Curriculum Vitae **Wilfran Moufouma-Okia (PhD)**

Université Paris Saclay, FCS Campus Paris-Saclay, Immeuble Discovery,
Route de l'Orme des Merisiers, 91190 Saint-Aubin, France,
Tel: +33 169337741, wilfran.moufouma-okia@universite-paris-saclay.fr

---

Employer **Université Paris Saclay**

Profession **Climate and weather modelling scientist**

Summary profile

Currently working as "Head of science" in the Technical Support Unit (TSU) of the Intergovernmental Panel on Climate Change (IPCC) Working Group 1.

Previously, I worked as "Climate science expert" at the African Climate Policy Centre (ACPC) of the **United Nations Economic Commission for Africa** (ECA) – in charge of provision of climate information, its translation and packaging and dissemination across Africa to support decision making across key development sectors (energy, infrastructures, water, food security agriculture) in the framework of the ClimDev-Africa programme. ClimDev-Africa programme is a joint effort of the African Union Commission (AUC), the African Development Bank (AfDB), and the ECA to address Africa development challenges through improved uptake of climate information and services (CIS), and establishing the policy basis for strategic investments in climate change-related opportunities.

I also lead ECA's contribution to major research initiatives such as: (i) the Weather and climate Information SERvices for Africa (WISER) programme, the UK DfiD investments to enhance climate resilience in Africa; (ii) the Climate Research for Development (CR4D) programme, an African-led initiative supported by partnership between the ACPC, African Ministerial Conference on Meteorology (AMCOMET), World Meteorological Organization (WMO), and Global Framework for Climate Services (GFCS); and (iii) Enhancing the Climate Resilience of Africa's Infrastructure (ECRAI), a World Bank led initiative to support investments of Africa's long life infrastructures in the energy and transport sectors.

In addition, I worked a decade for the UK Met Office Hadley Centre as "Senior regional climate modelling scientist" – leading the development, configuration, evaluation and dissemination worldwide of spatially detailed weather and climate prediction systems, with a focus on improving the credibility of climate information and understanding key climate drivers in tropical regions. This role included pulling through the latest climate and weather modelling science and technical developments to fully support customers' needs and the decision making process in climate sensitive sectors, but it also involved frequent delivery of capacity building activities and leading collaborative work projects worldwide, particularly over Africa, Asia, Americas, and Europe.

Expertise and experience:

2016 – Present: Head of Science in the IPCC Working group 1 technical support unit, Saint Aubin, France.

2014 – 2016: Climate science expert at African Climate Policy Centre (ACPC) of the United Nations Economic Commission for Africa (ECA), Addis Ababa,

Ethiopia.

2004 – 2014: Senior regional climate modelling scientist at the UK Met Office Hadley Centre, Exeter, UK.

2003 – 2004: Postdoctoral scientist in air pollution modelling at the CEREA/ENPC (Centre d'Enseignement et de Recherche en Environnement Atmosphérique/Ecole Nationale des Ponts et Chaussées), Paris, France.

Capability:

- Climate information services, coordination and project management, regional and global climate and weather prediction, adaptation and climate impacts, implementation of climate-related science programmes and activities, climate policy uptake, translating climate users' needs into services, training and capacity building, resource mobilisation, climate knowledge development, climate vulnerability and resilience of development sectors.
- 15 years of experience in developing and evaluating regional climate prediction systems, and advising on their use for the construction and application of climate change scenarios for impact and vulnerability studies;
- 15 years of experience in delivering high quality scientific and technical training worldwide;
- 15 years of experience in scientific and technical support of the customers and stakeholders' activities;
- Strong interactions with the policy, climate and weather research, climate information users and purveyor's communities worldwide, and development partners
- Multiple instances of living and working internationally;

Education

2000-2003: Doctor of Philosophy (PhD), Mechanic of geophysical environments, Polytechnic national institute (INP), Grenoble, France;

2000-2001: University Diploma in creating and managing enterprises, University Josef Fourier, Grenoble, France;

1998-2000: Master's degree, Numerical prediction and tropical meteorology, Ecole nationale de la Météorologie (ENM), Toulouse, France;

1997-1998: Master's degree, Oceanography-Meteorology and Environments, University of Paris 6, Paris, France;

1991-1996: Engineer's degree, Meteorology and Numerical Weather prediction, Institute of Hydro-meteorology, Odessa, Ukraine;

Selected publications

- Jones L., Dougill A., Jones R.G., Steynor A., Watkiss P., Kane C., Koelle B., Moufouma-Okia W., Padgham J., Ranger N., Roux J.-P., Suarez P., Tanner T., and Vincent K., 2015: Ensuring climate information guides long-term development. Nature Climate Change, 09/2015; Vol 5(9). DOI: 10.1038/nclimate2701
- Cerezo-Mota R., Cavazos T., Arritt R., Torres-Alavez A., Sieck K., Nikulin G., Moufouma-Okia W., and Salinas-Prieto J.A., 2015: CORDEX-NA: factors inducing dry/wet years on the North American Monsoon region. International Journal of Climatology 06/2015; DOI:10.1002/joc.4385

- Karmacharya J., Levine R.C., Jones R., Moufouma-Okia W., and New M, 2015: Sensitivity of systematic biases in South Asian summer monsoon simulations to regional climate model domain size and implications for downscaled regional process studies. Climate Dynamics, doi:10.1007/ s00382-015-2565-6, July 2015, Volume 45, Issue 1, pp 213-231
- Sperber, K.R., E. Cusiner, A. Kitoh, C.R. Mechoso, A.F. Moise, W. Moufouma-Okia, K. Schiro and A.G. Turner, 2015 (Accepted for publication): Modelling Monsoons. The Global Monsoon: Research and Forecast 3rd Edition.
- Moufouma-Okia W. and Jones R.G., 2014: Resolution dependence in simulating the African hydroclimate with the HadGEM3-RA regional climate model. Climate Dynamics,10/2014; 44(3-4). DOI: 10.1007/s00382-014-2322-2
- Diallo I., Bain C.L., Gaye A.T., Moufouma-Okia W., Niang C., Dieng M.D.B., and Graham R., 2014: Simulation of the West African monsoon onset using the HadGEM3-RA regional climate model. Climate Dynamics, DOI 10.1007/s00382-014-2219-0 August 2014, Volume 43, Issue 3, pp 575-594
- Sonwa D.J., Scholte, P. Pokam W.M., Schauerte P., Tsalefac M., Biona C.B., Brown C.P., Haensler A., Ludwig F., Mkankam F.K., Mosnier A., Moufouma-Okia W., Ngana F., and Tiani, A.M., 2013: Climate change and adaptation in Central Africa: past, scenarios and options for the future. In book: The Forests of the Congo Basin - State of the Forest 2013., Chapter: 4, Publisher: de Wasseige C., Flynn J., Louppe D., Hiol Hiol F., Mayaux Ph, Editors: de Wasseige C., Flynn J., Louppe D., Hiol Hiol F., Mayaux Ph, pp.Pp. 99-119
- Washington R., James R., Pearce H., Pokam W.M., and Moufouma-Okia W., 2013: Congo Basin rainfall climatology: can we believe the climate models?. Philos Trans R Soc Lond B Biol Sci 2013, DOI: 10.1098/rstb.2012.0296, 22;368(1625):20120296.
- Mearns L.O, Arritt R., Biner S., Bukovsky M.S, McGinnis S., Sain S., Caya D., Carreia J. Jr, Flory D., Gutowski W., Takle S., Jones R., Leung R., Moufouma-Okia W., Mcdaniel L., Nunes A.M.B, Qian Y., Roads J., Sloan L., Snyder M, 2012: The North American Regional Climate Change Assessment program: Overview of Phase I results. Bull. Amer. Meteor. Soc., 93, 1337-1362.
- Buontempo C., Booth B., and Moufouma-Okia W., 2012: The climate of the Sahel. In book: West African Studies Global Security Risks and West Africa Development Challenges: Development Challenges, Edition: West African Studies Development Challenges, Chapter: The climate of the Sahel, Publisher: OECD, Editors: OECD, pp.58-72
- Bhaskaran B., Ramachandran A., Jones R., and Moufouma-Okia W., 2012: Regional climate model applications on sub-regional scales over the Indian monsoon region: The role of domain size on downscaling uncertainty. J. Geophys. Res., 117, DOI: 10.1029/2012JDO17956.
- D. N. Walters · M. J. Best · A. C. Bushell · D. Copsey · J. M. Edwards · P. D. Falloon · C. M. Harris · A. P. Lock · J. C. Manners · C. J. Morcrette · [...] · P. D. Earnshaw · P. G. Hill · C. MacLachlan · G. M. Martin · W. Moufouma-Okia · M. D. Palmer · J. C. Petch · G. G. Rooney · A A Scaife · K. D. Williams , 2011: The Met Office Unified Model Global Atmosphere 3.0/3.1 and JULES global land 3.0/3.1 configurations. Geoscientific Model Development 10/2011; 4(4-4):919-941. DOI:10.5194/gmd-4-919-2011
- Heiko Paeth · Nicholas M.J. Hall · Miguel Angel Gaertner · Marta

Dominguez Alonso · Sounmaïla Moumouni · Jan Polcher · Paolo M. Ruti · Andreas H. Fink · Marielle Gosset · Thierry Lebel · Amadou T. Gaye · David P. Rowell · Wilfran Moufouma-Okia · Daniela Jacob · Burkhardt Rockel · Filippo Giorgi · Markku Rummukainen , 2011: Progress in regional downscaling of West African precipitation. Atmospheric Science Letters 02/2011; 12(1):75 - 82. DOI:10.1002/asl.306

- W.J.Jr Gutowski · Raymond W. Arritt · Sho Kawazoe · David M. Flory · Eugene S. Takle · Sébastien Biner · Daniel Caya · Richard G. Jones · René Laprise · L. Ruby Leung · Linda O. Mearns · Wilfran Moufouma-Okia · Ana M. B. Nunes · Yun Qian · John O. Roads · Lisa C. Sloan · Mark A. Snyder, 2011: Regional extreme monthly precipitation simulated by NARCCAP RCMs. Journal of Hydrometeorology 01/2011; 11(6). DOI:10.1175/2010JHM1297.1
- Moufouma-Okia W. and Rowell DP, 2009: Impact of soil moisture initialisation and lateral boundary conditions on regional climate model simulations of the West African Monsoon. Climate Dynamics, DOI: 10.1007/s00382-009-0638-0.
- Xue Y, de Sales F, Lau W, Boone A, Feng J, Dirmeyer P, Guo Z, Kim K-M, Kitoh A, Kumar V, Poccard-Leclercq, Mahowald N, Moufouma-Okia W, Pegion P, Schemm J, Schubert S, Sealy A, Thiaw W, Vintzileos A, Williams SF, Rowell D.P, Wu M-L, 2010: Intercomparison and analyses of the climatology of the West African Monsoon in the West African Monsoon Modeling and Evaluation project (WAMME) first model intercomparison experiment. Climate Dynamics, DOI: 10.1007/s00382-010-0778-2.
- Druyan LM, Feng J, Cook KH, Xue Y, Fulakeza M, Hagos SM, Konare A, Moufouma-Okia W, Rowell DP,Vizy EK, 2009: The WAMME regional model intercomparison study. Climate Dynamics, DOI: 10.1007/s00382-009-0676-7.
- Good P., Lowe J.A., Collins M., and Moufouma-Okia W., 2008: An objective tropical Atlantic sea surface temperature gradient index for studies of South Amazon dry-season climate variability and change. Philosophical Transactions of The Royal Society B Biological Sciences 06/2008; 363(1498):1761-6. DOI:10.1098/rstb.2007.0024
- H. Gallée · W. Moufouma-Okia · P. Bechtold · O. Brasseur · I. Dupays · P. Marbaix · C. Messager · R. Ramel · T. Lebel, 2004 : A high-resolution simulation of a West African rainy season using a regional climate model. Journal of Geophysical Research Atmospheres 03/2004; 109(5). DOI:10.1029/2003JD004020