CURRICULUM VITAE

Name	Prof. Dr. Martin Visbeck
Employer	GEOMAR Helmholtz Centre for Ocean Research Kiel and Kiel University, Düsternbrooker Weg 20, D 24105 Kiel, Germany
email	mvisbeck@geomar.de

History of employment

since 2004	Professor at Kiel University and head of the research unit „Physical Oceanography“ at GEOMAR Helmholtz Centre for Ocean Research Kiel (before 2012 IFM-GEOMAR)
since 2004	Adjunct Senior Research Scientist Lamont-Doherty Earth Observatory, Columbia University
1999-2004	Associate Professor, Department of Earth and Environmental Sciences, Columbia University, New York, USA
1995-2004	Associate Research Scientist, Lamont-Doherty Earth Observatory, USA
1994-1995	Postdoctoral fellow at MIT; (advisor: Prof. J. Marshall)
1989-1993	PhD student, Kiel University, Germany; (advisor: Prof. F. Schott)

Degrees

1993	PhD in physical oceanography, Kiel University, Germany
1989	Diploma in physical oceanography, Kiel University, Germany

Research experience

Martin Visbeck’s research interests revolve around ocean dynamic and the ocean’s role in the climate system, integrated global ocean observation and ocean sustainable development. He has investigated the interactive role of mesoscale eddies and convective plumes in deep water formation sites as well as the production mechanisms associated with shelf convection. He has explored the oceans response to NAO and SAM atmospheric forcing. A recent regional emphasis is the Atlantic. Where his group maintains the world’s longest direct current measurement series to document the variability of North Atlantic Deep Water transport exiting the Labrador Sea, a key component of the Atlantic Overturning Circulation. In the context of a Kiel based collaborative research centers on climate-biogeochemical interactions in the tropical ocean his work focuses on the supply of oxygen towards the extensive tropical oxygen minimum zones by diapycnal mixing and lateral eddy transfer. In his research on observations of ocean circulation and mixing he makes use of research vessel based expeditions but also is increasingly using and advancing modern robotic platforms including profiling floats and gliders, and the development of ocean observatories for long-term observations in the water column. As the speaker of the German excellence initiative “The Future Ocean” in Kiel, he is involved in integrated marine sciences bringing together different disciplines to work on marine issues. He is leading the EU Horizon2020 AtlantOS Project on sustained ocean observing in the Atlantic. Furthermore, Martin Visbeck is developing new conceptual frameworks to advance integrated marine research in the context of ocean sustainable development and is involved in strategic planning and decision-making processes about the ocean and sustainable development at a national, European and global level. He has contributed to ocean literacy projects and his advice is thought by national and international science bodies, governments and the UN.

Honors

2019	Henry Stommel Research Medal and American Meteorological Society (AMS) Fellow
2019	The Oceanography Society (TOS) Fellow
2015	American Geophysical Union (AGU) Fellow
2015	Member of the European Academy of Sciences (EURASC)
2008	Guest Professor, Ocean University, Qingdao, China
1997	Storke-Doherty Lectureship sponsored by LDEO/Columbia University

Memberships

- American Geophysical Union (AGU)
- American Meteorological Society (AMS)
- The Oceanography Society (TOS)
- European Geosciences Union (EGU)
- German Physical Society (DPG), German Meteorological Society (DMG)

Service to the community through committee work, advisory boards (partial)

international

since 2019	President of “The Oceanography Society”
since 2018	Elected member of the Governing Board of the International Science Council (ISC)
since 2018	Chair of European Space Agency (ESA) Advisory Committee for Earth Observations
since 2018	member of the executive planning group for the UN Decade of Ocean Science for Sustainable Development (2021-2030)
since 2017	Member of the Ocean Knowledge Action Network (KAN) development team sponsored by Future Earth, WCRP, SCOR and IOC/UNESCO
since 2017	Co-chair of OceanObs19 sponsors committee
since 2014	Member of the World Climate Research Programs Joint Scientific Committee (WCRP- JSC)
since 2012	Member of the leadership council of the UN-Sustainable Solutions Network (SDSN)
2014-2018	Member of the Scientific Advisory Board, Met Office Hadley Center (MOHC, UK)
2012-2018	Member of ICSU Committee on Scientific Planning and Review (CSPR)
2011-2012	Member of the ICSU Transition Team, the interim governing body of the new global sustainability initiative "Future Earth"
2010-2016	Member of AGU Ocean Science Section Executive Committee
2008-2009	Chair of the expert segment of the World Meteorological Organization’s Third World Climate Conference in 2009
2006-2009	IOC/UNESCO working group Advisory Body of Experts on the Law of the Sea
since 1999	NOAA-OAR/OGP/OCO Climate observing system council
1999-2004	Chair of the World Climate Research Project CLIVAR Atlantic Panel
1998-2004	NOAA-OGP Global and Climate Change advisory panel, USA

national

since 2017	Member of the Earth Observation Program Committee of the Advisory Councils of the German Aerospace Center (DLR)
since 2017	Co-Chair of the German science platform Sustainability 2030 (BMBF)
since 2017	Chair of the MARE:N advisory board for the German Research Program "Blue Ocean"
since 2017	Deputy Chair German Marine Research Consortium (KDM)
since 2015	Member of the Scientific Advisory Board, *Deutscher Wetterdienst* (DWD, Weather and Climate, Germany)
2013 - 2018	Chair of the German Committee Future Earth (DKN) sponsored by the German Research Foundation (DFG)
2008-2012	Elected member DFG peer review board for atmospheric and ocean research
2007-2014	Member of the Oceanography Commission of the German Research Foundation (DFG)

Leadership of major Science Projects

2015-2019	Lead-PI of EU Horizon2020 “AtlantOS” project (63 partners, 21M€ over 4 years)
2007-2019	Speaker of the Kiel base Cluster of Excellence “Future Ocean” (6M€ / year)

Ocean Research Expeditions

2008-2017 Chief Scientist on 11 large scale expeditions on RV METEOR and RV MSM MERIAN in the Atlantic, Indian and Pacific Ocean totaling 286 days at sea.

Publications

Selected Peer-reviewed publications

Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., McCollum, D., Messerli, P., Neumann, B., Stevance, A. S., **Visbeck, M**. and Stafford-Smith, M. (2018) Mapping interactions between the sustainable development goals: lessons learned and ways forward. Open Access Sustainability Science . DOI 10.1007/s11625-018-0604-z.

Visbeck, M. (2018) Ocean science research is key for a sustainable future. Nature Communications, 9 (1). Art.Nr. 690. DOI 10.1038/s41467-018-03158-3.

Schmidtko, S., Stramma, L. und **Visbeck, M.** (2017) Decline in global oceanic oxygen content during the past five decades. Nature, 542 (7641). pp. 335-339. DOI 10.1038/nature21399.

Rickels, W., Dovern, J., Hoffmann, J., Quaas, M. F., Schmidt, J. O. und **Visbeck, M**. (2016) Indicators for Monitoring Sustainable Development Goals: An Application to Oceanic Development in the European Union Earth's Future, 4 (5). pp. 252-267. DOI 10.1002/2016EF000353.

Turney, C. S. M., Jones, R. T., Lister, D., Jones, P., Williams, A. N., Hogg, A., Thomas, Z., Compo, G. P., Yin, X., Fogwill, C. J., Palmer, J., Colwell, S., Allan, R. und **Visbeck, M.** (2016) Anomalous mid-Twentieth Century atmospheric circulation change over the South Atlantic compared to the last 6000 years Environmental Research Letters, 11 (6). Article Nr. 064009. DOI 10.1088/1748-9326/11/6/064009.

Nilsson, M., Griggs, D. und **Visbeck, M**. (2016) Policy: Map the interactions between Sustainable Development Goals Nature, 534 (7607). pp. 320-322. DOI 10.1038/534320a.

Brandt, P., Bange, H. W., Banyte, D., Dengler, M., Didwischus, S. H., Fischer, T., Greatbatch, R. J., Hahn, J., Kanzow, T., Karstensen, J., Körtzinger, A., Krahmann, G., Schmidtko, S., Stramma, L., Tanhua, T. and **Visbeck, M.** (2015) On the role of circulation and mixing in the ventilation of oxygen minimum zones with a focus on the eastern tropical North Atlantic, Biogeosciences (BG), 12 . pp. 489-512. DOI 10.5194/bg-12-489-2015.

Lu, Y., Nakicenovic, N., **Visbeck, M.** and Stevance, A. S. (2015) Policy: Five priorities for the UN Sustainable Development Goals – Comment, Nature, 520 (7548). pp. 432-433. DOI 10.1038/520432a.

Rickels, W., Quaas, M. and **Visbeck, M.** (2014) How healthy is the human-ocean system? Environmental Research Letters, 9 (4). 044013. DOI 10.1088/1748-9326/9/4/044013.

Visbeck, M. (2014) Bumpy path to a warmer world, Nature Geoscience, 7 (3). pp. 160-161. DOI 10.1038/ngeo2104.

Visbeck, M., Kronfeld-Goharani, U., Neumann, B., Rickels, W., Schmidt, J., van Doorn, E., Matz-Lück, N., Ott, K. and Quaas, M. (2014) Securing Blue Wealth: The Need for a Special Sustainable Development Goal for the Ocean and Coasts, Marine Policy, 48 . pp. 184-191. DOI 10.1016/j.marpol.2014.03.005.

Stramma, L., Prince, E. D., Schmidtko, S., Luo, J., Hoolihan, J. P., **Visbeck, M.**, Wallace, D. W. R., Brandt, P. and Körtzinger, A. (2012) Expansion of oxygen minimum zones may reduce available habitat for tropical pelagic fishes, Nature Climate Change, 2 (1). pp. 33-37. DOI 10.1038/NCLIMATE1304.

Wu, L., Cai, W., Zhang, L., Nakamura, H., Timmermann, A., Joyce, T., McPhaden, M. J., Alexander, M., Qiu, B., **Visbeck, M.**, Chang, P. and Giese, B. (2012) Enhanced warming over the global subtropical western boundary currents, Nature Climate Change, 2 . pp. 161- 166. DOI 10.1038/NCLIMATE1353.

Selected Ocean Literacy Projects

2017 published the Ocean Atlas (ocean-atlas.org)

2010 – 2017 published five volumes of the World Ocean Review Series (worldoceanreview.com/en)

2016 – 2018 broadcast an Ocean MOOC: ONE PLANET – ONE OCEAN: From Science To Solutions a 6 weeks program (oceanmooc.org)