

# Dr Mouhamed LY

Senior Research Associate/ Climate change Strategies

## PROFILE

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Dr Mouhamed LY is a climate scientist with a PhD obtained from the Pierre Marie Curie University (Paris, France) in 2010 and a Master degree in 2006 from Polytechnic High School of the Cheikh Anta Diop University (Senegal) in environment sciences. He has a proven expertise in model to satellite application and climate monitoring in several international projects such as the African Monsoon Multidisciplinary Analysis (AMMA), the Quantifying Weather and Climate Impacts on Health in the developing countries (QWeCI) and other research initiatives such as GCCA, ACCIC, ClimDev-ISACIP, AgMIP, MESA, ... Prior joining the Climate Analytics Mouhamed worked at AGRHYMET/CILSS and conduct research in climate applied to agriculture and hydrology in the West African countries and played a coordinated role in the climate modelling activities in the AgMIP (Agricultural Model Intercomparison and Improvement Project) Phase II of the CIWARA (Climate change impacts on West African Agriculture) team. Dr Mouhamed LY also involved in training activities for experts of the region in the basics of climate change, the climate modelling, the climate data analysis using GIS and statistical software He also participated in several regional and international workshops in presenting research in climate sciences and climate impacts.

## EXPERIENCE

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05/2017 –  
Present

### Senior Research Associate CLMATE ANALYTICS

Main responsibilities and activities:

- Coordination and implementation of the of the IMPACT project in the West Africa region....
- Design, manage and implement quantitative research and analytical activities targeting the achievement of the project's regional objectives and outcomes
- Support overall development of scientific capacity and science-based approaches through science network activities and relevant skills transfer activities in partner institutions in the region.

02/2017 –  
04/2017

### Climate Change assessment expert

ACMAD (African Center of Meteorological Application for Development)

Main responsibilities and activities:

- Assist ACMAD/MESA team in generating and analysing climate change assessment products and services.
- Provide training support to ACMAD-MESA project on climate change assessment.

02/2012 –  
12/2016

### Climate Scientist AGRHYMET/CILSS

Main responsibilities and activities:

- Coordinator of the weekly AgroHydroMeteorology bulletin of AGRHYMET for information and dissemination to smallholder farming communities.
- Generate climate scenario for the CILSS countries to conduct climate change impact studies
- Training CILSS member countries technical staff in the elaboration of agro-meteorological bulletins, climate data analysis using R statistical software.

## EDUCATION

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01/2007 –  
12/2010

### PhD

Pierre Marie Curie University

Relation between large scale transport and organized convective system in West African Monsoon

2006 –  
2008

### MSc

Cheikh Anta Diop University

Pre-Doctoral Program in Atmospheric Physics

## PUBLICATIONS

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### Selected Peer-Review papers

- I. Abdou Saley, I. Seidou Sanda, J. P. BELL, **M. Ly**, S. Salack, and M. Fode, A. Diedhiou. *Impacts potentiels de la Grande Muraille Verte sur le climat du Sahel et de l'Afrique de l'Ouest*, 2016. Tome XXI Vol. 1, ISSN 1859-5014.
- S. Salack, B. Sarr, S. Sangare, **M. Ly**, I. Seidou Sanda, H. Kunstmann. Crop-Climate Ensemble Scenarios To Narrow Uncertainty In Agroclimatic Risks Assessment On Pearl Millet And Maize in the West African Sudan-Sahel. *Climate Research*, doi : 10.3354/cr01282, 2015.
- B. Sarr, S. Atta, **M. Ly**, S. Salack, T. Ourbak, S. Subsol and D., A. George. Adapting to climate variability and change in smallholder farming communities : A case study from Burkina Faso, Chad and Niger. *Journal of Agricultural Extension and Rural Development*, Vol.8(12), 2014.
- A. Agali, S. Salack, **M. Ly**, I. Lona, S. Traore, and B. Sarr Evolution des risques agroclimatiques associés aux tendances récentes du régime pluviométrique en Afrique de l'Ouest soudano-sahélienne. Volume 24, numéro 4. *Science et changements planétaires, Sécheresse*, 2013.
- M. Ly**, S. Traore, A. Agali, B. Sarr. Evolution of Some Observed Climate Extremes in the West African Sahel. *Weather And Climate Extreme*, 2013. <http://dx.doi.org/10.1016/j.wace.2013.07.005>.
- R. Roca, Berges J.C., Brogniez H., Capderou M., Chambon P., Chomette O., Cloche S., Fiolleau T., Jobard I., Lemond J., **M. Ly**, Picon L., Raberanto P., Szantai A. and Viollier M., 2010. Water and energy cycle in the Tropics. *C. R. Geosciences*, 2010

### Recent Reports

- M. Ly** and co-authors. Fighting Climate Change : Achievements of the CILSS / Lutte contre le Changement Climatique : Les réalisations du CILSS. Special Bulletin / CILSS, 30pp, November 2016.
- M. Ly**. Capacity Building on climate data analysis and climate vulnerability in Tchad. Global Climate Change Alliance/ GCCA-Tchad, 20pp, September 2016.
- M. Ly**. Generation of climate scenarios for impact studies in the ACCIC pilot sites (Burkina, Niger, Mali). Centre Régional AGRHYMET/ CILSS, 30pp, 2015.
- M. Ly**, B. Sarr. Atlas agroclimatique sur la variabilité et le changement climatique au Sahel / Agro-Climatic atlas of the Sahel on climate change and climate variability. Global Climate Change Alliance project (GCCA)/AGRHYMET/CILSS, 50pp, 2014
- M. Ly**, S. Tinni and A. Agali. Capitalisation des expériences sur les assurances agricoles existantes et d'identification des mécanismes d'instauration d'une assurance agricole Afrique de l'ouest.. FSTP Volet 2 SA - Centre Régional AGRHYMET / CILSS, 2013

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## CONFERENCE

### Some selected conferences and workshops

- M. Ly**, How can CR4D ensure greater access for African modellers to contribute their knowledge to climate model development, given ICT barriers? Ethiopia, on 27 October, 2017
- M. Ly**, S. B. Traore, D. McCarty, P. C. T. Traore, I. Hathie. Multi-model characterization of climatic stress patterns on the reproductive stage of West African crops. Potsdam, Friday 13 October, 2017
- M. Ly**. Changement et variabilité climatiques en Afrique de l'Ouest et au Niger. Atelier national Niger de restitution des ateliers régionaux (Dakar et Abidjan) de renforcement des capacités pour l'intégration des changements climatiques dans les politiques agricoles et la formulation de projets d'investissement. Projet de renforcement des capacités de l'Agence Régionale pour l'Agriculture et l'Alimentation de la CEDEAO (ARAA). Niamey, 23 - 24 Mars 2016
- M. Ly**. L'intégration du changement climatique dans les politiques et stratégies en Afrique de l'Ouest et au Niger. Atelier national Niger de restitution des ateliers régionaux (Dakar et Abidjan) de renforcement des capacités pour l'intégration des changements climatiques dans les politiques agricoles et la formulation de projets d'investissement. Projet de renforcement des capacités de l'Agence Régionale pour l'Agriculture et l'Alimentation de la CEDEAO (ARAA). Niamey, 23 – 24 Mars 2016

**M. Ly.** Climate Change impacts on West African Agriculture, a regional assessment (CIWARA). Modeling the West African climate. The Agricultural Model Intercomparison and Improvement Project (AgMIP) Phase 2 Integrated workshop February 22-28 2016, Dakar, Senegal

**M. Ly.** Invited lecturer. National workshop for capacity building on climate scenarios : use of climate model products for information production and dissemination. Organized by the Global Climate Change Alliance project in Nouakchott, Mauritania 05 to 09 October 2015

**M. Ly.** Lecturer. Workshop on climate applications for food security Co-Organized by AGRHYMET Regional Center and the International Centre for theoretical Physics (ICTP), Niamey, 28 September to 02 October 2015

**M. Ly.** Climate Change impacts on West African Agriculture, a regional assessment (CIWARA). Modeling the West African climate. The Agricultural Model Intercomparison and Improvement Project (AgMIP) Phase 2 Fundamentals Workshop June 24-30 2015, Victoria Falls, Zimbabwe.

**M. Ly.** Scientific committee member and lecturer. Regional workshop for capacity building on climate scenarios : use of simulation products for climate information production and dissemination in West Africa. Workshop on climate scenarios organized by the ACCIC/DANIDA project Ouagadougou 27 to 31 January 2014

**M. Ly,** Scientific committee member and lecturer. Expert Meeting on Improving Seasonal Agro- Hydro-Meteorological Forecasts in West Africa, Dakar, Senegal, 16-20 June 2014. ACCIC/DANIDA Dakar - Senegal, 16-20 June 2014.

**M. Ly,** A. Giannini, A. Robertson and B. Sarr. Advance analysis of temperature trends in the Sahel and their relation to precipitation trends. WAMME 2, AGU Fall Meeting, December 2013. San Francisco - USA, December 2013.

**M. Ly,** M. BOP, A. N'Diaye, I. Diouf, J., A. NDione, A. Deme and A., T. Gaye Enhancing rain gauges network in the Barkedji Health and Environment Observatory : perspectives with regards to Rift Valley Fever emergence. 4th AMMA International Conference. Toulouse - France, 2-6 July 2012.

**M. Ly.** Workshop WACREN-RENATER-AAU cooperation, National Network for Education and Research of Senegal (SnRER).. AAU, Dakar - Senegal, 25 March 2011.

**M. Ly** and A. Deme. Conference on the Role of e-Infrastructures for Climate Change Research.. Miramare, Trieste - Italy, 16 - 20 May 2011.

**M. Ly** and A. Deme. Joint AAP-ICTP on Special Training for UNDP African Adaptation Programme on building and using data servers for adaptation studies .. Miramare, Trieste - Italy, 16 - 27 May 2011.

**M. Ly** and co-authors. Using Climate model to forecast vector borne disease : a focus on the Rift Valley Fever in the Senegal river basin. ECSA-WCRP Workshop : Regional Climate Issues in Developing Countries. NCAR, Boulder, Colorado - USA, 19-22 October 2011.

**M. Ly,** R. Roca, F. Hourdin, A., T. Gaye and I. Musat. Representation of the West African Water cycle by the LMDZ GCM during the AMMA campaign. WCRP, Open Science Conference. Denver, Colorado - USA, 24-28 October 2011.

**M. Ly,** R. Roca and F. Hourdin. Synoptic variability in the nudged version of LMDZ over the West African monsoon region during the AMMA campaign.. EGU General Assembly, Vienna, Austria, 2009.

**M. Ly,** R. Roca and F. Hourdin. Modelling of the water vapor Transport using LMDz General Circulation model. AMMA workshop, Toulouse, France, October 2008.

**M. Ly,** R. Roca, L. Fairhead, F. Hourdin and A., T. Gaye. Evaluation of the nudged version of the LMDZ General Circulation model using the AMMA campaign with emphasis on Rainfall and Water Vapor. 2nd International Conference AMMA, Karlsruhe- Allemagne 26th-30th November, 2007.

## REFERENCES

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**Amadou T. GAYE**, Professor  
 Directeur Général de la Recherche  
 Ministère de l'Enseignement Supérieur et de la Recherche  
 1er étage - Immeuble Adja Fatou Nourou Diop - Allées Papa Gueye Fall  
 BP: 36005 Dakar - Sénégal  
 amadou†hierno.gaye@mesr.gouv.sn  
<http://www.mesr.gouv.sn>  
 Tel: +221 33 889 81 47  
 Mob: +221 78 637 05 75

**Seydou B. TRAORE**, Dr. Head of Scientific Coordinator Unit at AGRHYMET 425 Boulevard de l'Université BP 11011 Niamey - Niger Tel/Fax : +227 20 31 53 16/+227 20 31 54 35 e-mail :seydou\_traore@yahoo.com or s.traore@cilss.int

**Benoît SARR**, Dr. Technical Assistant GCCA-Tchad (European Union) Ministry of environment and fishery Ndjamena - Tchad Tel/Fax : +235 65 42 29 23 e-mail : sarrbenoitsarr@gmail.com

