

# Dr. Roger Cremades

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## EDUCATION

- 2013 - 2016 *Max Planck Institute for Meteorology and Hamburg University, Germany.*  
**Ph.D. Assessment of adaptation policies in Asia.**
- 2010 - 2012 *Cranfield University, United Kingdom.*  
**M.Sc. Economics for Natural Resource and Environmental Management.**
- 2011 *Beijing University of Technology (北京工业大学), China.*  
**Engineering Program for International Students.**
- 2007 - 2011 *Polytechnic University of Valencia, Spain.*  
**B.Sc. Environmental Science.**
- 2006 *Polytechnic University of Catalonia, Spain.*  
**Teaching Certificate.**
- 2000 *University of Padova, Italy.*  
**Erasmus Scholar.**
- 1995 - 2001 *Polytechnic University of Valencia.*  
**B.Sc. Forestry Engineering.**

## PROFESSIONAL EXPERIENCE

- 2017 to date *GERICS, Climate Service Center Germany.*  
**Leading Principal Investigator.**
- 2014 to 2017 *GERICS, Climate Service Center Germany.*  
**Research Associate.**
- Several years *Intergovernmental Panel on Climate Change (IPCC).*  
**Expert Reviewer: AR5 (SOD, 2013) and SR15 (FOD, 2017).**
- 2013 - 2016 *Hamburg University, Germany.*  
**Research associate.**
- 2012 *East Anglia University, United Kingdom.*  
**Research agreements.**
- 2011 *Centre for Chinese Agricultural Policy, Chinese Academy of Sciences, China.*  
**Visiting Researcher.**
- 2008 - 2012 *Independent professional activity, Valencia, Spain.*  
**Urban Sustainability Consultant (Agenda 21).**
- 2004 - 2010 *Governments of Valencia and Catalonia, Spain.*  
**Officer in Education Department.**
- 2003 - 2004 *Municipality of Gandia, Valencia, Spain.*  
**Urban Sustainability Trainee (Agenda 21).**
- 2002 *CADMAX, Madrid, Spain.*  
**Geographic Information Systems Engineer.**
- 1998 - 2001 *Herbarium of Gandia, Polytechnic University of Valencia.*  
**Teacher Assistant.**

## ARTICLES IN SCIENTIFIC JOURNALS

- Cremades, R.**, Surminski, S., Máñez Costa, M., Hudson, P., Shrivastava, P. & Gascoigne, J. (2018). Using the adaptive cycle in climate-risk insurance to design resilient futures. *Nature Climate Change* **8**, 4–7. <https://doi.org/10.1038/s41558-017-0044-2>.
- Carmona, M., Máñez Costa M., Andreu, J., Pulido-Velazquez, M., Haro-Monteagudo, D, Lopez-Nicolas, D. & **Cremades, R.** (2017). Assessing the effectiveness of Multi-Sector Partnerships to manage droughts: The case of the Jucar river basin. *Earth's Future* **5**(7), 750–770. <https://doi.org/10.1002/2017EF000545>.

- Cremades, R.**, Rothausen, S., Conway, D., Zou, X., Wang, J. & Li, Y. (2016). Co-Benefits and Trade-Offs in the Water-Energy Nexus of Irrigation in China. *Environmental Research Letters* **11**(5). <https://doi.org/10.1088/1748-9326/11/5/054007>.
- Li, X. Philp, J., **Cremades, R.**, Roberts, A., He, L., Li, L. & Yu, Q. (2016). Agricultural vulnerability over the Chinese Loess Plateau in response to climate change: Exposure, sensitivity, and adaptive capacity. *Ambio* **45**(3), 350-360. <https://doi.org/10.1007/s13280-015-0727-8>.
- Hasselmann, K., **Cremades, R.**, Filatova, T., Hewitt, R., Jaeger, C., Kovalevsky, D., Voinov & A., Winder, N. (2015). Free-riders to forerunners. *Nature Geoscience* **8**, 895–898. <https://doi.org/10.1038/ngeo2593>.
- Cremades, R.**, Wang, J. & Morris, J. (2015). Policies, Economic incentives and the adoption of modern irrigation technology in China. *Earth System Dynamics* **6**(2), 399-410. <https://doi.org/10.5194/esd-6-399-2015>.
- Zou, X., Li, Y., Li, K., **Cremades, R.**, Gao, Q., Wan, Y. & Qin, X. (2015). Greenhouse gas emissions from agricultural irrigation in China. *Mitigation and Adaptation Strategies for Global Change* **20** (2), 295-315 2015. <https://doi.org/10.1007/s11027-013-9492-9>.
- Rockström, J., Brasseur, G., Hoskins, B., Lucht, W., Schellnhuber, J., Kabat, P., Nakicenovic, N., Gong, P., Schlosser, P., Mánuez Costa, M., Humble, A., Eyre, N., Gleick, P., James, R., Lucena, A., Masera, O., Moench, M., Schaeffer, R., Seitzinger, S., van der Leeuw, S., Ward, B., Stern, N., Hurrell, J., Srivastava, L., Morgan, J., Nobre, C., Sokona, Y., **Cremades, R.**, Roth, E., Liverman, D. & Arnott, J. (2014). Climate change: The necessary, the possible and the desirable. *Earth's Future* **2**(12), 606–611. <https://doi.org/10.1002/2014EF000280>.
- Zou, X., Li, Y., **Cremades, R.**, Gao, Q., Wan, Y. & Qin, X. (2013). Cost-effectiveness analysis of water-saving irrigation technologies based on climate change response: A case study of China. *Agricultural water management* **129**, 9-20. <https://doi.org/10.1016/j.agwat.2013.07.004>.

## BOOKS

- Froelich, C., Gioli, G., **Cremades, R.** & Myrntinen, H. (Eds.). (2017). *Water security across the gender divide*. New York: Springer.

## MATHEMATICAL MODELLING AND COMPUTING SKILLS

**Models** (*demonstrable experience in published papers, or submitted\**): statistical and econometric, cost-efficiency, partial equilibrium, integrated assessment, system dynamics, ad-hoc water-energy-land nexus, spatially explicit optimization based on cellular automata\*. **Systems**: Mac, Windows, Linux, HPCC. **Software**: GAMS, Stata, Vensim. **Languages**: GAMS, SQL, Python; basic knowledge of Logo, Fortran and Java.

## HONOURS, PRIZES AND FUNDING

- 2017 **Seal of Excellence** Marie Skłodowska-Curie (European Commission).
- 2017 JPI Climate ERA4CS, Leading Principal Investigator of the CLISWELN project: **€550,688** of funds managed at GERICS, entire project over €1M.
- 2013 University of Hamburg, Centre for a Sustainable University (KNU): **€5,000**.
- 2013 Max Planck Institute for Meteorology, Doctoral Stipend: **€45,840**.
- 2011 Polytechnic University of Valencia, B.Sc. **thesis honoured with a special mention**.
- 2011 Polytechnic University of Valencia, PROMOE Programme: **€5,000**.
- 2008 - 2012 Polytechnic University of Valencia, Cranfield MSc fees (est. **€10,690**) plus €2,800.
- 2005 CEIC “Alfons el Vell”, Municipal Research Grant: **€1,500**.
- 2000 - 2001 European Union, Erasmus Scholar: **€2,500**.

## TEACHING EXPERIENCE

- 2015 Teacher Assistant (GAMS modelling), with Nobel laureate Prof. Bruce McCarl (Texas A&M University) in a summer course at Frisco (CO).  
2010 Supervisor of Trainee at Polytechnic University of Valencia.  
2010 Supervisor of Trainee at University of Valencia.  
2000 - 2001 Teacher Assistant (Botany), Polytechnic University of Valencia.

## LANGUAGES OTHER THAN ENGLISH

**English, Spanish and Catalan:** fluent. **German and Italian:** intermediate level.  
**Chinese (普通话):** official test HSK 2 passed.

## SELECTED NETWORKS

- Since 2017 *Future Earth*.  
**Development team of the Finance & Economics Knowledge-Action Network.**  
Since 2015 *The Earth League*.  
**Earth-Doc programme until 2018 and Alumni afterwards.**

## SELECTED CONFERENCES AND WORKSHOPS

**2018:** organiser of session “The Climate-Water-Energy-Land-Food Nexus”, *Adaptation Futures 2018* (Cape Town, South Africa); **2016:** panel discussion “Socio-economic & biophysical dynamics of the humanity-nature nexus”, *Future Earth & SDSN Foresight Workshop* (Como, Italy); **2013:** chair of session "Agriculture II: Ecosystems and Water" at *BIOECON* (Cambridge, UK).

## ACADEMIC AND COMMUNITY SERVICES

*Capacity building* in transition and developing countries: China, India, Nicaragua. *Student representative* at the Graduate School of the Max Planck Institute for Meteorology and Hamburg University (IMPRS-ESM, 2013-2014). *Peer reviews:* Water Resources Research; Greenhouse Gases: Science and Technology; Biomass & Bioenergy; Earth System Dynamics; Climatic Change; Agriculture, Ecosystems & Environment; Environmental Modelling and Software; Hydrological Sciences Journal; Ecological Indicators. Co-founder of *Scientific Writing Group* at the Hamburger “Klimacampus” (2014).

## MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2013 to date Member, European Association of Environmental and Resource Economists (EAERE).  
2015 to date Member, System Dynamics Society.

## PERSONAL INTERESTS

Mountaineering: 4,000 m. reached in 3 continents, and 6,000 m. in the Himalayas. Flute player. Heritage sites and landscape co-evolution.