandbreitenmodellen und stabilen Trends – erwartete Klimaänderungen“

2013

- 07.11. **International Conference on Regional Climate - CORDEX 2013, Brussels:**
“From GCM to RCM- from ESM to RESM”
- 03.09. **“Vom globalen Klimawandel zu regionalen Anpassungsstrategien” wurde vom Forschungsverbund KLIFF – Klimafolgenforschung in Niedersachsen, Göttingen**
„Regionaler Klimawandel: wo stehen wir heute?“
- 09.04. **Deutsche Informationsveranstaltung zum IPCC-AR5-WGII, Bonn:**
„Regionale Aspekte- Beispiel Europa“
- 20.02. **CSR Leader's Circle on Sustainable Water Management, Berlin:**
“Climate Change: from global to local action!”

2012

- 27.11. **Workshop: Terrestrial water systems under climate change: available knowledge and knowledge demands, Hamburg:**
“Soil moisture and climate change”
- 08.11. **2. Regionalkonferenz Klimaanpassung Küstenregion, Bremerhaven:**
„Stand der Klimaforschung – vom globalen zum regionalen Klima“
- 28.09. **Fachkonferenz aus Anlass des 100-jährigen Geburtstags von Budnikowsky, Hamburg:**
„Klimawandel: Herausforderungen an Industrie und Handel“
- 14.07. **Hydroinformatics Conference HIC-2012, Hamburg:**

“Regional Climate Change Projections: Bridging Global Climate Change and Local Applications”

20.03. **7. Extremwetterkongress, Hamburg:**

„Neues zu regionalen Klimaänderungen“

2011

02.11. **KLIMZUG Statuskonferenz , Berlin:**

„KLIMZUG-NORD - Strategische Anpassungsansätze zum Klimawandel in der Metropolregion Hamburg“

12.04. **6. Extremwetterkongress, Hamburg:**

Was wissen wir heute über den Klimawandel in den Metropolregionen?

30.03. **Klimaanpassung Küstenregion –Regionalkonferenz des Bundes und der norddeutschen Küstenländer, Hamburg:**

„Zukünftige Auswirkungen des Klimawandels auf die nordeutsche Küstenregion“

20.01. **CSC Thementagung: Unter 2 Grad: Wie lassen sich der Klimawandel und seine Folgen begrenzen?, Leipzig:**

„2 Grad globale Erwärmung: Was bedeutet das für unser Klima?“

2010

29.09. **ENERGIE-LANDSCHAFTEN!?! - Fallen oder Chancen für ländliche Räume, 31. Bundestagung der Deutschen Landeskulturgesellschaft DLKG, Husum:**

„Klimafolgen und Energielandschaften (MPI)“

02.09. **UBA Anpassungskonferenz, Dessau-Roßlau:**

„Regionale Klimamodelle und Aussagen zu Extremwerten (europäische Projekte)“

25.08. **Hamburger Streitgespräch zum Klimawandel, Hamburg:**

„Das wird schon nicht so schlimm werden! Wie viel Katastrophenszenario braucht der Mensch?“

22.06. **DWD-Workshop: Umgang mit Klimaprojektionen, Offenbach:**

„Regionale Klimamodellensembles und die Nutzung ihrer Ergebnisse“

31.05. **CES-Conference on Future Climate and Renewable Energy: Impacts, Risks and Adaptation, Oslo:**

„Global climate change with regional consequences: challenges for adaptation“

28.05. **IMEA 7, Hamburger Feuerkasse, Hamburg:**

„Klimaforschung: Stand und konkrete Relevanz“

23.04. **Conference: Continents under Climate Change, Berlin:**

„Global warming below 2°C relative to pre-industrial level: How might climate look like in Europe?“

12.04. **Workshop „Extremwetterereignisse und Ertragsausfälle in der Landwirtschaft“ , CSC, Hamburg:**

„Meteorologische Forschung zu Extremwetterereignissen – eine Herausforderung für die regionale Klimamodellierung“

18.02. **Expert-workshop Climate modelling and Climate services, German Delegation, Washington, US:**

„Regional climate modelling for climate projections and climate services“

21.01. **Vorlesung an der Senioren-Universität der HAW, Hamburg:**

„Wann wird's mal wieder richtig Sommer oder ist dies ein normaler Winter“

14.01. **Workshop „Klimafolgenforschung zur Beurteilung der Auswirkungen von konvektiven Extremwetterereignissen auf die Schadenlast in Deutschland“ , CSC, Hamburg:**

„Konvektive Extremereignisse – eine Herausforderung für die regionale Klimamodellierung “

2009

09.11. **Climate for Culture: Kick-Off meeting**

„Global Climate change and Regional Consequences“

05.11. **SFB-512 Abschlussymposium 'Klimasystem Nordatlantik'**

„Analyse des Wasserhaushaltes nordatlantischer Zyklonen und ihr Einfluss auf das europäische Festland “

29.10. **Seminar at University of Bergen**

„Challenges in regional climate modelling“

19.08. **NW2050 Auftaktveranstaltung**

„Auswertung des Klimawandel in der Region – Klimaeffekte bis 2100“

16.06. **COSMOS General Assembly**

„Challenges in regional climate modelling“

04.06. **BayCEER-Kolloquium an der Universität Bayreuth**

„Global Climate change and Regional Consequences“

13./14.05. **Fehmarn Sund Belt: Workshop on Climate Scenarios**

„Climate Scenarios – a regional perspective“

26.03. **IBM-Symposium zu Klimaberechnung und Risikomanagement, Hamburg**

„Globaler Klimawandel und lokale Konsequenzen – neueste Erkenntnisse für den deutschsprachigen Raum“

18./19.03. **KLIWAS-Statuskonferenz des Bundesministerium für Verkehr, Bau und Stadtentwicklung**

„Methoden, Möglichkeiten und Grenzen der regionalen Klimamodellierung“

19.-21.02. **IBA-Labor Klimafolgenmanagement, Hamburg**

„Aktuelle Erkenntnisse zur Klimaentwicklung in Norddeutschland“

21.01. **Besuch der XXV. US Bosch Fellows am KlimaCampus, Hamburg**

„Regionale Klimaszenarien für die untere Mittelelbe“

2008

09.12. **GIWEP: Klimamodelle, Mühlheim/Ruhr**

„Globaler Klimawandel und regionale Konsequenzen“

28.11. **Bauphysik-Tagung 2008, Düsseldorf**

„Klimawandel bis 2100 – eine Studie für Deutschland“

- 28.11. **Wissenschaftsforum Hamburg, Kopf oder Zahl?**
„Mit dem Klimawandel rechnen: Modelle für Schutz- und Anpassungs-Strategien“
- 15.11. **Jahrestagung "Natur und Kultur in der Elbtalaue", Hitzacker**
„Regionale Klimaszenarien für die untere Mittelelbe“
- 10.11. **Institutsseminar Leuphana, Suderburg**
„Globaler Klimawandel und regionale Konsequenzen“
- 06.11. **AREVA Energietechnik, Seminarvortrag, Bremerhaven**
„Globaler Klimawandel und regionale Konsequenzen“
- 28.10. **Institutsseminar IMK-ASF, Karlsruhe**
„Globaler Klimawandel und regionale Konsequenzen“
- 04.09. **AON Rück, Seminarvortrag, Hamburg**
„Globaler Klimawandel und regionale Konsequenzen“
- 23.07. **EBZ, Stuttgart**
„Das Wetter morgen“
- 21.07. **Workshop: Hamburger Strategie zur Anpassung an den Klimawandel**
„Existiert der Klimawandel wirklich? Klimatische Wirkungen in der Metropolregion Hamburg“
- 24.06. **DWA Landesverband Bayern, Symposium „Klimawandel - Was kann die Wasserwirtschaft tun?“, Nürnberg,**
Regionale Klimamodellierung in Deutschland“
- 08.06. **Go for Climate, Initiative zum Klimaschutz, Hamburg,**
„Existiert der Klimawandel wirklich?“
- 03.04. **Augsburger Arbeitskreis, Hamburg**
„Globaler Klimawandel und lokale Konsequenzen – neueste Erkenntnisse für den deutschsprachigen Raum“
- 02.04. **Urania Vortragszentrum, Berlin: Veranstaltungsreihe "Der Klimawandel und die Internationale Sicherheit":**

„Globaler Klimawandel und lokale Konsequenzen – neueste Erkenntnisse für den deutschsprachigen Raum“

10.03. **NAFEMS 5th Anniversary CFD Seminar, Wiesbaden:**

„Globaler Klimawandel und lokale Konsequenzen: regionale Klimaprojektionen schlagen die Brücke zwischen den Skalen“

29.02. **Klimafachtagung, Hochschule für Angewandte Wissenschaften Hamburg,**

„Klimawandel: Klimatische Wirkungen in der Metropolregion Hamburg“

26.02. **Agrarforum Husum, Europ. Akademie Schleswig Holstein**

„Das Klima verändert die Welt- und wir uns mit ihr. Verantwortung für die Gesellschaft“

17.01. **Geowissenschaftliche Vorträge am Gymnasium Heidberg, Hamburg**

„Wird es in Zukunft nur noch Bilderbuchsommer geben?“

16.01. **Kreisbauernverband Schwarzenbek**

„Regionale Auswirkungen des Klimawandels auf die Landwirtschaft“

15.01. **Nautischer Verein, Hamburg**

“Globaler Klimawandel-Regionale Konsequenzen”

2007

21.11. **Alpentagung, Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit, Benediktbeuren**

“Klimawandel im Alpenraum – Heute und in der Zukunft”

16.11. **Klausurtagung Bundesministerium für Verkehr, Bau und Stadtentwicklung Potsdam**

“Globaler Klimawandel und regionale Konsequenzen: Der IPCC-Bericht und regionale Konsequenzen“

14.11. **CAIWA 2007, Int. Conference on Adaptive & Integrated Water Management, Basel**

"Downscaling climate information for water resources management: uncertainty and challenges"

06.11. **Klimawandel in Deutschland: Strategien der Anpassung, Umweltbundesamt Dessau**

„Klimaänderungen in Deutschland“

05.11. **European Water Association, Brussels**

"Report on the findings from the IPCC working groups I, II and III

18.10. **Climate Change Research Seminar, Norwegian Ministry of Education and Research, Düsseldorf**

"Possibilities and limitations for downscaling of regional climate scenarios"

04.10. **SPD Bad Bevensen**

„Globaler Klimawandel-Regionale Konsequenzen“

01.10. **BASF Ludwigshafen**

„Regionale Klimamodellierung und Klimaprojektionen für das 21. Jahrhundert“

27.09. **Climate Change and Vectors, Umweltbundesamt Berlin**

„Climate Modelling: Global and regional scenarios“

12.09 **International Conference Climate Change and Spatial Planning, De Bilt**

"Global and European Perspective: General Progress and Remaining Uncertainties"

01.08. **Wissenschaftssommer Sylt**

„Globaler Klimawandel und lokale Konsequenzen“

15.08. **World Water Week Stockholm**

"From global climate change to climate change projections in Europe"

25.06. **Niedersächsischer Landtag, Hannover**

„Klimaschutz in Niedersachsen“

12.06. **Wege zum Erhalt der Wertschöpfung durch den Transportweg Rhein, Dewitt&Company, Bonn**

„Aktuelle meteorologische Kenntnisse und Perspektiven für das Rheineinzugsgebiet“

20.05. **Int. Conference Community Testing Facilities, Lolland, Dänemark**

“A Critical View on the Baltic Sea Region’s Future”

09.05. **Parlament. Abend Bundesverband Deutsche Binnenschifffahrt, Berlin**

„Klimawandel in Europa - Auswirkungen auf die deutschen Bundeswasserstraßen“

26.04. **Bremer Energie-Konsens, Bremen**

“Globaler Klimawandel und lokale Konsequenzen”

16.04. **Bündnis 90/Die Grünen, Rathaus Stuttgart**

“Das Wetter morgen”

08.03. **Kernkraftwerke Isar, Essenbach**

“Klimaentwicklung unter regionalen Aspekten”

22.02. **DB AG, Strategieklausur Potsdam:**

“ Globaler Klimawandel und lokale Konsequenzen”

12.02. **BMU Conference, Berlin: Time to adapt – Climate change and the European Water Dimension**

“Climate change and water resources: Observed and projected trends at regional scale in Europe”

31.01. **Brucerius Law School, Hamburg**

“Regionale Klimamodellierung”

26.01. **Wegener Center Graz, Seggau Workshop on Local Impacts of Climate Change**

“Downscaling: From global climate change to climate change projections in Europe”

23.01. **Landfrauenverein Stelle u. Umgebung, Winsen**

“Globaler Klimawandel-Regionale Auswirkungen“

18.01. **TuTech, Hamburg-Bergedorf**

„Climate Change in Northern Europe“

2006**14.12. HAW Seminar, FH Bergedorf**

„Globaler Klimawandel mit lokalen Konsequenzen – Regionale Klimamodelle schlagen die Brücke zwischen den Skalen“

12.12. Kolloquium Institut für Ostseeforschung Warnemünde:

„Globaler Klimawandel mit lokalen Konsequenzen: Womit müssen wir rechnen?“

05.12. Mitgliederversammlung Windenergie-Agentur Bremen:

„Globaler Klimawandel - regionale Auswirkungen auch in Deutschland?“

15.11. Brauner Risk, Mutenz, CH

„Extremwetter auch in der Schweiz? Was die neue regionale Klimaprognose für die Schweiz erwarten lässt“

09.11. TLUG, Jena

„Eine klimatische Vorschau für Deutschland bis zum Jahr 2100 mit dem regionalen Klimamodell REMO“

06.11. ZUFO Symposium, Münster

„Klimawandel in Europa – Auswirkungen auf die Wasserverfügbarkeit“

17.10. UBA Klimagipfel, Berlin

„Regionale Klimaszenarien für Deutschland“

16.10. WVV Würzburg

„Globaler Klimawandel mit lokalen Konsequenzen – womit müssen wir rechnen?“

10.10. E.ON Kernkraft, Goslar

„Klimaentwicklung unter regionalen Aspekten“

26.09. EC JRC, Brüssel:

“Overview of Climate Change Projections in Europe”

12.09. DWS Investment Konferenz, Zürich:

„Globaler Klimawandel mit lokalen Konsequenzen – Womit müssen wir rechnen?“

11.09. **Österreichischer Umweltdachverband, Neukirchen a. Großvenediger:**

„Klimawandel – Globale und regionale Klimamodelle“

01.09. **Kreisverwaltung Plön, Agenda 24:**

„Mögliche Klimaveränderung in Norddeutschland: was wissen wir wirklich?“

29.08. **Vortrag vor Berufschullehrern, Universität Hamburg:**

„Globaler Klimawandel mit lokalen Konsequenzen: Womit müssen wir rechnen?“

11.04. **Annaberger Klimatage:**

„Review der regionalen Klimamodellierung“

27.04. **Freising, University Weihenstephan:**

„Wie wirkt sich der Klimawandel auf die Niederschlagsereignisse aus?“

Publications

H-Index of 43 (Scopus, citations received since 2002), 08.01.2019

2018

O.Hoegh-Guldberg, **D.Jacob**, M.Taylor, M.Bindi, S.Brown, I.Camilloni, A.Diedhiou, R.Djalante, K.Ebi, F. Engelbrecht, J.Guiot, Y. Hijioka, S. Mehrotra, A. Payne, S. I. Seneviratne, A. Thomas, R. Warren, G. Zhou, 2018, Impacts of 1.5°C Global Warming on Natural and Human Systems. 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 [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.)]. In Press.

- 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 [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.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp. **Drafting Author**
- Bastin, S.; Belda, M. Belusic, D.; Caldas-Alvarez, A.; Cardoso, R. M.; Davolio, S.; Dobler, Coppola, E.; Sobolowski, S.; Pichelli, E.; Raffaele, F.; Ahrens, B.; Anders, I.; Ban, N.; A.; Fernandez, J.; Fita, L.; Fumiere, Q.; Giorgi, F.; Goergen, K.; Güttler, I.; Halenka, T.; Heinzeller, D.; Hodnebrog, Ø.; **Jacob, D.**; Kartsios, S.; Katragkou, E.; Kendon, E.; Khodayar, S.; Kunstmann, H.; Knist, S.; Lavín-Gullón, A.; Lind, P.; Lorenz, T.; Maraun, D.; Marelle, L.; van Meijgaard, E.; Milovac, J.; Myhre, G.; Panitz, H.-J.; Piazza, M.; Raffa, M.; Raub, T.; Rockel, B.; Schär, C.; Sieck, K.; Soares, P. M. M.; Somot, S.; Srnec, L.; Stocchi, P.; Tölle, M. H.; Truhetz, H.; Vautard, R.; de Vries, H.; Warrach-Sagi, K.; (2018): A first-of-its-kind multi-model convection permitting ensemble for investigating convective phenomena over Europe and the Mediterranean. In: Climate Dynamics. Vol. 51 (327), pp 1–32. DOI: 10.1007/s00382-018-4521-8; ISSN: 0930-7575 (Print) 1432-0894 (Online)
- Jacob, D.**; Kotova, L.; Teichmann, C.; Sobolowski, S.P.; Vautard, R.; Donnelly, C.; Koutroulis, A.G.; Grillakis, M.G.; Tsanis, I.K.; Damm, A.; Sakalli, A.; Vliet, M.T.H.van (2018): Climate Impacts in Europe Under +1.5°C Global Warming. In: Earth's Future. Vol. 6 (2), pp 264-285. DOI: 10.1002/2017EF000710
- Kjellstroem, E.; Nikulin, G.; Strandberg, G.; Christensen, O.B.; **Jacob, D.**; Keuler, K.; Lenderink, G.; Meijgaard, E.van; Schaer, C.; Somot, S.; Soerland, S.L.; Teichmann, C.; Vautard, R. (2018): European climate change at global mean temperature increases of 1.5 and 2 °C above pre-industrial conditions as simulated by the EURO-CORDEX regional climate models. In: Earth System Dynamics. Vol. 9 (2), pp 459-478. DOI: 10.5194/esd-9-459-2018
- Koutroulis, A.G.; Grillakis, M.G.; Tsanis, I.K.; **Jacob, D.** (2018): Mapping the vulnerability of European summer tourism under 2 °C global warming. In: Climatic Change. Vol. 151 (2), pp 157–171. DOI: 10.1007/s10584-018-2298-8
- Pietikäinen, J.-P.; Markkanen, T.; Sieck, K.; **Jacob, D.**; Korhonen, J.; Räisänen, P.; Gao, Y.; Ahola, J.; Korhonen, H.; Laaksonen, A. and Kaurola, J.

(2018): The regional climate model REMO (v2015) coupled with the 1-D freshwater lake model FLake (v1): Fenno-Scandinavian climate and lakes. In: Geosci. Model Development. Vol. 11 (4), pp 1321-1342. DOI: 10.5194/gmd-11-1321-2018

Schuck-Zoeller, S.; Cortekar, J.; **Jacob, D.** (2018): Evaluation transdisziplinärer Forschung und deren Rahmenbedingungen. Vorüberlegungen zur Nutzung im Bereich von Klimaservice. In: Fteval Journal for Research and Technology Policy Evaluation. Vol. 45, pp 28-37

Teichmann, C.; Buelow, K.; Otto, J.; Pfeifer, S.; Rechid, D.; Sieck, K.; **Jacob, D.** (2018): Avoiding Extremes: Benefits of Staying below +1.5 °C Compared to +2.0 °C and +3.0 °C Global Warming. In: Atmosphere [Online Ressource]. Vol. 9 (4), pp 115. DOI: 10.3390/atmos9040115

van den Hurk, B.; Hewitt, C.; **Jacob D.**; Bessembinder, J.; Doblas-Reyes, F.; Döscher R. (2018): The match between climate services demands and Earth System Models supplies. In: Climate Services. DOI: [10.1016/j.cliser.2018.11.002](https://doi.org/10.1016/j.cliser.2018.11.002)

Weber, T.; Hänsler, A.; Rechid, D.; Pfeifer, S.; Eggert, S.; **Jacob, D.** (2018): Analyzing Regional Climate Change in Africa in a 1.5, 2, and 3°C Global Warming World. In: Earth's Future. Vol. 6 (4), pp 643-655. DOI: 10.1002/2017EF000714

Weber, T.; Hänsler, A.; **Jacob, D.** (2018): Sensitivity of the atmospheric water cycle to corrections of the sea surface temperature bias over southern Africa in a regional climate model. In: Climate Dynamics. Vol. 51 (7-8), pp 2841-2855. DOI: .1007/s00382-017-4052-8

Xu, J.; Koldunov, N.; Remedio, A.R.C.; Sein, D.; Zhi, X.; Jiang, X.; Xu, M.; Zhu, X.; Fraedrich, K. and **Jacob, D.** (2018): On the role of horizontal resolution over the Tibetan Plateau in the REMO regional climate model. In: Climate Dynamics. Vol. 51 (11-12), pp 4524-4542. DOI: 10.1007/s00382-018-4085-7

2017

Weber, T., Haensler, A., **Jacob, D.** (2017): Sensitivity of the atmospheric water cycle to corrections of the sea surface temperature bias over southern Africa in a regional climate model. In: Climate Dynamics, DOI:

10.1007/s00382-017-4052-8

- Kjellstroem, E.; Nikulin, G.; Strandberg, G.; Christensen, O.B.; Jacob, D.; Keuler, K.; Lenderink, G.; Meijgaard, E.van; Schaer, C.; Somot, S.; Soerland, S.L.; Teichmann, C.; Vautard, R. : European climate change at global mean temperature increases of 1.5 and 2°C above pre-industrial conditions as simulated by the EURO-CORDEX regional climate models. In: *Earth System Dynamics Discussions* [Online Ressource]. (2017) 104. (DOI: .5194/esd-2017-104)
- Blome, T.; Haensler, A.; Manez-Costa, M.; **Jacob, D.** . In: Blome, T.; Haensler, A. (Eds.): *ICCS 5 - Fifth International Conference on Climate Services, Innovation in Climate Services and Capacity Building - Conference report*. Cape Town (ZA), 28.02.-02.03.2017, 2017.
- Schuck-Zöller, S, Cortekar, J., **Jacob, D.** (2017): *EVALUATING CO-CREATION OF KNOWLEDGE: From Quality Criteria and Indicators to Methods*. In: *Advances in Science and Research*
- Jacob, D.**; Bender, S. Extremereignisse in der Zukunft - Welche Aussagen sind durch Klimaprojektionen möglich? In *GWF, Wasser – Abwasser*, Volume 158, Issue 7-8, pp. 85-88
- Cabos, W.; Sein, D.V.; Pinto, J.G.; Fink, A.H.; Koldunov, N.V.; Alvarez, F.; Izquierdo, A.; Keenlyside, N.; **Jacob, D.** (2017): The South Atlantic Anticyclone as a key player for the representation of the tropical Atlantic climate in coupled climate models. In: *Climate Dynamics*, Vol. 48(11-12), pp. 4051-4069 DOI: 10.1007/s00382-016-3319-9
- Jacob, D.**; Solman, S. (2017): *IMPACT2C – An introduction*. In: *Climate Services*, Vol. 7, pp. 1-2. DOI: 10.1016/j.cliser.2017.07.006
- Knist, S.; Goergen, K.; Buonomo, E.; Christensen, O.B.; Colette, A.; Cardoso, R.M.; Fealy, R.; Fernández, J.; García-Díez, M.; **Jacob, D.**; Kartsios, S.; Katragkou, E.; Keuler, K.; Mayer, S.; van Meijgaard, E.; Nikulin, G.; Soares, P.M.M.; Sobolowski, S.; Szepszo, G.; Teichmann, C.; Vautard, R.; Warrach-Sagi, K.; Wulfmeyer, V.; Simmer, C. (2017): Land-atmosphere coupling in EURO-CORDEX evaluation experiments. In: *Journal of Geophysical Research: Atmospheres*, Vol. 122 (1), pp. 79-103. DOI: 10.1002/2016JD025476
- Otto, J.; Brown, C.; Buontempo, C.; Doblas-Reyes, F.; **Jacob, D.**; Juckes, M.; Keup-Thiel, E.; Kurnik, B.; Schulz, J.; Taylor, A.; Verhoelst, T.; Walton, P.: Uncertainty: Lessons Learned for Climate Services. In: *Bulletin of the American Meteorological Society*, Vol. 97 (12). pp. 265 - 269. DOI: 10.1175/BAMS-D-16-0173.1
- Paeth, H.; Paxian, A.; Sein, D.; **Jacob, D.**; Panitz, H. J.; Warscher, M.; Fink, A.; Kunstmann, H.; Breil, M.; Engel, T.; Krause, A.; Tödter, J.; Ahrens, B. (2017): Decadal and multi-year predictability of the West African

- monsoon and the role of dynamical downscaling. In: *Meteorologische Zeitschrift*, DOI: 10.1127/metz/2017/0811
- Preuschmann, S.; Hänsler, A.; Kotova, L.; Dürk, N.; Eibner, W.; Waidhofer, C.; Haselberger, C.; **Jacob, D.** (2017): The IMPACT2C web-atlas - Conception, organization and aim of a web-based climate service product. In: *Climate Services*, Vol. 7, pp. 115-125. DOI: 10.1016/j.cliser.2017.03.005
- Púčik, T.; Groenemeijer, P.; Rädler, A. T.; Tijssen, L.; Nikulin, G.; Prein, A. F.; Meijgaard, E.; Fealy, R.; **Jacob, D.**; Teichmann, C. (2017): Future changes in European severe convection environments in a regional climate model ensemble. In: *Journal of Climate*, Vol. 30(17), pp. 6771-6794. DOI: 10.1175/JCLI-D-16-0777.1
- Stankoweit, M.; Groth, M.; **Jacob, D.** (2017): On the Heterogeneity of the Economic Value of Electricity Distribution Networks: An Application to Germany. In: Working Paper Series in Economics, University of Lueneburg, Vol. 371 Lueneburg: Institut fuer Volkswirtschaftslehre.

2016

- Brasseur, Guy P.; **Jacob, D.**; Schuck-Zöller, S. (2016): Klimawandel in Deutschland - Entwicklung, Folgen, Risiken und Perspektiven. Springer. Berlin, Heidelberg. ISBN: 978-3-662-50396-6. DOI: 10.1007/978-3-662-50397-3
- Bender, S.; Cortekar, J.; **Jacob, D.** (2016): Klimaresiliente Stadt - Was sagen Klimamodell-Projektionen ueber die Zukunft von Staedten aus und wie koennen Staedte diese Zukunft beeinflussen und meistern?. In: Pinnekamp, J. (Ed.): *Tagungsband Gewaesserschutz - Wasser - Abwasser, 49. Essener Tagung fuer Wasser- und Abfallwirtschaft*, Vol. 239 Essen (D), 02.-04.03.2016, 2016. 32-1 - 32-14. ISBN: 978-3-938996-45-4
- Bender, S.; **Jacob, D.** (2016): Die Aussagekraft von Klimaprojektionen fuer zukuenftige Herausforderungen der Trinkwasserversorgung in Deutschland. In: *GWF, Wasser - Abwasser*, 4, pp. 362 - 368.
- Casanueva, A.; Kotlarski, S.; Herrera, S.; Fernández, J.; Gutiérrez, J.M.; Boberg, F.; Colette, A.; Christensen, O.B.; Goergen, K.; **Jacob, D.**; Keuler, K.; Nikulin, G.; Teichmann, C.; Vautard, R. (2016): Daily precipitation statistics in a EURO-CORDEX RCM ensemble: added value of raw and bias-corrected high-resolution simulations. In: *Climate Dynamics*, Vol. 47(3-4), pp. 719-737. DOI: 10.1007/s00382-015-2865-x
- Dobler, A.; Feldmann, H.; Ulbrich, U.; **Jacob, D.**; Kottmeier, C. (2016): Grenzen und Herausforderungen der regionalen Klimamodellierung. In: Brasseur, Guy P.; Jacob, D.; Schuck-Zöller, S. (Eds.): *Klimawandel in Deutschland - Entwicklung, Folgen, Risiken und Perspektiven*. pp. 37-44. Springer. Berlin, Heidelberg. ISBN: 978-3-662-50396-

6. DOI: 10.1007/978-3-662-50397-3

Gutowski, J.W., Jr.,; Giorgi, F.; Timbal, B.; Frigon, A.; **Jacob, D.**; Kang, H.-S.; Raghavan, K.; Lee, B.; Lennard, C.; Nikulin, G.; O'Rourke, E.; Rixen, M.; Solman, S.; Stephenson, T.; Tangang, F. (2016): WCRP Coordinated Regional Downscaling Experiment (CORDEX): A diagnostic MIP for CMIP6. In: *Geoscientific Model Development*, Volume 9 (11), pp. 4087-4095. DOI: 10.5194/gmd-9-4087-2016

Haensler, A.; Koldunov, N.; Sein, D.; Sauf, W.; **Jacob, D.** (2016): Very High Resolution Simulations of African Climate with the Regional Climate Model REMO. In: K. Binder, M. Müller, M. Kremer, A. Schnurpfeil (Ed.): *NIC Symposium 2016 11-12 February 2016 Jülich, Germany*. pp. 291- 298. ISBN: 978-3-95806-109-5

Jacob, D.; Kottmeier, C.; Petersen, J.; Rechid, D.; Teichmann, C. (2016): Regionale Klimamodellierung. In: Brasseur, Guy P.; Jacob, D.; Schuck-Zöller, S. (Eds.): *Klimawandel in Deutschland - Entwicklung, Folgen, Risiken und Perspektiven*. pp. 27-35. Springer. Berlin, Heidelberg. ISBN: 978-3-662-50396-6. DOI: 10.1007/978-3-662-50397-3

Jacob, D.; Fischer-Bruns, I.; Seipold, P. (2016): Klimadienstleistungen GERICS - Climate services GERICS. In: *Annalen der Meteorologie, 10. Annaberger Klimatage 2016*, Vol. 49 Annaberg-Buchholz, 11.-12.05.2016. ISBN: 978-3-88148-489-3

Kaspar, F.; Mächel, H.; **Jacob, D.**; Kottmeier, C. (2016): Beobachtung von Klima und Klimawandel in Mitteleuropa und Deutschland. In: Brasseur, Guy P.; Jacob, D.; Schuck-Zöller, S. (Eds.): *Klimawandel in Deutschland - Entwicklung, Folgen, Risiken und Perspektiven*. pp. 17-26. Springer. Berlin, Heidelberg. ISBN: 978-3-662-50396-6. DOI: 10.1007/978-3-662-50397-3

Jacob, D.; Kottmeier, C.; Petersen, J.; Rechid, D.; Teichmann, C. (2016): Regionale Klimamodellierung. In: Brasseur, Guy P.; Jacob, D.; Schuck-Zöller, S. (Eds.): *Klimawandel in Deutschland - Entwicklung, Folgen, Risiken und Perspektiven*. pp. 27 - 35. DOI: 10.1007/978-3-662-50397-3_4

Jingwei, X.; Min, X.; Xi, J.; Remedio, A.R.C.; Sein, D.V.; Koldunov, N.; **Jacob, D.** (2016): The Assessment of Surface Air Temperature and Precipitation Simulated by Regional Climate Model REMO over China. In: *Advances in Climate Change Research - Chinese version*, Vol. 12 (4), pp. 286 - 293. DOI: 10.12006/j.issn.1673-1719.2015.194

Koldunov, N.V.; Kumar, P.; Rasmussen, R.; Ramanathan, A.L.; Nesje, A.; Engelhardt, M.; Tiwari, M.; Haensler, A.; **Jacob, D.** (2016): Identifying climate change information needs for the Himalaya region - Results from the GLACINDIA Stakeholder Workshop and Training Program. In: *Bulletin of the American Meteorological Society*, Vol. 97. ES37 - ES40. DOI: 10.1175/BAMS-D-15-00160.1

- Koutroulis, A.G.; Grillakis, M.G.; Daliakopoulos, I.N.; Tsanis, I.K.; **Jacob, D.** (2016): Cross sectoral impacts on water availability at +2°C and +3°C for east Mediterranean island states: The case of Crete. In: *Journal of Hydrology*, Vol. 532, pp. 16-28. DOI: 10.1016/j.jhydrol.2015.11.015
- Marke, T.; Mauser, W.; Pfeiffer, A.; Zaengl, G.; **Jacob, D.**; Preuschmann, S. (2016): Climate Variants of the MM5 and REMO Regional Climate Models. In: Mauser, W.; Prasch, M. (Eds.): *Regional Assessment of Global Change Impacts - The Project GLOWA-Danube*, pp. 435 - 453. DOI: 10.1007/978-3-319-16751-0_51
- Mauser, W.; Marke, T.; Reiter, A.; **Jacob, D.**; Preuschmann, S. (2016): The GLOWA-Danube Climate Trends. In: Mauser, W.; Prasch, M. (Eds.): *Regional Assessment of Global Change Impacts - The Project GLOWA-Danube*, pp. 377 - 395. DOI: 10.1007/978-3-319-16751-0_48
- Otto, J.; Brown, C.; Buontempo, C.; Doblus-Reyes, F.; **Jacob, D.**; Jukes, M.; Keup-Thiel, E.; Kurnik, B.; Schulz, J.; Taylor, A.; Verhoelst, T.; Walton, P. (2016): Uncertainty: Lessons Learned for Climate Services. In: *Bulletin of the American Meteorological Society*, Vol. 97 (12), pp. 265 - 269. DOI: 10.1175/BAMS-D-16-0173.1
- Paxian, A.; Sein, D.; Panitz, H.-J.; Warscher, M.; Breil, M.; Engel, T.; Toedter, J.; Krause, A.; Cabos Narvaez, W.D.; Fink, A.H.; Ahrens, B.; Kunstmann, H.; **Jacob, D.**; Paeth, H. (2016): Bias reduction in decadal predictions of West African monsoon rainfall using regional climate models. In: *Journal of Geophysical Research: Atmospheres*, Vol. 121 (4), pp. 1715 - 1735. DOI: 10.1002/2015JD024143
- Prein, A.F.; Gobiet, A.; Truhetz, H.; Keuler, K.; Goergen, K.; Teichmann, C.; Fox Maule, C.; van Meijgaard, E.; Déqué, M.; Nikulin, G.; Vautard, R.; Colette, A.; Kjellström, E.; **Jacob, D.** (2016): Precipitation in the EURO-CORDEX 0.11° and 0.44° simulations: high resolution, high benefits? In: *Climate Dynamics*, 46 (1-2), pp. 383-412. DOI: 10.1007/s00382-015-2589-y
- Raub, T.; Getzlaff, K.; **Jacob, D.**; Lehmann, A. (2016): The BALTEX Box Revisited: The Energy Budget of the Baltic Sea in the Coupled Regional Climate Model REMO-BSIOM. In: *Multiple drivers for Earth system changes in the Baltic Sea region*. 1st Baltic Earth Conference. Conference Proceedings. pp. 158 – 159.
- Sieck, K.; **Jacob, D.** (2016): Influence of the Boundary Forcing on the Internal Variability of a Regional Climate Model. In: *American Journal of Climate Change*, 5(03), pp. 373-382. DOI: 10.4236/ajcc.2016.53028
- Xu, J.; Xu, M.; Jiang, X.; Remedio, A. R.; Sein, D.V.; Koldunov, N.; **Jacob, D.** (2016): The Assessment of Surface Air Temperature and Precipitation Simulated by Regional Climate Model REMO over China. In: *Advances in Climate Change Research*, 12 (4), pp. 286-293. DOI: 10.12006/j.issn.1673-1719.2015.194

2015

- Bowyer, P.; Schaller, M.; Bender, S.; **Jacob, D.** (2015): Adaptation as Climate Risk Management: Methods and Approaches, In: W. Leal Filho (Ed.): *Handbook of Climate Change Adaptation*. Springer, Berlin, Heidelberg. DOI: 10.1007/978-3-642-38670-1_28
- Bowyer, P.; Brasseur, G.; **Jacob, D.** (2015): The Role of Climate Services in Adapting to Climate Variability and Change, In: W. Leal Filho (Ed.): *Handbook of Climate Change Adaptation*. Springer, Berlin, Heidelberg. DOI: 10.1007/978-3-642-38670-1_29
- Eggert, B.; Berg, P.; Haerter, J.O.; **Jacob, D.**; Moseley, C. (2015): Temporal and spatial scaling impacts on extreme precipitation. In: *Atmospheric Chemistry and Physics*, Vol. 15 (10), pp. 5957-5971. DOI: 10.5194/acp-15-5957-2015
- Gálos, B.; Führer, E.; Czimmer, K.; Gulyás, K.; Bidló, A.; Hänsler, A.; **Jacob, D.**; Mátyás, C. (2015): Climatic threats determining future adaptive forest management - A case study of Zala county. In: *Quarterly Journal of the Hungarian Meteorological Service*, Vol. 119 (4), pp. 425-441.
- Gao, Y.; Weiher, S.; Markkanen, T.; Pietikäinen, J.-P.; Gregow, H.; Henttonen, H.M.; **Jacob, D.**; Laaksonen, A. (2015): Implementation of CORINE land use classification in the regional climate model REMO. In: *Boreal Environment Research*, Vol. 20 (2), pp.261-282. ISSN: 12396095
- Imholt, C.; Reil, D.; Eccard, J.A.; **Jacob, D.**; Hempelmann, N.; Jacob, J. (2015): Quantifying the past and future impact of climate on outbreak patterns of bank voles (*Myodes glareolus*). In: *Pest Management Science*, Vol. 71 (2), pp. 166-172. DOI: 10.1002/ps.3838
- Katragkou, E.; García-Diéz, M.; Vautard, R.; Sobolowski, S.; Zanis, P.; Alexandri, G.; Cardose, R.M.; Colette, A.; Fernandez, J.; Gobiet, A.; Goergen, K.; Karacostas, T.; Knist, S.; Meyer, S.; Soares, P.M.M.; Pytharoulis, I.; Tegoulis, I.; Tsikerdekis, A.; **Jacob, D.** (2015): Regional climate hindcast simulations within EURO-CORDEX: Evaluation of a WRF multi-physics ensemble. In: *Geoscientific Model Development*, Vol. 8 (3), pp. 603-618. DOI: 10.5194/gmd-8-603-2015
- Kumar, P.; Kotlarski, S.; Moseley, C.; Sieck, K.; Frey, H.; Stoffel, M.; **Jacob, D.** (2015): Response of Karakoram-Himalayan glaciers to climate variability and climatic change: A regional climate model assessment. In: *Geophysical Research Letters*, Vol. 42 (6), pp. 1818-1825. DOI: 10.1002/2015GL063392
- Leissner, J.; Kilian, R.; Kotova, L.; **Jacob, D.**; Mikolajewicz, U.; Brostroem, T.; Ashley-Smith, J.; Schellen, H.L.; Martens, M.; Schijndel, J.van; Antretter, F.; Winkler, M.; Bertolin, C.; Camuffo, D.; Simeunovic, G.; Vyhlidal, T. (2015): Climate for Culture: assessing the impact of climate

change on the future indoor climate in historic buildings using simulations. In: *Heritage Science*, Vol. 3 (1), 38. DOI: 10.1186/s40494-015-0067-9

Pfeifer, S.; Bülow, K.; Gobiet, A.; Haensler, A.; Mudelsee, M.; Otto, J.; Rechid, D.; Teichmann, C.; **Jacob, D.** (2015): Robustness of Ensemble Climate Projections Analyzed with Climate Signal Maps: Seasonal and Extreme Precipitation for Germany. In: *Atmosphere*, Vol. 6 (5), pp. 677-698. DOI: 10.3390/atmos6050677

Sánchez, E.; Solman, S.; Remedio, A.R.C.; Berbery, H.; Samuelsson, P.; Da Rocha, R.P.; Mourão, C.; Li, L.; Marengo, J.; de Castro, M.; **Jacob, D.** (2015): Regional climate modelling in CLARIS-LPB: a concerted approach towards twentyfirst century projections of regional temperature and precipitation over South America. In: *Climate Dynamics*, Vol. 45 (7-8), pp. 2193-2212. DOI: 10.1007/s00382-014-2466-0

Sein, D. V.; Mikolajewicz, U.; Gröger, M.; Fast, I.; Cabos, W.; Pinto, J.G.; Hagemann, S.; Semmler, T.; Izquierdo, A.; **Jacob, D.** (2015): Regionally coupled atmosphere-ocean-sea ice-marine biogeochemistry model ROM: 1. Description and validation. In: *Journal of Advances in Modeling Earth Systems*, Vol. 7 (1), pp. 268-304. DOI: 10.1002/2014MS000357 , hdl:10013/epic.44993

2014

Bennartz, R.; Lorenz, P.; **Jacob, D.** (2014): A comparison of the BALTIMOS coupled climate model with atmospheric and sea surface parameters derived from AMSR-E. In: *Theoretical and Applied Climatology*, Vol. 118 (4), pp. 617-625. DOI: 10.1007/s00704-009-0178-x

Jacob, D. (2014): Development and validation of a coupled model system in the Baltic region—BALTIMOS. In: *Theoretical and Applied Climatology*, Vol. 118 (4), pp. 609-610. DOI: 10.1007/s00704-014-1291-z

Jacob, D.; Petersen, J.; Eggert, B.; Alias, A.; Christensen, O.B.; Bouwer, L.M.; Braun, A.; Colette, A.; Déqué, M.; Georgievski, G.; Georgopoulou, E.; Gobiet, A.; Menut, L.; Nikulin, G.; Haensler, A.; Hempelmann, N.; Jones, C.; Keuler, K.; Kovats, S.; Kröner, N.; Kotlarski, S.; Kriegsmann, A.; Martin, E.; van Meijgaard, E.; Moseley, C.; Pfeifer, S.; Preuschmann, S.; Radermacher, C.; Radtke, K.; Rechid, D.; Rounsevell, M.; Samuelsson, P.; Somot, S.; Soussana, J.-F.; Teichmann, C.; Valentini, R.; Vautard, R.; Weber, B. (2014): EURO-CORDEX: New high-resolution climate change projections for European impact research. In: *Regional Environmental Changes*, Vol. 14 (2), pp. 563-578. DOI: 10.1007/s10113-013-0499-2

Katragkou, E.; García-Díez, M.; Vautard, R.; Sobolowski, S.; Zanis, P.; Alexandri, G.; Cardoso, R.M.; Colette, A.; Fernandez, J.; Gobiet, A.; Goergen, K.;

- Karacostas, T.; Knist, S.; Myer, S.; Soares, P.M.M.; Pytharoulis, I.; Tegoulis, I.; Tsikerdekis, A.; **Jacob, D.** (2014): Hindcast regional climate simulations within EURO-CORDEX: evaluation of a WRF multi-physics ensemble. In: *Geosci. Model Dev. Discuss*, Vol. 7, pp. 6629-6675. DOI: 10.5194/gmdd-7-6629-2014
- Kotlarski, S.; Keuler, K.; Christensen, O.B.; Colette, A.; Deque, M.; Gobiet, A.; Goergen, K.; **Jacob, D.**; Luethi, D.; van Meijgaard, E.; Nikulin, G.; Schaer, C.; Teichmann, C.; Vautard, R.; Warrach-Sagi, K.; Wulfmeyer, V. (2014): Regional climate modeling on European scales: a joint standard evaluation of the EURO-CORDEX RCM ensemble. *Geoscientific Model Development*, Vol. 7(4) pp. 1297-1333. DOI: 10.5194/gmd-7-1297-2014
- Kovats, R.S.; Valentini, R.; Bouwer, L.M.; Georgopoulou, E.; **Jacob, D.**; Martin, E.; Rounsevell, M.; Soussana, J.-F. (2014): Europe. In: *Climate Change 2014: Impact, Adaptation, and Vulnerability. Part B. Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Barros, V.R.; Field, C.B.; Dokken, D.J.; Mastrandrea, M.D.; Mach, K.J.; Bilir, T.E.; Chatterjee, M.; Ebi, K.L.; Estrada, Y.O.; Genova, R.C.; Girma, B.; Kissel, E.S.; Levy, A.N.; MacCracken, S.; Mastrandrea, P.R.; White, L.L. (eds.)]. Cambridge University Press. Cambridge, United Kingdom and New York, NY, USA, pp. 1267-1326.
- Kumar, P.; Podzun, R.; Hagemann, S.; **Jacob, D.** (2014): Impact of modified soil thermal characteristic on the simulated monsoon climate over south Asia. *Journal of Earth System Science*, Vol. 123 (1), pp. 151-160. DOI: 10.1007/s12040-013-0381-0
- Lorenz, P.; **Jacob, D.** (2014): BALTIMOS-a coupled modelling system for the Baltic Sea and its drainage basin. In: *Theoretical and Applied Climatology*, Vol. 118 (4), pp. 715-727. DOI: 10.1007/s00704-014-1276-y
- Marke, T.; Mauser, W.; Pfeiffer, A.; Zaengl, G.; **Jacob, D.**; Strasser, U. (2014): Application of a hydrometeorological model chain to investigate the effect of global boundaries and downscaling on simulated river discharge. In: *Environmental Earth Sciences*, Vol. 71(11), pp. 4849-4868. DOI: 10.1007/s12665-013-2876-z
- Pessacq, N.L.; Solman, S.A.; Samuelsson, P.; Sanchez, E.; Marengo, J.; Li, L.; Remedio, A.R.C.; da Rocha, R.P.; Mourao, C.; **Jacob, D.** (2014): The surface radiation budget over South America in a set of regional climate models from the CLARIS-LPB project. In: *Climate Dynamics*, Vol. 43(5-6), pp. 1221-1239. DOI: 10.1007/s00382-013-1916-4
- Schuck-Zoeller, S.; Bowyer, P.; **Jacob, D.**; Brasseur, G.: Inter- und transdisziplinaeres Arbeiten im Klimageservice. In: Beese, K.; Fekkek, M.; Katz, C.; Koerner, C.; Molitor, H. (Eds.): *Anpassung an regionale Klimafolgen kommunizieren - Konzepte, Herausforderungen und Perspektiven*. pp. 99 - 116 Muenchen: Oekom, 2014.. ISBN: 978-3-86581-474-6

- Vautard, R.; Gobiet, A.; Sobolowski, S.; Kjellstroem, E.; Stegehuis, A.; Watkiss, P.; Mendlik, T.; Landgren, O.; Nikulin, G.; Teichmann, C.; **Jacob, D.** (2014): The European climate under a 2 °C global warming. In: *Environmental Research Letters*, Vol. 9 (3). DOI: 10.1088/1748-9326/9/3/034006
- Weber, T.; Helmschrot, J.; Berndt, R.; **Jacob, D.** (2014): Assessment of climate dynamics in the Okavango region using high-resolution ERA-40 reanalysis data. In: *Zentralblatt für Geologie und Paläontologie*, Teil I, Heft 1, pp 171 – 187.
- Wilhelm, C.; Rechid, D.; **Jacob, D.** (2014): Interactive coupling of regional atmosphere with biosphere in the new generation regional climate system model REMO-iMOVE. In: *Geoscientific Model Development*, Vol. 7 (3), pp. 1093-1114. DOI: 10.5194/gmd-7-1093-2014

2013

- Dimri, A.P.; Yasunari, T.; Wiltshire, A.; Kumar, P.; Mathison, C.; Ridley, J.; **Jacob D.** (2013): Application of regional climate models to the Indian winter monsoon over the western Himalayas. In: *Science of the Total Environment*, Vol. 468-469, pp. S36-S47. DOI: 10.1002/joc.3584
- Gálos, B.; Hagemann, S.; Hänsler, A.; Kindermann, G.; Rechid, D.; Sieck, K.; Teichmann, C.; **Jacob, D.** (2013): Case study for the assessment of the biogeophysical effects of a potential afforestation in Europe. In: *Carbon Balance and Management*, Vol. 8 (1), 1. DOI: 10.1186/1750-0680-8-3.
- Gualdi, S.; Somot, S.; Li, L.; Artale, V.; Adani, M.; Bellucci, A.; Braun, A.; Calmanti, S.; Carillo, A.; Dell'Aquila, A.; Déqué, M.; Dubois, C.; Elizalde, A.; Harzallah, A.; **Jacob, D.**; L'Hévéder, B.; May, W.; Oddo, P.; Ruti, P.; Sanna, A.; Sannino, G.; Scoccimarro, E.; Sevault, F.; Navarra, A. (2013): The CIRCE Simulations: Regional Climate Change Projections with Realistic Representation of the Mediterranean Sea. In: *Bulletin of the American Meteorological Society*, Vol. 94 (1), pp. 65–81. DOI: 10.1175/BAMS-D-11-00136.1
- Hänsler, A.; Saeed, F.; **Jacob, D.** (2013): Assessing the robustness of projected precipitation changes over central Africa on the basis of a multitude of global and regional climate projections. In: *Climatic Change*, Vol. 121, pp. 349-363. DOI: 10.1007/s10584-013-0863-8
- Hienola, A. I.; Pietikäinen, J.-P.; **Jacob, D.**; Pozdun, R.; Petäjä, T.; Hyvärinen, A.-P.; Sogacheva, L.; Kerminen, V.-M.; Kulmala, M.; Laaksonen, A. (2013): Black carbon concentration and deposition estimations in Finland by the regional aerosol-climate model REMO-HAM. In: *Atmospheric Chemistry and Physics*, Vol. 13 (8), pp. 4033-4055. DOI: 10.5194/acp-13-4033-2013
- Hoyos, I.; Baquero-Bernal, A.; **Jacob, D.**; Rodríguez, B.A. (2013): Variability of extreme events in the Colombian Pacific and Caribbean catchment basins.

- In: *Climate Dynamics*, Vol. 40 (7-8), pp. 1985-2003. DOI: 10.1007/s00382-012-1487-9
- Hueging, H.; Born, K.; Haas, R.; **Jacob, D.**; Pinto, J.G. (2013): Regional changes in wind energy potential over Europe using regional climate model ensemble projections. In: *Journal of Applied Meteorology and Climatology*, Vol. 52, pp. 903-917. DOI: 10.1175/JAMC-D-12-086.1
- Koutroulis, A.G.; Tsanis, I.K.; Daliakopoulos, I.N.; **Jacob, D.** (2013): Impact of climate change on water resources status: A case study for Crete Island, Greece. In: *Journal of Hydrology*, Vol. 479, pp. 146-158. DOI: 10.1016/j.jhydrol.2012.11.055
- Kumar, P.; Wiltshire, A.; Mathison, C.; Asharaf, S.; Ahrens, B.; Lucas-Picher, P.; Christensen, J.H.; Gobiet, A.; Saeed, F.; Hagemann, S.; **Jacob D.** (2013): Downscaled climate change projections with uncertainty assessment over India using a high resolution multi-model approach. In: *Science of the Total Environment*, Vol. 468-469, pp. S18-S30. DOI: 10.1016/j.scitotenv.2013.01.051
- Mannig, B.; Müller, M.; Starke, E.; Merckenschlager, C.; Mao, W.; Zhi, X.; Podzun, R.; **Jacob, D.**; Paeth, H. (2013): Dynamical downscaling of climate change in Central Asia. In: *Global and Planetary Change*, Vol. 110, pp. 26-39. DOI: 10.1016/j.gloplacha.2013.05.008
- Mathison, C.; Wiltshire, A.; Dimri, A.P.; Falloon, P.; **Jacob, D.**; Kumar, P.; Moors, E.; Ridley, J.; Siderius, C.; Stoffel M.; Yasunari T. (2012): Regional projections of North Indian climate for adaptation studies. In: *Science of the Total Environment*, Vol. 468-469, pp. S4-S17 DOI: 10.1016/j.scitotenv.2012.04.066
- Marengo, J.; Chou, S.; Mourao, C.; Solman, S.; Sanchez, E.; Samuelsson, P.; da Rocha, R.P.; Li, L.; Pessacg, N.; Remedio, A.R.C.; Carril, A.F.; F Cavalcanti, I.; **Jacob, D.** (2013): Simulation of rainfall anomalies leading to the 2005 drought in Amazonia using the CLARIS LPB regional climate models. In: *Climate Dynamics*, Vol. 41 (11-12), pp. 2937-2955. DOI: 10.1007/s00382-013-1919-12012
- Saeed F.; Hänsler, A.; Weber, T.; Hagemann, S.; **Jacob, D.** (2013) Representation of extreme precipitation events leads to opposite climate change signals over the Congo basin. In: *Atmosphere*, Vol. 4, pp. 254-271. DOI: 10.3390/atmos4030254
- Saeed, F.; Hagemann, S.; Saeed, S.; **Jacob, D.** (2013): Influence of mid-latitude circulation on upper Indus basin precipitation: the explicit role of irrigation. In: *Climate Dynamics*, Vol. 40, Issue 1-2, pp. 430-440. DOI: 10.1007/s00382-012-1480-3
- Solman, S.A.; Sanchez, E.; Samuelsson, P.; da Rocha, R.P.; Li, L.; Marengo, J.; Pessacg, N.L.; Remedio, A.R.C.; Chou, S.C.; Berbery, H.; Le Treut, H.; de Castro, M.; **Jacob, D.** (2013): Evaluation of an ensemble of regional climate model simulations over South America driven by the ERA-Interim reanalysis: model performance and uncertainties.

In: *Climate Dynamics*, Vol. 41, pp. 1139-1157. DOI: 10.1007/s00382-013-1667-2

- Teichmann, C.; Eggert, B.; Elizalde, A.; Haensler, A.; **Jacob, D.**; Kumar, P.; Moseley, C.; Pfeifer, S.; Rechid, D.; Remedio, A.R.; Ries, H.; Petersen, J.; Preuschmann, S.; Raub, T.; Saeed, F.; Sieck, K.; Weber, T. (2013): How does a regional climate model modify the projected climate change signal of the driving GCM: A study over different CORDEX regions using REMO. In: *Atmosphere*, Vol. 4, pp. 214-236. DOI: 10.3390/atmos4020214
- Tsanis, I.K.; Grillakis, M.G.; Koutroulis, A.G.; **Jacob, D.** (2013): Reducing uncertainty on global precipitation projections. In: *Journal of Earth Science & Climatic Change*, Vol. 5 (178). DOI: 10.4172/2157-7617.1000178
- Vautard, R.; Gobiet, A.; **Jacob, D.**; Belda, M.; Colette, A.; Déqué, M.; Fernández, J.; García-Díez, M.; Goergen, K.; Güttler, I.; Halenka, T.; Karacostas, T.; Katragkou, E.; Keuler, K.; Kotlarski, S.; Mayer, S.; van Meijgaard, E.; Nikulin, G.; Patarčić, M.; Scinocca, J.; Sobolowski, S.; Suklitsch, M.; Teichmann, C.; Warrach-Sagi, K.; Wulfmeyer, V.; Yiou, P. (2013): The simulation of European heat waves from an ensemble of regional climate models within the EURO-CORDEX project. In: *Climate Dynamics*, Vol. 41 (9-10), pp. 2555-2575. DOI: 10.1007/s00382-013-1714-z

2012

- Becker, P.; **Jacob, D.**; Deutschländer, T.; Imbery, F.; Namyslo, J.; Müller-Westermeier, G.; Roos, M. (2012): Klimawandel in Deutschland. In: Mosbrugger, V., G. Brasseur, M. Schaller, B. Stribrny (Ed.): *Klimawandel und Biodiversität - Folgen für Deutschland*. WBG, Darmstadt.
- Carril, A.F.; Menéndez, C.G.; Remedio, A.R.C.; Robledo, F.; Sörensson, A.; Tencer, B.; Boulanger, J.-P.; de Castro, M.; **Jacob, D.**; Le Treut, H.; Li, L.Z.X.; Penalba, O.; Pfeifer, S.; Rusticucci, M.; Salio, P.; Samuelsson, P.; Sanchez, E.; Zaninelli, P. (2012): Performance of a multi-RCM ensemble for South Eastern South America. In: *Climate Dynamics*, Vol. 39 (12), pp. 2747-2768. DOI: 10.1007/s00382-012-1573-z
- Déqué, M.; Somot, S.; Sanchez-Gomez, E.; Goodess, C.M.; **Jacob, D.**; Lenderink, G.; Christensen, O.B. (2012): The spread amongst ENSEMBLES regional scenarios: regional climate models, driving general circulation models and inter annual variability. In: *Climate Dynamics*, Vol. 38 (5-6), pp. 951-964. DOI: 10.1007/s00382-011-1053-x
- Dubois, C.; Somot, S.; Calmanti, S.; Carillo, A.; Déqué, M.; Dell'Aquila, A.; Elizalde, A.; Gualdi, S.; **Jacob, D.**; L'Hévéder, B.; Li, L.; Oddo, P.; Sannino, G.; Scoccimarro, E.; Sevault, F. (2012): Future projections of the surface heat and water budgets of the Mediterranean Sea in an

ensemble of coupled atmosphere-ocean regional climate models. In: *Climate Dynamics*, Vol. 39, (7-8), pp. 1859-1884. DOI: 10.1007/s00382-011-1261-4

Gálos, B.; Hänsler, A.; Kindermann, G.; Rechid, D.; Sieck, K.; **Jacob, D.** (2012): The role of forests in mitigating climate change - A case study for Europe. In: *Acta Silvatica et Lignaria Hungarica*, Vol. 8 (1), pp. 87-102. DOI: 10.2478/v10303-012-0007-2

Jacob, D.; Elizalde, A.; Haensler, A.; Hagemann, S.; Kumar, P.; Podzun, R.; Rechid, D.; Remedio, A.R.; Saeed, F.; Sieck, K.; Teichmann, C.; Wilhelm, C. (2012): Assessing the Transferability of the Regional Climate Model REMO to Different Coordinated Regional Climate Downscaling Experiment (CORDEX) Regions. In: *Atmosphere*, Vol. 3(1), pp. 181-199. DOI: 10.3390/atmos3010181

Kotlarski, S.; Hagemann, S.; Krahe, P.; Podzun, R.; **Jacob, D.** (2012): The Elbe river flooding 2002 as seen by an extended regional climate model. In: *Journal of Hydrology*. Vol. 472-473, pp. 169-183. DOI: 10.1016/j.jhydrol.2012.09.020

Pietikainen, J.-P.; O'Donnell, D.; Teichmann, C.; Karstens, U.; Pfeifer, S.; Kazil, J.; Podzun, R.; Fiedler, S.; Kokkola, H.; Birmili, W.; O'Dowd, C.; Baltensperger, U.; Weingartner, E.; Gehrig, R.; Spindler, G.; Kulmala, M.; Feichter, J.; **Jacob, D.**; Laaksonen, A. (2012): The regional aerosol-climate model REMO-HAM. In: *Geoscientific Model Development*, Vol. 5 (6), pp. 1323-1339. DOI: 10.5194/gmd-5-1323-2012

Saeed, F.; Hagemann, S.; **Jacob, D.** (2012): A framework for the evaluation of the South Asian summer monsoon in a regional climate model applied to REMO. In: *International Journal of Climatology*, Vol. 32 (3), pp. 21-38. DOI: 10.1002/joc.2285

2011

Aich, V.; Strauch, U.; Sieck, K.; Leyens, D.; **Jacob, D.**; Paeth, H. (2011): Development of Wet-Bulb-Temperatures in Germany with special regard to conventional thermal Power Plants using Wet Cooling Towers. In: *Meteorologische Zeitschrift*, Vol. 20 (6), pp. 601-614. DOI: 10.1127/0941-2948/2011/0259

Brasseur, G., Fischer-Bruns, I.; **Jacob, D.**; Elizalde, A. (2011): Klimawandel und Luftqualität im Mittelmeerraum - Das Climate Service Center informiert. EMA, Mediterranes, Ausgabe 2/2011 "Innovativ in eine gemeinsame Zukunft-Umwelt und Erneuerbare Energien in der EMA-Region."

Gálos, B.; Mátyás, C.; **Jacob, D.** (2011): Regional characteristics of climate change altering effects of afforestation. In: *Environmental Research Letters*. Vol. 6 (4), 044010. DOI: 10.1088/1748-9326/6/4/044010

Gálos, B.; **Jacob, D.**; Mátyás, C. (2011): Effects of Simulated Forrest Cover Change on

Projected Climate - a case Study of Hungary. In: *Acta Silvatica et Lignaria Hungarica*, Vol. 7, pp. 49-62. ISSN: 1786691X

- Haensler, A.; Hagemann, S.; **Jacob, D.** (2011): The role of the simulation setup in a long-term high-resolution climate change projection for the southern African region. In: *Theoretical and Applied Climatology*, Vol. 106, (1-2), pp. 153-169. DOI: 10.1007/s00704-011-0420-1
- Haensler, A.; Cermak, J.; Hagemann, S.; **Jacob, D.** (2011): Will the southern African west coast fog be affected by future climate change? Results of an initial fog projection using a regional climate model. *Erdkunde*, Vol. 65 (3), pp. 261-275. DOI: 10.3112/erdkunde.2011.03.04
- Haensler, A.; Hagemann, S.; **Jacob, D.** (2011): Dynamical downscaling of ERA40 reanalysis data over southern Africa: added value in the representation of seasonal rainfall characteristics. In: *International Journal of Climatology*, Vol. 31 (15), pp. 2338-2349. DOI: 10.1002/joc.2242
- Jacob, D.**; Hagemann, S. (2011): Verstärkung des Wasserkreislaufs – wichtige Kennzeichen des Klimawandels. In: Lozán, J.L., H. Graßl, P. Hupfer, L. Karbe & C.-D. Schönwiese (Eds): *Warnsignal Klima: Genug Wasser für alle?*
- Lucas-Picher, P.; Christensen, J.H.; Saeed, F.; Kumar, P.; Asharaf, S.; Ahrens, B.; Wiltshire, A.J.; **Jacob, D.**; Hagemann, S. (2011): Can Regional Climate Models Represent the Indian Monsoon? In: *Journal of Hydrometeorology*, Vol. 12 (5), pp. 849-868. DOI: 10.1175/2011jhm1327.1
- Moors, E.J.; Biemans, H.; Groot, A.; Terwissch van Scheltinga, C.; Siderius, C.; Stoffel, M.; Huggelb, C.; Wiltshire, A.; Mathison, C.; Ridley, J.; **Jacob, D.**; Kumar, P.; Bhadwal, S.; Gosain, A.; Collins, D.N. (2011): Adaptation to changing water resources of the Ganges basin in northern India. In: *Environmental Science & Policy*, Vol. 14(7), pp. 758–769. DOI: 10.1016/j.envsci.2011.03.005
- Mudelsee, M.; Chirila, D.; Deutschländer, T.; Döring, C.; Haerter, J.O.; Hagemann, S.; Hoffmann, H.; **Jacob, D.**; Krahé, P.; Lohmann, G.; Moseley, C.; Nilson, E.; Panferov, O.; Rath, T.; Tinz, B. (2010): Climate Model Bias Correction und die Deutsche Anpassungsstrategie. In: *Mitteilungen Deutsche Meteorologische Gesellschaft*, Vol. 3, pp. 2-7. ISSN: 0177-8501
- Paeth, H.; Hall, N.M.; Gaertner, M. A.; Alonso, M. D.; Moumouni, S.; Polcher, J.; Ruti, P. M.; Fink, A. H.; Gosset, M.; Lebel, T.; Gaye, A. T.; Rowell, D. P.; Moufouma-Okia, W.; **Jacob, D.**; Rockel, B.; Giorgi, F.; Rummukainen, M. (2011): Progress in regional downscaling of West African precipitation. In: *Atmospheric Science Letters*, Vol. 12, pp.75-82. DOI: 10.1002/asl.306
- Saeed, S.; Müller, W.A.; Hagemann, S.; **Jacob, D.**; Mujumdar, M.; Krishnan, R. (2011). Precipitation variability over the South Asian monsoon heat low and associated teleconnections. In: *Geophysical Research Letters*,

Vol. 38. DOI: 10.1029/2011GL046984

- Saeed, S.; Müller, W.; Hagemann, S.; **Jacob, D.** (2011): Circumglobal wave train and the summer monsoon over northwestern India and Pakistan: The explicit role of the surface heat low. In: *Climate Dynamics*, Vol. 37 (5-6), pp. 1045-1060. DOI: 10.1007/s00382-010-0888-x
- Suklisch, M.; Gobiet, A.; Truhetz, H.; Khurshid Awan, N.; Göttel, H.; **Jacob, D.** (2011): Error Characteristics of High Resolution Regional Climate Models over the Alpine Area. In: *Climate Dynamics*, Vol. 37 (1-2), pp. 377-390. DOI: 10.1007/s00382-010-0848-5
- Tomassini, L.; Moseley, Ch.; Hagemann, S.; Podzun, R.; **Jacob, D.** (2011): Extremes and predictability in the European pre-industrial climate of a regional climate model. In: *Climate Dynamics*, Vol. 36. (11-12), pp. 2371-2397. DOI 10.1007/s00382-010-0814-2
- Tsanis, I. K.; Koutroulis, A.G.; Daliakopoulos, I.N.; **Jacob, D.** (2011): Severe climate-induced water shortage and extremes in Crete. In: *Climate Change*, Vol. 106 (4), pp. 667-677. DOI:10.1007/s10584-011-0048-2

2010

- Frueh, B.; Feldmann, H.; Panitz, H.-J.; Schädler, G.; **Jacob, D.**; Lorenz, Ph.; Keuler, K. (2010): Determination of Precipitation Return Values in Complex Terrain and their Evaluation. In: *Journal of Climate*, Vol. 23 (9), pp. 2257-2274. DOI: 10.1175/2009JCL2685.1
- Graf, H.-F.; Shirsat, S.V.; Oppenheimer, C.; Jarvis, M.J.; Podzun, R.; **Jacob, D.** (2010): Continental Scale Antarctic deposition of sulphur and black carbon from anthropogenic and volcanic sources. In: *Atmos. Chem. Phys. Discuss.* Vol. 9, pp. 26577-26592. ISSN: 16807316
- Haensler, A.; Hagemann, S.; **Jacob, D.** (2010): How the future climate of the southern African region might look like: Results of a high-resolution regional climate change projection. In: *Nova Acta Leopoldina*, Vol. 112 (384), pp. 183-193.
- Hurkmans, R.; Terink, W.; Uijlenhoet, R.; Torfs, P.; **Jacob, D.**; Troch, P. A. (2010): Changes in streamflow dynamics in the Rhine basin during the 21st century under different climate scenarios. In: *Journal of Climate*, Vol. 23, pp. 679- 699. DOI: 10.1175/2009JCLI3066.1
- Jacob, D.**; Podzun, R. (2010): Global warming below 2°C relative to pre-industrial level: How might climate look like in Europe. In: *Nova Acta Leopoldina*, NF, 71-76.
- Jacob, D.** (2010): Atmosphere: An International and Interdisciplinary Scientific Open Access Journal. In: *Atmosphere*, Vol. 1, pp. 1-2. DOI:10.3390/atmos1010001
- Kotlarski, S.; **Jacob, D.**; Podzun, R.; Paul, F. (2010): Representing Glaciers in a Regional Climate Model. In: *Climate Dynamics*, Vol. 34, pp. 27-46. DOI: 10.1007/s00382-009-0685-6

- Kotlarski, S.; Paul, F.; **Jacob, D.** (2010): Forcing a distributed glacier mass balance model with the regional climate model REMO. Part 1: Climate model evaluation. In: *Journal of Climate*, Vol 23 (6), pp. 1589-1606. DOI: 10.1175/2009JCLI2711.1.
- Larsén, X. G.; Mann, J.; Berg, J.; Göttel, H.; **Jacob, D.** (2010): Wind Climate from the Regional Climate Model REMO. In: *Wind Energy*, Vol. 13 (4), pp. 279-296. DOI: 10.1002/we.337
- Lorenz, P.; **Jacob, D.** (2010): Validation of temperature trends in the ENSEMBLES regional climate model runs driven by ERA40. In: *Climate Research*, Vol. 44 (2-3), pp. 167-177. DOI: 10.3354/cr00973
- Menéndez, C.G.; de Castro, M.; Boulanger, J.-P.; D'Onofrio, A.; Sanchez, E.; Sörensson, A.A.; Blazquez, J.; Elizalde, A.; **Jacob, D.**; Le Treut, H.; Li, Z.X.; Núñez, M.N.; Pessacg, N.; Pfeiffer, S.; Rojas, M.; Rolla, A.; Samuelsson, P.; Solman, S. A.; Teichmann, C. (2010): Downscaling extreme month-long anomalies in southern South America. In: *Climatic Change*, Vol. 98 (3-4), pp 379–403. DOI: 10.1007/s10584-009-9739-3

2009

- Goodess, C.M.; **Jacob, D.**; Deque, M.; Guttierrez, J.M.; Huth, R.; Kendon, E.; Leckebusch, G.C.; Lorenz, P.; Pavan, V. (2009): "Downscaling methods, data and tools for input to impacts assessments" In: van der Linden, P. and J.F.B. Mitchell (Eds.): *ENSEMBLES: Climate Change and its Impacts: Summary of research and results from the ENSEMBLES project*. Met Office Hadley Centre, Fitzroy Road, Exeter, EX1 3PB, UK pp. 59-78.
- Hagemann, S.; Goettel, H.; **Jacob, D.**; Lorenz, P.; Roeckner, E. (2009). Improved regional scale processes reflected in projected hydrological changes over large European catchments. In: *Climate Dynamics*, Vol. 32 (6), 767-781. DOI: 10.1007/s00382-008-0403-9
- Hagemann, S.; **Jacob, D.** (2009): Mögliche Auswirkungen des Klimawandels auf Deutschland. In: Fansa, M. & C. Ritzau (Eds.): *Klimawandel: Globale Herausforderung des 21. Jahrhunderts*. Primus Verlag Darmstadt. pp. 33-44.
- Jacob, D.** (2009): Organisation in Verbundprojekten: Konzeptionelle Darstellung anhand der Projekte ENIGMA und BALTIMOS aus dem Bereich der Klimaforschung. In: Jost Halfmann & Falk Schützenmeister (Eds.): *Organisation der Forschung: Der Fall der Atmosphärenwissenschaft*. pp. 53-63. VS Verlag für Sozialwissenschaften. ISBN 978-3-531-15789-4
- Jacob, D.** (2009): Regionalisierte Szenarien des Klimawandel. *Raumforschung und Raumordnung*, Vol. 67 (2), pp. 89-96. DOI: 10.1007/BF03185698
- Jacob, D.** (2009): Regional Climate Models: Linking Global Climate Change to Local Impacts. In: R. Meyers (Ed.): *Springer Encyclopedia of Complexity*

and Systems Science. pp. 7591-7602. New York: Springer.

- Jacob, D.;** Kotova, L.; Lorenz, P.; Moseley, Ch.; Pfeifer S. (2009): Regional climate modelling activities in relation to the CLAVIER project. In: *Quarterly Journal of the Hungarian Meteorological Service*, Vol. 112 (3-4), pp. 141-153.
- Jacob, D.;** Lorenz, P. (2009): Future trends and variability of the hydrological cycle in different IPCC SRES emission scenarios - a case study for the Baltic Sea region. In: *Boreal Environment Research*, Vol. 14 (1), pp. 100-113.
- Jacob, D.;** Van den Hurk, B. (2009): Climate Change Scenarios at Global and Local Scales. In: F. Ludwig, P. Kabat, H. van Schaik, M. van der Valk (Eds.): *Climate change and adaptation in the water sector*, pp. 23-34, Earthscan. ISBN 978-1-84407-652-9
- Krahe, P.; Nilson, E.; Carambia, M.; Maurer, T.; Tomassini, L.; Buelow, K.; **Jacob, D.;** Moser, H. (2009): Estimating the consequences for projections of river discharges resulting from uncertainties in climate-change modelling - Analysis of an application of a multi-model ensemble in the catchment of the River Rhine. In: *Hydrologie und Wasserbewirtschaftung*, Vol. 53(5), pp. 316-331. ISSN: 14391783
- Langlais, C.; Barnier, B.; Molines, J.-M.; Fraunié, P.; **Jacob, D.;** Kotlarski, S. (2009): Evaluation of a dynamically downscaled atmospheric reanalysis in the prospect of forcing long term simulations of the ocean circulation in the Gulf of Lions. In: *Ocean Modelling*, Vol. 30 (4), pp. 270-286. DOI: 10.1016/j.ocemod.2009.07.004
- Paeth, H.; Born, K.; Girmes, R.; Podzun, R.; **Jacob, D.** (2009): Regional Climate change in Tropical and Northern Africa due to Greenhouse Forcing and Land Use Change. In: *Journal of Climate*, Vol. 22, pp. 114-132. DOI: 10.1175/2008JCLI2390.1
- Radvánszky, B.; **Jacob, D.** (2009): The Changing Annual Distribution of Rainfall in the Drainage Area of the River Tisza during the Second Half of the 21st Century. In: *Zeitschrift für Geomorphologie*, Vol 53 (2), pp. 171-195. DOI: 10.1127/0372-8854/2009/0053-0171
- Rechid, D.; Hagemann, S.; **Jacob, D.** (2009): Sensitivity of climate models to seasonal variability of snow-free land surface albedo. In: *Theoretical and Applied Climatology*, Vol. 95 (1-2), pp. 197-221. DOI: 10.1007/s00704-007-0371-8
- Rechid, D.; Raddatz, T.J.; **Jacob, D.** (2009): Parameterization of snow-free land surface albedo as a function of vegetation phenology based on MODIS data and applied in climate modelling. In: *Theoretical and Applied Climatology*, Vol. 95 (3-4), pp. 245-255. DOI: 10.1007/s00704-008-0003-y
- Saeed, F.; Hagemann, S.; **Jacob, D.** (2009): Impact of irrigation on the South Asian Summer Monsoon. In: *Geophysical Research Letters*, Vol. 36 (20), L20711. DOI: 10.1029/2009GL040625

- Silvestri, G.; Vera, C.; **Jacob, D.**; Pfeifer, S.; Teichmann, C. (2009): A high-resolution 43-year atmospheric hindcast for South America generated with the MPI regional model. In: *Climate Dynamics*, Vol. 32 (5), pp. 693-709. DOI: 10.1007/s00382-008-0423-5
- Starke, E.; **Jacob, D.** (2009): NeWater Report2.2.2/D2.2.3. Max Planck Institute for Meteorology.
- Tomassini, L.; **Jacob, D.** (2009): Spatial analysis of trends in extreme precipitation events in high-resolution climate model results and observations for Germany. In: *Journal of Geophysical Research Atmospheres*, Vol. 114 (12), D12113. DOI: 10.1029/2008JD010652.
- Van den Hurk, B.; **Jacob, D.** (2009): The Art of Predicting Climate Variability and Change. In: F. Ludwig, P. Kabat, H. van Schaik and M. van der Valk (Eds.): *Climate change and adaptation in the water sector*, pp. 9-22, Earthscan. ISBN 978-1-84407-652-9

2008

- Feldmann, H.; Früh, B.; Schädler, G.; Panitz, H.J.; Keuler, K.; **Jacob, D.**; Lorenz, P. (2008): Evaluation of Regional Climate Model Precipitation Climatology for South-western Germany. In: *Meteorologische Zeitung*, Vol. 17, No. 4, pp. 455-465. DOI: 10.1127/0941-2948/2008/0295
- Göttel, H.; Alexander, J.; Keup-Thiel, E.; Rechid, D.; Hagemann, S.; Blome, T.; Wolf, A.; **Jacob, D.** (2008): Influence of changed vegetation fields on regional climate simulations in the Barents Sea Region. In: *Climatic Change* (BALANCE Special Issues), Vol. 87(1-2), pp. 35-50. DOI: 10.1007/s10584-007-9341-5
- Hennemuth, B.; Weiss, A.; Boesenberg, J.; **Jacob, D.**; Linne, H.; Peters, G.; Pfeifer, S. (2008): Quality assessment of water cycle parameters in REMO by radar-lidar synergy. In: *Atmospheric Chemistry and Physics*, Vol. 8, pp. 287-308. ISSN: 16807316
- Jacob, D.**; Göttel, H.; Kotlarski, S.; Lorenz, P.; Sieck, K. (2008): Klimaauswirkungen und Anpassung in Deutschland -- Phase 1: Erstellung regionaler Klimaszenarien für Deutschland. Abschlussbericht zum UFOPLAN-Vorhaben. FKZ: 204 41 138
- Jacob, D.**; Kotlarski, S.; Göttel, H. (2008): Klimawandel und Wasserressourcen: Regionale Trends in Deutschland und Europa. *DVGW Energie-Wasser-Praxis*. wgw Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbH. Ausgabe Januar 2008, 59. Jahrgang.
- Kotlarski, S.; **Jacob, D.**; Paul, F. (2008): Simulation of Glacier Mass and Energy Balance within a Regional Climate Model. *CliC - Ice and Climate News*, No. 10, January 2008.

- Larsén, X.G.; Mann, J.; Göttel, H.; **Jacob, D.** (2008): Wind climate and extreme winds from the regional climate model REMO. In: *European Wind Energy Conference and Exhibition 2008*, Vol. 2, pp. 665-674. ISBN: 978-161567115-1
- Radvánszky, B.; **Jacob, D.** (2008): A Tisza vízgyűjtőterületének várható klímaváltozása és annak hatása a Tisza vízhozamára regionális klímamodell (REMO) és a lefolyási model (HD) alkalmazásával, *Hidrológiai Közlöny, Journal of the Hungarian Hydrological Society*, Vol. 88
- Roeckner, E.; **Jacob, D.** (2008): Der Klimawandel ist voll im Gang: ein Überblick. In: Lozán, J.L., H. Graßl, G. Jendritzky, L. Karbe und K. Reise (Ed.): *Warnsignal Klima: Gesundheitsrisiken?*
- Roy, S.; Beig, G.; **Jacob, D.** (2008): Seasonal distribution of ozone and its precursors over the tropical Indian region using regional chemistry-transport model. In: *Journal of Geophysical Research Atmospheres*, Vol. 113(21), D21307. DOI: 10.1029/2007JD009712
- Wolf, A.; Blyth, E.; Harding, R.; **Jacob, D.**; Keup-Thiel, E.; Göttel H.; Callaghan; T. (2008): Sensitivity of an ecosystem model to hydrology and temperature. In: *Climatic Change*, Vol. 87(1-2), pp. 75-89. DOI: 10.1007/s10584-007-9339-z
- Wyser, K.; Jones, C.G.; Du, P.; Girard, E.; Willén, U.; Cassano, J.; Christensen, J.H.; Curry, J.A.; Dethloff, K.; Haugen, J.-E.; **Jacob, D.**; Køltzow, M.; Laprise, R.; Lynch, A.; Pfeifer, S.; Rinke, A.; Serreze, M.; Shaw, M.J.; Tjernström, M.; Zagar, M. (2008): An Evaluation of Arctic Cloud and Radiation processes during the SHEBA year: Simulation results from 8 Arctic Regional Climate Models. In: *Climate Dynamics*, Vol. 30, pp. 203-223. DOI: 10.1007/s00382-007-0286-1

2007

- Déqué, M.; Rowell, D.P.; Lüthi, D.; Giorgi, F.; Christensen, J.H.; Rockel, B.; **Jacob, D.**; Kjellström, E.; de Castro, M.; van den Hurk, B. (2007): An intercomparison of regional climate simulations for Europe: assessing uncertainties in model projections. In: *Climatic Change*, Vol. 81. DOI: 10.1007/s10584-006-9228-x.
- Benko, T.; Teichmann, C.; Mizsey, P.; **Jacob, D.** (2007): Regional Effects and Efficiency of Flue Gas Desulphurization in the Carpathian Basin. In: *Atmospheric Environment*, Vol. 41 (38), pp. 8500-8510. DOI: 10.1016/j.atmosenv.2007.07.018

- Gaertner, M. A.; **Jacob, D.**; Gil, V.; Dominguez, M.; Padorno, E.; Sanchez, E.; Castro, M. (2007): Tropical cyclones over the Mediterranean Sea in climate change simulations. In: *Geophysical Research Letter*, Vol. 34 (14), L14711. DOI: 10.1029/2007GL029977
- Gálos, B.; Lorenz, P.; **Jacob, D.** (2007): Will dry events occur more often in Hungary in the future? In: *Environmental Research Letter*, Vol. 2(3), 034006. DOI: 10.1088/1748-9326/2/3/034006
- Hagemann, S.; **Jacob, D.** (2007), Ergebnisse des Klimamodells REMO für Deutschland und das Rheineinzugsgebiet. In: *IWW-Schriftenreihe zum 20. Mühlheimer Wassertechnischen Seminar am 22.11.2007*, Band 46. ISSN 0941-0961
- Hagemann, S.; **Jacob, D.** (2007): Gradient in the climate change signal of European discharge predicted by a multi-model ensemble. In: *Climatic Change*, Vol. 81, pp. 309-327. DOI: 10.1007/s10584-006-9225-0
- Jacob, D.** (2007): Regionale Wirkungen des globalen Klimawandels. In: Müller, M., U. Fuentes & H. Kohl (Eds): *Der UN-Weltklimareport: Bericht über eine aufhaltsame Katastrophe, KiWi Paperback*
- Jacob, D.** (2007): Globaler Klimawandel und lokale Konsequenzen: regionale Klimaprojektionen schlagen die Brücke zwischen den Skalen. In: Altner, G., H. Leitschuh, G. Michelsen, U. E. Simonis & E. U. von Weizäcker (Eds.): *Jahrbuch Ökologie 2008. Becksche Reihe*
- Jacob, D.**; Bärring, L.; Christensen, O.-B.; Christensen, J.-H.; de Castro, M.; Déqué, M.; Giorgi, F.; Hagemann, S.; Hirschi, M.; Jones, R.; Kjellström, E.; Lenderink, G.; Rockel, B.; Sanchez Sanchez, E.; Schär, Ch.; Seneviratne, S.; Somot, S.; van Ulden, A.; van den Hurk, B. (2007): An inter-comparison of regional climate models for Europe: Design of the experiments and model performance. In: *Climatic Change*, Vol. 81, pp. 31-52. DOI: 10.1007/s10584-006-9213-4
- Jacob, D.**; Göttel, H.; Kotlarski S.; Lorenz, P. (2007): Mögliche Klimaänderungen im Alpenraum. In: *Klimawandel in den Alpen. Fakten - Folgen - Anpassung*. Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU), Berlin
- Jacob, D.**; Hagemann, S. (2007): Regionale Klimamodelle-Konsequenzen für das Einzugsgebiet von Elbe und Rhein. *Natura 2000 und Klimaänderungen, Tagungsband*
- Kjellström, E.; Bärring, L.; **Jacob, D.**; Jones, R.; Lenderink G.; Schär, C. (2007): Modelling daily temperature extremes: Recent climate and future changes over Europe. In: *Climatic Change*, Vol. 81. DOI: 10.1007/s10584-006-9220-5

2006

- Keup-Thiel, E.; Göttel H.; **Jacob, D.** (2006): Regional climate simulations for the Barents Sea region. In: *Boreal Environment Research*, Vol. 11, pp. 329–339. ISSN: 12396095
- Rechid, D.; **Jacob, D.** (2006): Influence of monthly varying vegetation on the simulated climate in Europe. In: *Meteorologische Zeitschrift*, Vol. 15(1), pp. 99-116. DOI: 10.1127/0941-2948/2006/0091
- Rinke, A.; Dethloff, K.; Cassano, J.; Christensen, J.H.; Curry, J.A.; Du, P.; Girard, E.; Haugen, J.-E.; **Jacob, D.**; Jones, C.; Koltzow, M.; Laprise, R.; Lynch, A.H.; Pfeifer, S.; Serreze, M.C.; Shaw, M.J.; Tjernstroem, M.; Wyser, K.; Zagar, M. (2006): Evaluation of an ensemble of Arctic regional climate models: Spatiotemporal fields during the SHEBA year. In: *Climate Dynamics*, Vol. 26 (5), pp. 459-472. DOI: 10.1007/s00382-005-0095-3
- Walter, A.; Keuler, K.; **Jacob, D.**; Knoche, R.; Block, A.; Kotlarski, S.; Müller-Westermeier, G.; Rechid, D.; Ahrens, W. (2006): A high resolution reference data set of German wind velocity 1951-2001 and comparison with regional climate model results. In: *Meteorologische Zeitschrift*, 15 (6), pp. 585-596. DOI: 10.1127/0941-2948/2006/0162

2005

- Aldrian, E.; D. Sein; **Jacob, D.**; Podzun, R.; Gates, L.D. (2005): Modelling of Indonesian rainfall with a Coupled Regional Model. In: *Climate Dynamics*, Vol. 25 (1), pp. 1-17. DOI: 10.1007/s00382-004-0483-0
- Arpe, K.; Hagemann, S.; **Jacob, D.**; Roeckner, E. (2005): The realism of the ECHAM5 models to simulate the hydrological cycle in the Arctic and North European area. In: *Nordic Hydrology*, Vol 36, pp. 349-367
- Déqué, M.; Jones, R.G.; Wild, M.; Giorgi, F.; Christensen, J.H.; Hassell, D.C.; Vidale, P.L.; Rockel, B.; **Jacob, D.**; Kjellström, E.; de Castro, M.; Kucharski, F. van den Hurk, B. (2005): Global high resolution versus Limited Area Model scenarios over Europe: results from the PRUDENCE project. In: *Climate Dynamics*, Vol. 25 (6), pp. 653-670. DOI: 10.1007/s00382-005-0052-1
- Hagemann, S.; **Jacob, D.** (2005): European Discharge under Climate Change Conditions Simulated by a Multimodel Ensemble. In: J.Coté (Ed.): *Research Activities in Atmospheric and Oceanic Modelling*, WGNE Blue Book 2005, WMO, Geneva, pp. 7-12

- Jacob, D.;** Bülow, K. (2005): Regionale Klimasimulationen zur Untersuchung der Niederschlagsverhältnisse in heutigen und zukünftigen Klimaten. In: Wechsung, F., A. Becker & P. Graefe (Ed.): *Integrierte Analyse der Auswirkungen des globalen Wandels auf Wasser, Umwelt und Gesellschaft im Elbegebiet*. Weissensee Verlag, Berlin 2005.
- Jacob, D.;** Hagemann, S. (2005): Verstärkung und Schwächung des regionalen Wasserkreislaufs – wichtiges Kennzeichen des Klimawandels. In: Lozán J.L., H. Graßl, P. Hupfer, L. Menzel & C.D. Schönwiese (Ed.): *Warnsignal Klima: Genug Wasser für alle?* Wissenschaftliche Auswertungen / GEO, Hamburg
- Jacob, D.;** Gerstengarbe, F.-W. (2005): Klimaszenarien für den Deutschen Teil des Elbeeinzugsgebietes [Climat scenarios for the German side of the Elbe region], PIK Report, (95), pp. 89-91. ISSN: 14360179
- Jacob, D.;** Goettel, H.; Jungclaus, J.; Muskulus, M.; Podzun R.; J. Marotzke (2005): Slowdown of the thermohaline circulation causes enhanced maritime climate influence and snow cover over Europe. In: *Geophysical Research Letter*, Vol. 32(21), L21711. DOI: 10.1029/2005GL023286
- Kotlarski, S.; **Jacob, D.** (2005): Development of a Subgrid Scale Parameterization of Mountain Glaciers for Use in Regional Climate Modelling. WGN Blue Book 2005/, WMO, pp. 4-13
- Kotlarski, S.; Block, A.; Böhm, U.; **Jacob, D.;** Keuler, K.; Knoche, R.; Rechid, D.; Walter, W. (2005): Regional Climate Model Simulations as Input for Hydrological Applications: Evaluation of Uncertainties. In: *Advances in Geosciences*, Vol. 5, pp. 119-125. ISSN: 16807340
- Kotova, L.; Kotlarski, S.; Marien, L.; **Jacob, D.;** Podzun, R. (2005): Is the Climate Change Signal Resolution Dependent? Proceedings EGU 2005, *Geophysical Research Abstracts*, Vol. 7, 04712
- Lorenz, Ph.; **Jacob, D.** (2005): Influence of regional scale information on the global circulation: A two-way nesting climate simulation. In: *Geophysical Research Letters*, Vol. 32(18), L18706. DOI: 10.1029/2005GL023351
- Mikolajewicz, U.; Sein, D.V.; **Jacob, D.;** König, T.; Podzun, R.; Semmler, T. (2005): Simulating Arctic sea ice variability with a coupled regional atmosphere-ocean-sea ice model. In: *Meteorologische Zeitschrift*, 14 (6), pp. 793-800. DOI: 10.1127/0941-2948/2005/0083

- Muskulus, M.; **Jacob, D.** (2005): Tracking cyclones in regional model data: the future of Mediterranean storms. In: *Advances in Geosciences*, Vol. 2, pp. 13-19. ISSN: 16807340
- Paeth, H.; Born, K.; Podzun, R.; **Jacob, D.** (2005): Regional dynamical downscaling over West Africa: model evaluation and comparison of wet and dry days. In: *Meteorologische Zeitschrift*, Vol. 14(3), pp. 349-367. DOI: 10.1127/0941-2948/2005/0038
- Pfeifer, S.; **Jacob, D.** (2002): Changes of the Arctic Climate under the SRES B2 Scenario Conditions. In: *Meteorologische Zeitschrift*, Vol. 16, pp. 711-719. DOI: 10.1127/0941-2948/2005/0076
- Semmler, T.; **Jacob, D.**; Schlünzen, K.H.; Podzun, R. (2005): The water and energy budget of the Arctic atmosphere. In: *Journal of Climate*, Vol. 18 (13), pp. 2515-2530. DOI: 10.1175/JCLI3414.1

2004

- Aldrian, E.; Gates, L. D.; **Jacob, D.**; Podzun, R.; Gunawan, D. (2004): Long term simulation of the Indonesian rainfall with the MPI Regional Model. In: *Climate Dynamics*, Vol. 22(8), pp. 795-814. DOI: 10.1007/s00382-004-0418-9
- Hagemann S; Machenhauer, B.; Jones, R.; Christensen, O.B.; Déqué, M.; **Jacob, D.**; P.L. Vidale (2004): Evaluation of water and energy budgets in regional climate models applied over Europe. In: *Climate Dynamics*, Vol. 23(5), pp. 547-567. DOI: 10.1007/s00382-004-0444-7
- Hennemuth, B.; **Jacob, D.** (2004): Validation of atmospheric boundary layer simulations with REMO by ground-based lidar measurements. In: *Bulletin of the American Meteorological Society*, pp. 5139-5142. ISSN: 00030007
- Lehmann, A.; Lorenz, Ph.; **Jacob, D.** (2004): Exceptional Baltic Sea inflow events in 2002 - 2003. In: *Geophysical Research Letters*, Vol. 31(21), L21308. DOI: 10.1029/2004GL020830
- Semmler, T.; **Jacob, D.** (2004): Modeling extreme precipitation events –a climate change simulation for Europe. In: *Global and Planetary Change*, Vol. 44(1-4), pp. 119-127. DOI: 10.1016/j.gloplacha.2004.06.008
- Semmler, T.; **Jacob, D.**; Schlünzen, K.H.; Podzun, R. (2004): Influence of sea ice treatment in a regional climate model on boundary layer values in the Fram Strait region. In: *Monthly Weather Review*, Vol.

132(4), pp. 985-999. DOI: 10.1175/1520-0493(2004)132<0985:IOSITI>2.0.CO;2

2003

Frei, C.; Christensen, J.H.; Déqué, M.; **Jacob, D.**; Jones, R.G.; Vidale, P.L. (2003): Daily precipitation statistics in regional climate models: Evaluation and intercomparison for the European Alps. In: *Journal of Geophysical Research D: Atmospheres*, Vol. 108 (3), pp. ACL 9-1 - ACL 9-19. ISSN: 01480227

Hennemuth, B.; Rutgersson, A.; Bumke, K.; Clemens, M.; Omstedt, A.; **Jacob, D.**; Smedman, A.-S. (2003): Net precipitation over the Baltic Sea for one year using models and data-based methods. In: *Tellus, Series A: Dynamic Meteorology and Oceanography*, Vol. 55 (4), pp. 352-367. DOI: 10.1034/j.1600-0870.2003.00020.x

Schrum, C.; Hübner, U.; **Jacob, D.**; Podzun, R. (2003): A coupled atmosphere/ice/ocean model for the North Sea and the Baltic Sea. In: *Climate Dynamics*, Vol. 21(2), pp.131-151. DOI: 10.1007/s00382-003-0322-8

2002

Chevillard, A.; Ciais, P.; Karstens, U.; Heimann, M.; Schmidt, M.; Levin, I.; **Jacob, D.**; Podzun, R.; Kazan, V.; Sartorius, H.; Weingartner, E. (2002): Transport of ²²²Rn using the regional model REMO: A detailed comparison with measurements over Europe. In: *Tellus, Series B: Chemical and Physical Meteorology*, Vol. 54 (5), pp. 850-871. DOI: 10.1034/j.1600-0889.2002.01339.x

Hagemann, S.; Machenhauer, B.; Christensen, O.B.; Déqué, M.; **Jacob, D.**, Jones, R.; Vidale, P.L. (2002): Intercomparison of regional climate models applied over Europe. Max-Planck-Institute for Meteorology, Report Nr. 338.

Hennemuth, B.; **Jacob, D.** (2002): One year measurement and simulation of turbulent surface heat fluxes over the BALTIC Sea. In: *Meteorologische Zeitschrift*, Vol. 11(2), pp. 105-118. DOI: 10.1127/0941-2948/2002/0011-0105

2001

Jacob, D. (2001): A note to the simulation of the Annual and Interannual Variability of the Water Budget over the Baltic Sea Drainage Basin. In:

Meteorology and Atmospheric Physics, Vol. 77 (1-4), pp. 61-73.
DOI: 10.1007/s007030170017

Jacob, D. (2001): The Role of Water Vapour in the Atmosphere. A Short Overview from a Climate Modellers Point of View. In: *Physics and Chemistry of the Earth, Part A: Solid Earth and Geodesy*, Vol. 26 (6-8), pp. 523-527. DOI: 10.1016/S1464-1895(01)00094-1

Jacob, D.; Van den Hurk, B. J. J. M; Andrae, U.; Elgered, G.; Fortelius, C.; Graham, L.P.; Jackson, S. D.; Karstens, U.; Koepken, Chr.; Lindau, R.; Podzun, R.; Rockel, B.; Rubel, F.; Sass, B. H.; Smith R.; Yang, X. (2001): A Comprehensive Model Intercomparison Study Investigating the Water Budget During the PIDCAP Period. In: *Meteorology and Atmospheric Physics*, Vol. 77 (1-4), pp. 19-43. DOI: 10.1007/s007030170015

Raschke, E.; Meywerk, J.; Warrach, K.; Andrea, U.; Bergström, S.; Beyrich, F.; Bosveld, F.; Bumke, K.; Fortelius, C.; Graham, L.P.; Gryning, S.-E.; Halldin, S.; Hasse, L.; Heikinheimo, M.; Isemer, H.-J.; **Jacob, D.;** Jauja, I.; Karlsson, K.-G.; Keevallik, S.; Koistinen, J.; Van Lammeren, A.; Lass, U.; Launianen, J.; Lehmann, A.; Liljebladh, B.; Lobmeyr, M.; Matthäus, W.; Mengelkamp, T.; Michelson, D.B.; Napiórkowski, J.; Omstedt, A.; Piechura, J.; Rockel, B.; Rubel, F.; Ruprecht, E.; Smedman, A.-S.; Stigebrandt, A. (2001): The Baltic Sea Experiment (BALTEX): A European Contribution to the Investigation of the Energy and Water Cycle over a Large Drainage Basin. In: *Bulletin of the American Meteorological Society*, Vol. 82 (11), pp. 2389-2413. ISSN: 00030007

Renssen, H.; Isarin, R.F.B.; **Jacob, D.;** Podzun, R.; Vandenberghe, J. (2001): Simulation of the Younger Dryas Climate in Europe Using a Regional Climate Model Nested in an AGCM: Preliminary Results. In: *Global and Planetary Change*, Vol. 30 (1-2), pp. 41-57. DOI: 10.1016/S0921-8181(01)00076-5

Semmler, T.; **Jacob, D.;** Podzun, R. (2001): Sensitivity experiments with the regional climate model REMO on the influence of the ice edge. *Proceedings of the CLIMPACT-Workshop* in Tromsø, Norway, April 2 - 5, 2000.

2000

Graham, L.P.; **Jacob, D.** (2000): Using Large-Scale Hydrologic Modelling to Review Runoff Generation Processes in GCM Climate Models. In: *Meteorologische Zeitschrift*, Vol. 9 (1), pp. 49-57. ISSN: 09412948

- Hagedorn, R.; Lehmann, A.; **Jacob, D.** (2000): A Coupled High Resolution Atmosphere-Ocean Model for the BALTEX Region. In: *Meteorologische Zeitschrift*, Vol. 9 (1), pp. 7-20. ISSN: 09412948
- Jacob, D.** (2000): Modelling Activities and Model Intercomparisons within BALTEX. In: Parameterization of Surface Fluxes, Atmospheric Planetary Boundary Layer and Ocean Mixed Layer Turbulence for BRIDGE - What Can We Learn From Field Experiments? Proceedings from a Workshop Arranged by The BALTEX Working Group on Numerical Experimentation and The BALTEX Working Group on Process Studies, Abisko, Lapland, Sweden 20-21 June 1999, Edited by Nils Gustafsson, International BALTEX Secretariat, Publication No. 17.
- Jacob, D.**; Podzun, R. (2000): Investigation of the Annual and Interannual Variability of the Water Budget Over the Baltic Sea Drainage Basin Using the Regional Climate Model REMO. WMO/JCSU/IOC report 1999.
- Schlünzen, K.H.; Dierer, S.; **Jacob, D.**; Semmler, T. (2000): Regional Modelling. In: B. Brümmel (Ed.): *FRAMZY99 Field Phase Report*. Meteorologisches Institut, Universität Hamburg.
- Semmler, T.; Podzun, R.; **Jacob, D.**; Juerrens, R. (2000): Comparison of ECMWF reanalyses with NCEP reanalysis. *Proceedings of the Second WCRP International Conference on Reanalyses*.

1999

- Bauer, S.; Langmann, B.; **Jacob, D.** (1999): An Atmospheric-Chemistry Model Hierarchy. In: *Air Pollution VII*, WIT Press, Southampton, England, pp. 719-728.
- Langmann, B.; Bauer, S.; **Jacob, D.** (1999): Model Hierarchy for Tropospheric Chemistry Simulations. In: *Proceedings of the EUROTRAC Symposium 1998*. Edited by P. M. Borell and P. Borrel, WIT Press, Southampton, England, pp. 581-585.

1998

- Böhm U.; Podzun, R.; **Jacob, D.** (1998): Surface Water Balance Estimation for a Semi-Arid Region Using a Regional Climate Model and Comparison of Water Balance Components with Global Circulation Model Output and Analysis Data. In: *Physics and Chemistry of the Earth*, Vol. 23 (4), pp. 405-411. DOI: 10.1016/S0079-1946(98)00045-7

Jacob, D. (1998): Landwind-Seewind. In: *Umweltatlas Wattenmeer*, Band 1. Landesamt für den Nationalpark Schleswig-Holsteinisches Wattenmeer u. Umweltbundesamt (Ed.), pp. 70-71.

Jacob, D. (1998): Intensivierung des Wasserkreislaufes? In: J.L. Lozán, H. Graßl & P. Hupfer (Eds.): *Das Klima des 21. Jahrhunderts.*, pp. 177-178.

Langmann, B.; **Jacob, D.**; Podzun, R. (1998): Development and Application of a Global to Local Model Hierarchy for the Determination of Chemical Processes in the Troposphere. In: Sven-Erik Gryning and Nadine Chaumerliac (Eds.): *Air Pollution Modelling and its Application XII*. Plenum Press, New York, pp. 489-495.

Schlünzen, K.H.; Dierer, S.; **Jacob, D.**; Semmler, T. (1998): Gekoppelte Modelle des Systems Atmosphäre/Eis. In: B. Brümmer (Ed.): *Meßkampagne FRAMZY'99 Experimentplan*. Meteorologisches Institut, Universität Hamburg

1997

Jacob, D.; Podzun, R. (1997): Sensitivity Studies with the Regional Climate Model REMO. *Meteorology and Atmospheric Physics*, Vienna, Austria, Vol. 63 (1-2), pp.119-129. ISSN: 01777971

1995

Eppel, D.P.; Kapitza, H.; Claussen, M.; **Jacob, D.**; Koch, W.; Levkov, L.; Mengelkamp, H.-T.; Werrmann, N. (1995): The Non-Hydrostatic Mesoscale Model GESIMA. Part II: Parameterizations and Applications. In: *Beiträge zur Physik der Atmosphäre*, Vol. 68, pp. 15-41. ISSN: 00058173

Jacob, D.; Claussen, M.; Majewski, D.; Podzun, R.; Rockel, B. (1995): REMO - A Model for Climate Research and Weather Forecast. Research Activities in Atmospheric and Oceanic Modelling, *WMO/JCSU/IOC Report*

Jacob, D.; Podzun, R.; Claussen, M. (1995): REMO – A model for Climate Research and Weather Prediction. International Workshop on Limited-Area and Variable Resolution Models, Beijing, China, 23-27 October 1995, WMO/TD No. 699.

Lal, M.; **Jacob, D.**; Podzun, R.; Cubasch, U. (1995): Summer Monsoon Climatology Simulated with the Regional Climate Model Nested in a General Circulation Model. International Workshop on Limited-Area and Variable Resolution Models, Beijing, China, 23-27 October 1995, WMO/TD No. 699.

1991

Jacob, D. (1991): Numerische Simulation der Wolkenbildung in einer Land-Seewind-Zirkulation, *GKSS Bericht 91/E/40*

1989

Levkov, L.; **Jacob, D.**; Eppel, D.; Graßl, H. (1989): Framework of Cloud Parameterization Including Ice for 3-d Mesoscale Models. *GKSS-Bericht 89/E/7*

Levkov, L.; **Jacob, D.**; Eppel, D.; Graßl, H. (1989): Test of a Parameterization Scheme for Cloud Microphysical Processes in a 3-d Mesoscale Model. In: *Atmospheric Research*, 24