

Johannes Friedrich - WRI's Climate, Ocean and Power Data Lead

CONTACT INFORMATION E-mail: jfriedrich@wri.org Website: johannes-friedrich.com
WRI Portfolio: wri.org/profile/johannes-friedrich

SUMMARY Johannes is leading the **data strategies** for **climate, ocean and power** across WRI. He manages an annual project budget of **\$1-2M** and **6 staff** across Climate Watch, Ocean Watch and Power Explorer.

His visuals and tools are widely cited in **countries climate plans** (15 NDCs), used by over **130 government ministries**, and **400 large companies**.

He manages **partnerships with over a 100 organizations**, including public (UN-FCCC, World Bank), private (Google, Amazon, IBM) and academics.

His goal is to create bold visions for innovative data products that drive system change transformations by government and the private sector.

WORK EXPERIENCE **World Resources Institute**, Washington, D.C., USA

Associate; Senior Associate, since June 2013

Leading WRI's climate, ocean and power sector data work. Develop the vision and implementation of globally leading data platforms that serve international processes (UNFCCC), national governments, private sectors and investors. Delivered 8 online data tools across 4 Programs and with 4 WRI international offices (Indonesia, India, Mexico, South Africa).

Currently managing three projects with \$1.5m yearly budget:

- **Climate Watch**: Global compressive platform on countries' emissions, climate targets, linkages with sustainable development and emissions scenarios.
- **Power Explorer**: First open data platform to map out power plants around the world and their impacts on climate, water and air quality.
- **Ocean Watch**: In development open data platform that show the global and national state of the ocean, its threats and economic costs and benefits.

Responsibilities include

- Manage full project life cycle: Idea development, fund-raising, team leadership, data processing, outreach, training and policy advising.
- Supervise 6 staff and coordinate with all WRI Programs and international offices.
- Develop institutional climate and energy data innovation strategies.
- Establish and manage partnership of national governments, International Organizations, NGOs, universities and the private sector.

Stockholm Resilience Centre, Stockholm, Sweden

Research Assistant, November 2012 to May 2013

Improvement of the scientific underpinning of the Planetary Boundaries concept. Analysis of the integration of environmental and social systems in Integrated Assessment Models in cooperation with the Potsdam Institute for Climate Impact Research. Establishment of the Planetary Boundaries Research Network. Support of Stockholm Environmental Institute for the Arctic Resilience Report.

Green Earth Citizen ENGO, Linköping, Sweden

Vice-Chair, April 2012 to September 2012

Founding member and vice-chair of environmental NGO focusing on global environmental governance and green life-style. Project management and team leadership.

ARTE G.E.I.E., Strasbourg, France

New Media Developer, April 2011 to October 2011

Contract work at headquarter of Franco-German public television station ARTE. Support of video publishing platform, software development, video production, large data processing and user experience design.

Hurghada Environmental Protection and Conservation Association, Egypt

Research Assistant, August 2010 to December 2010

Interdisciplinary thesis in computer science and marine ecology. Field work and data collection on marine mammals and coral reefs. Design and implementation of research infrastructure and databases in collaboration with local NGO.

Fraunhofer Institute for Integrated Circuits IIS, Erlangen, Germany

Software Developer, August 2007 to December 2007

Internship at the department Multimedia Real-time Systems. Implementation of video transcoding, color space conversion, subsampling algorithms for video compression.

Kinderarche gGmbH, Fürth, Germany

Website Developer and Course Instructor, June 2005 to June 2011

Construction and maintenance of NGO web presence and performance of IT training courses.

Office for Economic Development, Nuremberg, Germany

IT Specialist, June 2005 to August 2005

Internship to support the economic development of the metropolitan region of Nuremberg. Statistical economic analysis, Web management and software development.

EDUCATION

Linköping University, Linköping, Sweden

Master of Science, Science for Sustainable Development, August 2011 to June 2013

Thesis topic: Modeling boundaries - A network analysis of existing environmental and social-economic models for examining planetary boundaries

Nuremberg Institute of Technology, Nuremberg, Germany

Bachelor of Science, Computer Science, September 2005 to April 2011

Thesis topic: The Red Sea Dolphin Project - Development of an IT-infrastructure for Cetacean Research in the Red Sea

OTHER ACTIVITIES

Yale Environmental Performance Index (EPI), Yale University, USA

Expert Contributor, October 2013

Contribution and review of the climate policy module of the EPI.

Bonn International Model United Nations (BIMUN), Bonn, Germany

Delegate in United Nations Environment Programme (UNEP), November 2011

Representative of the Delegation of Saudi Arabia.

Nuremberg Institute of Technology, Nuremberg, Germany

Teaching Assistant, Mentor & Students Representative, September 2006 to August 2010

Instructor for Foundations of Computer Science, Mathematics of Computer Science, Theoretical Computer Science. Representative in the Faculty Council and the Students Parliament.

LANGUAGE German: Mother tongue
SKILLS English: Fluent written and spoken

COMPUTER **Operating Systems**
SKILLS Microsoft operating systems, Linux (Ubuntu, CentOS)

Software and Applications

Microsoft Office, Basecamp project management, IBM TM1 budget management, ICIMS hiring manager, Raisers Edge CRM, Sharepoint, OpenOffice, Google Docs, ArcGIS, LaTeX, GIMP graphics editor, Microsoft Visual Studio, PAMGUARD Marine Acoustic Monitoring

Programming/Script Languages

JavaScript, HTML, CSS, PHP, C, C++, SQL, Java, MS Visual Basic, OpenOffice Basic

Web Technologies

D3.js Visualizations, JQuery, Highcharts, CakePHP, Google Maps API, Prototype, Apache Webserver, Apache Tomcat, MySQL Databases, Filezilla FTP, Drupal CMS, Coremedia CMS, AMS Video Management Systems, Confluence Wiki, Jira, HTML5 Video, Webmin Administration, Doxygen Documentation, LDAP User Management

- PUBLICATIONS K. Lebling, Ge, M., K. Levin, and J. Friedrich. 2020. **State of Climate Progress: Assessing the Action Needed to get on Track**. Report. Washington, DC: World Resources. www.wri.org/publication/state-climate-action-assessing-progress-toward-2030-and-2050 Institute.
- Yin, L., L. Byers, L. Malaguzzi Valeri, and J. Friedrich. 2020. **Estimating Power Plant Generation in the Global Power Plant Database**. Technical Note. Washington, DC: World Resources Institute. Available online at wri.org/publication/estimating-power-plant-generation-global-power-plant-database.
- Ge, M., K. Lebling, K. Levin, and J. Friedrich. 2019. **Tracking Progress of the 2020 Climate Turning Point**. Working Paper. Washington, DC: World Resources Institute. Available online at wri.org/publication/tracking-progress-2020-climate-turning-point.
- L. Byers, J. Friedrich, R. Hennig, A.Kressig, Li X., C. McCormick, and L. Malaguzzi Valeri. 2018. **A Global Database of Power Plants**. Washington, DC: World Resources Institute. Available online at www.wri.org/publication/global-database-power-plants.
- Climate Watch**. 2017. Washington, DC: World Resources Institute. Available online at: climatewatchdata.org
- CAIT Climate Data Explorer**. 2017. Washington, DC: World Resources Institute. Available online at: cait.wri.org.
- Ge, M., H. Chrysolite, A. Utami, A. Wijaya, and J. Friedrich. 2016. **Indonesian Climate Policy and Data in CAIT Indonesia Climate Data Explorer (PINDAI)**. Technical Note. Washington D.C.: World Resources Institute. Available online at: wri.org/publication/indonesian-climate-policy-and-data-cait-indonesia-climate-data-explorer-pindai.
- Friedrich, J.; Northrop, E.; Bevins, W.; Elliot, C. 2016. **Visualizing Climate Equity: The CAIT Equity Explorer**, Technical Note. Washington, D.C.: World Resources Institute. Available online at: wri.org/publication/cait-climate-equity-explorer.