Ahmadou DICKO, PhD
Statistician-Economist

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Languages
French: fluent
English: professional
proficiency

Statistical programming
R, Julia

Visualization
R, D3

Data collection
ODK, KoBoToolbox

RDBMS
PostgreSQL, DuckDB

GIS
GRASS GIS, PostGIS

Professional experience

2021–Now   **UNHCR - West and Central regional bureau**   *Dakar, Senegal*
Statistics and data analysis officer
Statistics and data analysis officer
- Designing surveys and develop tools for collecting data
- Analyzing data on displacement and statelessness
- Developing analytical data products to streamline decision making
- Facilitating training on statistics and data analysis

2019–2020   **FAO - Regional Resilience, Emergency Office for West Africa**   *Dakar, Senegal*
Resilience measurements and MEAL officer
Lead resilience measurements and MEAL officer
- Monitoring and evaluation of resilience projects
- Conducting impact evaluation of resilience projects
- Developing resilience measurements surveys and analyses

2017–2019   **UN OCHA - Center for Humanitarian Data**   *Dakar, Senegal*
Data science team lead
Lead for the OCHA Center for Humanitarian Data Dakar team
- Oversight and strategy of the Data team
- Conduct tailored data literacy training
- Building humanitarian data products
  - Visualization of the Pool crisis (Congo): link to the viz
  - FAO pastoral crisis dashboard : link to the viz
- Community building around humanitarian data science
  - Humanitarian data R User Group: Link to the website
  - Humanitarian data partnership in West Africa: link to the blog
  - Data literacy curriculum in West Africa: link to the blog

2016–2017   **Agricultural Research Centre for International Development**   *Montpellier, France*
Postdoctoral researcher
Modeling and developing data products to optimize pest control:
- Development of statistical models to optimize tsetse control
- Development of tools to evaluate the cost of tropical diseases under climate change

2013–2016   **University Cheikh Anta Diop**   *Dakar, Senegal*
PhD in climate change economics
A thesis on the economics of African animal trypanosomosis under climate change.
- It was organized in three parts:
  - Building a machine learning model to optimize tsetse control in Senegal
  - Designing of a risk index to build an index-based animal disease insurance
  - Evaluating the cost and benefit of African animal trypanosomosis control
- The Senegalese tsetse eradication project was based on the output of this research
- This eradication campaign won a best pratice awards at the Milano 2015 Expo

2010–2011   **National School of Statistics and Economic Analysis (ENSAE)**   *Dakar, Senegal*
Director of the ENSAE junior enterprise, providing:
- Training in statistical analysis
- Survey design and analysis services
- Survey data collection, entry and management services

Independent statistical consulting and training

2018   **Agricultural Research Centre for International Development**   Montpellier, France
Consultant
Expert lecturer in statistical analysis.

2017   **FAO and International Atomic Energy Agency**   Montpellier, France
Consultant
Predicting the distribution of Anophelese arabiensis in Northern Sudan

2016   **FAO International Atomic Energy Agency**   Montpellier, France
Consultant
Predicting the distribution of tsetse in Angola for target control.

2015   **Commissariat à la sécurité alimentaire du Mali and GISSE**   Bamako, Mali
Consultant
Enhancement and refinement of the food security early warning system used in Mali.

2015   **FAO and International Atomic Energy Agency**   Addis Ababa, Ethiopia
Consultant
Expert lecturer in predictive analytics, GIS and R programming for trypanosomosis control.

2015   **CIRAD**   Dakar, Senegal
Consultant
Training on species distribution modeling and handling of remote sensing data.

2014   **International Atomic Energy Agency**   Dakar, Senegal
Consultant
Predicting tsetse flies distribution in Mozambique for target control.

2013   **Intrahealth**   Dakar, Senegal
Consultant
Training and collaborative mapping of Senegalese health districts using open source tools.

Teaching experience

2020   **Université Internationale d'Excellence**   Bamako, Mali
Visiting lecturer
Visualizing big data

2020   **ENSAE**   Dakar, Senegal
Visiting lecturer
R programming

2017   **ENSAE**   Dakar, Senegal
Visiting lecturer
Advanced course on robust and non parametric statistics for graduate students.

2014   **ENSAE**   Dakar, Senegal
Visiting lecturer
Advanced course on robust and non parametric statistics for graduate students.

Education

2013–2016	**PhD in climate change economics**	University Cheikh Anta Diop, Dakar
	The economics of African animal trypanosomosis under climate change	
2009–2012	**MSc in statistics and applied economics**	ENSAE, Dakar
	Statistician-economist engineer	

Certifications

2021	**Survey Data Collection and Analytics Specialization**	Coursera - UMich and UMD
2019	**Rstudio certified trainers**	Rstudio
2019	**Causality from observational data**	Coursera - University of Pennsylvania
2016	**Julia scientific programming**	Coursera - University of Cape Town
2015-2016	**Data science specialization**	Coursera - John Hopkins University

Awards

2012	**Postgraduate Scholarship**	German Federal Ministry of Education and Research (BMBF)
	Scholarship to pursue a PhD in climate change economics in the WASCAL program	
2009	**Postgraduate Scholarship**	French government
	Scholarship obtained from outstanding results in the African wide entrance exam to regional school of statistics	

Leadership and affiliation

2021–Now	**Regular member of the International Statistics Institute**	isi-web.org
2013–Now	**Founder and co-organizer of the Dakar R User Group**	r-dakar.gitlab.io
2012–Now	**Kaggle user, platform for data science competition**	kaggle.com/dickoa
2011–Now	**Top R user in Stackoverflow**	stackoverflow.com/users/592920/dickoa
2010–Now	**Member of Dakar Linux User Group**	meetup.com/Linux-Senegal

Software

2021-Now	**ridl**	UNHCR internal platform to share raw data
2021-Now	**popdata**	UNHCR internal population statistics platform
2020-Now	**rgeoboundaries**	Access high resolution administrative boundaries
2020-Now	**prepr**	R package to fix broken spatial polygons
2018-Now	**rhdx**	R package to interact with the Humanitarian Data Exchange portal
2018-Now	**ochatemplates**	R markdown templates inspired by OCHA graphics stylebook
2018-Now	**ochathemes**	ggplot2 themes inspired by OCHA graphics stylebook
2018-Now	**humicons**	R package to easily insert OCHA Humanitarian icons to R markdown document

Selected publications

2020
Field performance of sterile male mosquitoes released from an uncrewed aerial vehicle
Science Robotics
*Jérémy Bouyer, Nicole J Culbert, **Ahmadou H. Dicko**, ..., Marc JB Vreysen*

2020
Controlling the spatio-temporal dynamics of tsetse flies in a cattle breeding region of Senegal
ModAH
*Hélène Cecilia, **Ahmadou H. Dicko**, ..., Pauline Ezanno*

2017
A pilot study to delimit tsetse target populations in Zimbabwe
PNTD
*Gerald Chikowore, **Ahmadou H. Dicko**, ..., Laure Guerrini*

2016
Influence of temperature and relative humidity on survival and fecundity of three tsetse strains
Parasites & Vectors
*Soumaïla Pagabeleguem, ..., **Ahmadou H. Dicko**, ..., Jérémy Bouyer*

2016
Range expansion of the Bluetongue vector, Culicoides imicola, in continental France likely due to rare wind-transport events
Nature Scientific reports
*Stéphanie Jacquet, ..., **Ahmadou H. Dicko**, ..., Claire Garros*

2015
Mapping landscape friction to locate isolated tsetse populations that are candidates for elimination
PNAS
*Jérémy Bouyer, **Ahmadou H. Dicko**, ..., Renaud Lancelot*

2015
A spatio-temporal model of African animal trypanosomosis risk
PNTD
***Ahmadou H. Dicko**, ..., Jérémy Bouyer*

2015
Modelling the Abundances of Two Major Culicoides (Diptera: Ceratopogonidae) Species in the Niayes Area of Senegal
Plos One
*Maryam Diarra, ..., **Ahmadou Hamady Dicko**, ..., Hélène Guis*

2014
Using species distribution models to optimize vector control: the tsetse eradication campaign in Senegal
PNAS
***Ahmadou H. Dicko**, ..., Jérémy Bouyer*

2014
Ex-ante Benefit-Cost Analysis of the Elimination of a Glossina palpalis gambiensis Population in the Niayes of Senegal
PNTD
*Fanny Bouyer, ..., **Ahmadou H. Dicko**, ..., Abdrahmane Wane*