

Professor Romain Lucas GLELE KAKAÏ

TITLE: Full Professor of Biometry and Forest modeling

FUNCTIONS:

- Professor of Biostatistics at the University of Abomey-Calavi (Benin)
- Coordinator of the Master's and PhD programmes in Biostatistics
- Head of the "Laboratoire de Biomathématiques et d'Estimations Forestières"
- President of the scientific council of Agronomic Sciences of the University of Abomey-Calavi
- Director of the Humboldt Research Hub – SEMCA
- Past Chair of the African German Network of Excellence in Sciences (2019-2023)

CIVIL STATUS: Married, 3 children

PERMANENT ADDRESS: School of Environment Management, Faculty of Agronomic Sciences, University of Abomey-Calavi (UAC)
04 BP 1525, Cotonou, Benin; Phone.: +229 95840800;
E-Mail : romain.glelekakai@fsa.uac.bj; gleleromain@yahoo.fr ;
Website: <http://www.labef-uac.org> / [www. http://fsa-uac.org/](http://fsa-uac.org/)

EDUCATION

Full Professor (2015 – till now)

University of Abomey-Calavi

Associate Professor (2011-2015)

University of Abomey-Calavi

Senior lecturer (2009-2011)

University of Abomey-Calavi

Lecturer (2007-2009)

University of Abomey-Calavi

Doctorate in Biometry (The Highest distinction with Congratulations)

Gembloux Agricultural University, Belgium, 2005

MSc in Applied Statistics (Ranked First)

Gembloux Agricultural University, Belgium, 2001

Engineer Degree in Agronomy, Major: Forestry (Ranked First)

Faculty of Agronomic Sciences, University of Abomey-Calavi, 2000.

Bachelor Degree in Agronomy (Ranked First)

Faculty of Agronomic Sciences, University of Abomey-Calavi, 1998.

PRIZES AND INTERNATIONAL DISTINCTIONS

- Prize "**Heinz and Johannes**". Best research paper in Ecology; 2007 edition. The Support Africa International Foundation, Germany, 2007.
- Prize "**Jan Tinbergen**". Best young statistician from emerging and developing countries. The International Statistical Institute (ISI), Australia, 2005.
- Prize "**Biométrie 88**". Best young French biometrist in Belgium. National Association of French Belgian biometrists, Belgium, 2002.

- Member of the selection committee of **the International Climate Protection Fellowship Programme** of the Alexander von Humboldt Foundation (Germany), since 2017
- President of **AGNES** (African-German Network of Excellence in Science), since 2019.
- Member of the **Global Young Academy of Sciences**, 2012-2018.
- Member of **The Young Affiliate Network of the World Academy of Sciences**, Since 2011.
- Member of **the World Economic Forum** community (Young scientists). Participation in the Annual meeting of the new champions 2012, Tianjin, China.
- Fellow of **the Alexander von Humboldt Foundation** for outstanding achievements in research. Germany, 2007.

PROFESSIONAL EXPERIENCE

Lecturer and Researcher, University of Abomey-Calavi, 2007-
 Biometrician (Part time job), Africa Rice (Ex ADRAO), 2006-2008
 Biometrician, National Institute of Agricultural Research of Bénin, 2002-2007

SUPERVISED PHD STUDENTS

1. **Emmanuel Ehnon Gongnet** (2020-2022). Analysis of Bayesian Maximum Entropy (BME) robustness in estimation with application on soil data. Université d'Abomey-Calavi.
2. **Hounsou-Dindin** (2020-2022): Biodiversity and ecological status of wild oil plants with implications for conservation and domestication in Benin. Université d'Abomey-Calavi.
3. **Serge Zanvo** (2019-2022). Population structure, dynamics, biomass and ecosystem services of mangroves in southern Benin, West-Africa: implications for sustainable management. Université d'Abomey-Calavi, 233 pages.
4. **Hounmenou Castro** (2018-2021). Nonlinear regression analysis with multilayer perceptron neural networks for single and multidimensional outputs. Université d'Abomey-Calavi, 191 pages.
5. **Frederic C. Tovissode** (2018-2021). Performance of Generalized Linear and Nonlinear Mixed Models under Flexible Distributions with Applications in Biological and Social Sciences. Université d'Abomey-Calavi, 191 pages.
6. **Corine B. Sinsin** (2018-2021). Resilience of mangrove ecosystems to climate change in west Africa: Benin case study. (Co-supervision with Prof. Kouassi). Université Félix Houphouet-Boigny (Côte d'Ivoire), 158 pages.
7. **Eliane Assogbadjo** (2018-2021). Diversité végétale et connaissances endogènes des espèces ligneuses alimentaires dans les systèmes agroforestiers de la zone périphérique du noyau central de la Forêt Classée de la Lama au Bénin. (Co-supervision with Prof. Barima). Université Jean Lorougnon Guedé (Côte d'Ivoire), 174 pages.
8. **Essomanda Tchandao** (2018-2021). Analyse des données multiblocs : approches unifiées et développement de nouvelles méthodes. (Co-supervision with Prof. Qanari). ONIRIS (France), 173 pages.
9. **Bruno Lokonon** (2017-2020). Empirical performance of parameter estimation methods in Generalized Linear Mixed Models (GLMMs) with applications to ecological data. Université d'Abomey-Calavi, 96 pages.
10. **Sewanou Hermann Honfo** (2017-2020). Performance Analysis of Parameters' Estimation Methods in Multivariate Linear Mixed Effects Models: application to natural

- regeneration potential assessment of *Adansonia digitata* L. Université d'Abomey-Calavi, 120 pages.
11. **Kisito Gandji** (2015-2018). Assessing ethnobotanical patterns and morphological diversity of *Moringa oleifera* Lam. (Moringaceae) in Benin (West Africa). Université d'Abomey-Calavi, 172 pages.
 12. **Achille Hounkpevi** (2014-2017). Conservation and ecological adaptations of the black plum (*Vitex doniana* Sweet) to climatic conditions in Benin, West Africa. (Co-supervision with Prof. Kone). Université Félix Houphouet-Boigny (Côte d'Ivoire), 138 pages.
 13. **Jean Didier Akpona** (2014-2017). Biodiversity, prioritization, population ecology and conservation of woody plant species in Benin (West Africa). Université d'Abomey-Calavi, 97 pages.
 14. **Kolawole Valère Salako** (2013-2015). Population ecology, the pattern of uses and conservation of the dioecious palm *Borassus aethiopum* Mart. (Arecaceae) in Benin, West Africa. Université d'Abomey-Calavi, 154 pages.
 15. **Charlemagne Gbemavo** (2012-2014). Caractérisation ethnobotanique et modélisation de la dynamique de production du pourghère (*Jatropha curcas*) au Bénin (Afrique de l'Ouest). Université d'Abomey-Calavi, 170 pages.

PhD STUDENTS CURRENTLY UNDER SUPERVISION

1. **Luc Zinzinchedo** (2023-2025). Combined approach of Machine Learning and spatiotemporal models for cassava (*Manihot esculenta* C.) yield prediction in Benin under pathogen infestation conditions.
2. **Mireille Odounfa** (2023-2025). Using deep learning techniques for early detection and estimation of the severity of chilli diseases under constraints of limited sample image, climate variations, and pests.
3. **Paulette Guédézoumè** (2023-2025). Developing machine learning-based approaches to predict soil fertility in Benin. (Co-supervision with Prof. Dagbenonbakin, INRAB, Benin).
4. **Kassifou Traore** (2023-2025). A mathematical model for the analysis of malaria incidence and mortality in sub-Saharan Africa: Accounting for population opinion of modern and traditional treatments and prevention methods.
5. **Mathilde Adeoti** (2022-2024). Bayesian nonlinear modelling for correlated epidemic data using flexible distributions: A case study with COVID-19 data, Université d'Abomey-Calavi.
6. **Yvette Montcho** (2022-2024). Modeling the impacts of non-pharmaceutical interventions on COVID-19 dynamics using mixed regression and Generalized linear mixed models: case study of Africa. Université d'Abomey-Calavi.
7. **Yanik Akin** (2022-2024). Phylogenetic diversity, perturbation and transient dynamic of fuelwood tree. (Co-supervision with Prof. Gaoue, University of Tennessee).
8. **Céptime Ahlonsou** (2022-2024). Empirical performance of Distance functions for farm efficiency analysis with application on organic cotton farming systems in Benin (Co-supervision with Prof. Sodjinou).
9. **David Akodekou** (2022-2025). Impacts of agricultural activities on the sustainable management of inland valleys in a context of climate change in the Guinean region of Benin (Co-supervision with Prof. Diallo, Mali).
10. **Ariane Houetohossou** (2021-2023). Architectural and parametric optimization of pre-trained Deep Convolutional Neural Network (DCNN): Stress detection on tomato plants

under climate and infection-based simulated environments. Université d'Abomey-Calavi.

11. **Peace Souand Tahi** (2021-2023). Artificial Intelligence based problem-solving in agricultural yield prediction: Optimization of Ensemble Learning techniques performances and ability of base regressors in the prediction of the yield of maize cultures under several controlled weather and fertilization patterns. Université d'Abomey-Calavi.
12. **Angeline Kakpo** (2021-2023). Conservation participative d'espèces agroforestières à fort potentiel de fertilisation au Centre du Bénin. Université d'Abomey-Calavi.
13. **Arsène Mushagalusa Ciza** (2020-2022). Random forest regression for count response data and disease vectors abundance prediction: application to ticks (*Rhipicephalus appendiculatus*) abundance in grazed permanent pastures. Université d'Abomey-Calavi.
14. **Yannick Mugumaarhahama** (2020-2022). Spatial point process model for analysis of presence-only data: accounting for species characteristics and uncertainties in data. Université d'Abomey-Calavi.
15. **Armel Bourobou Bourobou** (2020-2022). Inhomogeneous Poisson Process and its extensions for species distribution analysis: accounting for sampling bias, non-linear effect and spatial dependence using classical and approximate Bayesian inference.

VISITING PROFESSOR IN BIOSTATISTICS AT OTHER AFRICAN UNIVERSITIES

1. Kwame Nkrumah University of Science and Technology (KNUST), **GHANA**. Contact person: Prof. Wilson Agyei Agyare. Email: wagyare@gmail.com. **Course: Univariate and Multivariate statistical methods** for PhD Students in the Regional Water and Environmental Sanitation Centre, Kumasi (RWESCK). Since 2015.
2. Kwame Nkrumah University of Science and Technology (KNUST), **GHANA**. Contact person: Prof. Agyare. Email: wagyare@yahoo.co.uk. Course: **Univariate and Multivariate statistical methods** for PhD Students in WASCAL Doctoral Programme Climate Change and Land Use. Since 2018.
3. Wascal's GRP-Climate Change and Biodiversity, University Félix Houphouët Boigny (**COTE D'IVOIRE**). **Course: Sampling techniques and experimental designs** for PhD students in Natural resources and climate change. Contact Person: Prof. Kone Daouda. Email: daoudakone2013@gmail.com (Since 2014)
4. University of Lome; Faculty of Sciences, **TOGO**. Contact Person: Prof. Kokou Kouami. **Course: Linear mixed-effects models** for students in WASCAL Master Research Program in Climate Change and Human Security. Email: kokoukouami@hotmail.com. Since 2018
5. University of Kara; Faculty of Sciences, **TOGO**. Contact person: Prof. Baba Gnon. Email: gnonbaba@yahoo.fr. **Course: Linear models** for BSc students in statistics. (2010-2018).
6. University of Abdou Moumouni; Faculty of Sciences, **NIGER**. Contact person: Prof. Bakasso Yacoubou. BP 10662 Niamey Niger. E-mail: bakasso@yahoo.com. Phone: +227 90381418. **Course: Biostatistics** for MSc Students. (2010-2017).
7. Higher National Agronomy and Biotechnology Institute (**GABON**). **Lecture in Experimental designs** for engineer degree students in agronomy. Contact person : Prof. Kumulungui Brice Serge. Email: kumulungui@yahoo.fr (2013-2014).

COLLABORATIVE RESEARCH PROJECTS

N°	PROJECT	FUNDING AGENCY	AIMS	PERIOD
1	PAPBio C1-Mangroves Role: Coordinator	IUCN 50,000 €	Recherche-action sur la restauration de C. erectus au Bénin	2023-204
2	INSPIRE Innovation Santé Publique Internationale Recherche – Université d'Abomey-Calavi Role: Coordinator of MSc and PhD in Biostat	AFD 3,072,234 €	Train MSc and PhD IN Biostatistics and epidemiology in Benin	2023-2027
3	Malaria Vaccine Impact Modeling Role: Coordinator	VIMC (GAVI, BMGF) 180,000 €	Modeling Malaria Vaccine RTS,S Impact scenarios for 101 age cohorts in 117 endemic countries.	2023-2025
4	DELTAS Africa II. Sub-Saharan Africa Consortium for Advanced Biostatistics training. Role: Coordinator in Benin	African Union 4,400,000 US \$	Train MSc and PhD IN Biostatistics and epidemiology in Africa	2021-2025
5	Research Hub-SEMCIA. Socio-ecological modelling of COVID-19 in Africa Role: Director	Federal Foreign Office (Germany) 749500 €	- Model the spatial dynamics of COVID-19 in Africa and analyze its determinants - Analyze the potential seasonality of COVID-19 taking into account the 5 major climatic regions in Africa - Model the effect of vaccination with an imperfect vaccine on the dynamics of COVID-19 - Analyze the effect of control measures on the dynamics of COVID-19 in Africa	2021-2026
6	TEBWA. Training Epidemiologists and Biostatisticians for enhanced response to disease outbreak and epidemic in West-Africa Role: Coordinator	EDCTP 750000 €	Train epidemiologists and biostatisticians for an effective and appropriate response to epidemics	2021 - 2023
7	DAAD "In-Country/In-Region Scholarship Programme" for Master in Statistics (Major Biostatistics) & Doctorate in Biometrics. Role: Coordinator	Deutscher Akademischer Austauschdienst German Academic Exchange Service (DAAD) 850000 €	Train West African biostatisticians in the management and analysis of biological data.	2022-2025
8	ARES-POP. Morphophysiological adaptation and genetic diversity of keystone mangrove tree species in response to human disturbance regimes in Benin: implications for mangrove conservation. 2018 Role: Coordinator	Coopération belge au développement 50,000 €		2019
9	GREPPAO. Gestion et résilience des pêches de petits pélagiques en Afrique de l'Ouest	Union Européenne	The objective of the GREPPAO is to contribute to the achievement of the overall objective of the PESCAO Program which is to improve the contribution of	2019-2021

			fisheries resources to sustainable development, food security and poverty reduction in West Africa.	
10	TWAS. Modelling nonlinear trend in multilevel data using flexible distributions: a guideline for selecting the best of parametric and semi-nonparametric approaches	TWAS (N°20-346 RG/MATHS/AF/AC_G – FR3240314177).	Build an approach for the efficient use of parametric, semi-parametric and non-parametric methods for the modeling by flexible distributions of nonlinear trends for multi-level observations.	2020-2021
11	BAOCHAIN. Scaling up African baobab food products valuation through enhancement of their safety and value chains for food and nutritional security in Benin. Rôle : Coordonateur scientifique	CARP+/RUFORUM	- Analyze the value chains of baobab leaves and fruit pulp; - organize actors in baobab sectors and fruit pulp value chains into a platform and networks to ensure sustainable connections; - Upgrade new value-added technologies at the country level and baobab-based products in food and nutrition security strategies, but also as an agro-industrial opportunity at the national level.	2018-2021
12	PGD-MANGROVES. Vers une gestion durable des mangroves au Bénin : dynamique spatio-temporelle, biodiversité, usages et gestion locale, capacité de séquestration de carbone et impacts des changements climatiques. Rôle : Coordonateur	Fonds National de la Recherche Scientifique et de l'innovation Technologique	- characterize the spatio-temporal dynamics of the mangroves in Benin - estimate the biodiversity of Benin's mangroves - assess the uses of mangroves as well as local mangrove management practices - assess the carbon sequestration capacity and the effect of climate change on the extent of Benin's mangroves	2017-2019
13	Setting up a system of evaluation of the land use dynamics and follow up indicators of the transboundary biosphere reserve of the Mono Rôle : Coordonateur	Observation spatiale des forêts d'Afrique Centrale et de l'Ouest (OSFACO/IRD)	The project aims to develop cost-effective methods that respect the environment and allow the sustainable production of baobab leaves to ensure food security for small producers in the three climatic zones in the Republic of Benin.	2017-2019
14	TREE FOOD. Enhancing nutritious food availability through promotion of native edible tree/shrub species in Sub-Saharan Africa Rôle : Membre	Agropolis Fondation – Fondazione Cariplò and Fondation Daniel et Nina Carasso	The project aims at supporting so-called farmer-led innovation platforms in improving collection, production, processing and marketing of products from edible tree/shrub species, whereas field schools will be established to disseminate technologies.	2017-2019
15	Promoting environmentally friendly practices for sustainable baobab leaves production for food and nutritional security in smallholders farming systems in Benin Rôle : Membre	RUFORUM	Develop a set of agro-ecological practices to improve the production of the daily used baobab leaves by building capacity of local farmers and NGOs on how to propagate and grow baobab treelets in small garden plots using environmentally friendly practices	2015-2017
16	Project SCOPA (Sustainability of Cotton Production in Africa) Rôle : Coordonnateur	DANIDA	The overall aim of the project is to increase knowledge about the sustainability of cotton production in SSA, where we will particularly focus on organic cotton production.	2015-2018
17	Improving the resilience of agro-ecosystems to climate change along watersheds by co-developing anti-erosion and fertilizing agroforestry	WECARD	This project aims to (i) assess the potential of agroforestry in sustainable land use and land management and (ii) prospect options for intensive but environmentally friendly agriculture on watersheds.	2014-2016

	systems in six West African countries Rôle : membre			
18	Etat de la biodiversité et perspectives de gestion durable de la forêt classée de Pénéssoulou Rôle : membre	Office National du Bois	- Inventory the species of flora and fauna of the FCP and know their biodiversity through appropriate biodiversity indices; - Specify the regional conservation status of species identified on the IUCN Red List. - Know the uses made of biological resources by local populations and identify the threats to their conservation.	
19	Wild palms in Benin: biodiversity, uses, ecology, economic importance, and conservation Rôle : membre	University of Abomey-Calavi	It aims to: (i) assess local knowledge of the rural communities through the analysis of social perceptions and the quantification of their ethnobotanical use value; (ii) evaluate the biodiversity (specific richness and genetic diversity) and the distribution of the wild palm species in Benin; (iii) assess the structure and the dynamics of the wild palm species populations in Benin; (iv) evaluate the economic importance of the wild palm species through the study of the flow markets and the income generated to actors of the market chain; and (v) assess the conservation gap of the species.	2012-2015
20	Harmonization of methods of vegetation study in West-Africa Rôle : Coordonnateur	PAES/ECOWAS	This research project focuses on assessing the efficiency of the shape and size of inventory plot (relevés) in the floristic analysis and estimation of dendrometric parameters in West-African vegetation.	2012-2014

AFFILIATION

AGNES (African-German Network of Excellence in Science), 2015.

Global Young Academy of Sciences, 2012-2018.

Scientific and Technical council for the development of maize crop in Benin, 2012- .

The World Academy of Sciences (Young affiliate), 2011-2015.

Statistical Pan African Society (SPAS), 2009-

International Statistical Institute (ISI, the Netherlands), 2005- .

African Forestry Research Network, 2004.

RESEARCH INTEREST

- Linear and generalized linear mixed effect models;
- Multi-bloc data analysis;
- Artificial Intelligence applied in Agriculture
- E-M Algorithms and their variants in non-linear models under scale mixture of non-symmetric normal distributions;
- Ecology and management of mangroves;
- Spatial distribution modeling;
- Modeling of structure and dynamics of forest species populations in Benin.

QUELQUES MISSIONS D'EXPERTISE EN AGRO-FORESTERIE ET STATISTIQUE

- Expert en Inventaire Forestier et renforcement de capacité auprès de la FAO (2023-2026). FAO, Rome, Italie.
- Chef de mission dans l'inventaire d'aménagement de dix forêts classées du Bénin sous-gestion du Projet « Forêts Classées ». PFC, DGFC, Bénin. 2023.
- Chef de mission dans l'étude de l'inventaire des arbres de *Pterocarpus erinaceus* au Benin. DGFC, 2022.
- Chef de mission dans l'étude *d'estimation de la biomasse et du stockage de Carbone dans les plantations forestières mises en place par les projets PANA-Energie et Biomasse Electricité* conduite par le Laboratoire de Biomathématiques et d'Estimations Forestières (LABEF). 2019
- Expert statisticien du projet *Improving food security in West and East Africa through capacity building in research and information dissemination*. 2017.
- Expert statisticien du projet BIOCEL (*Biologie de la Conservation et Ethnopharmacologie des Ligneux médicinaux de la Pharmacopée Béninoise*), FNRSIT, 2017.
- Expert forestier dans le projet *d'amélioration de la résilience aux changements climatiques des Écosystèmes agricoles le long des bassins-versants par le développement participatif de systèmes agroforestiers antiérosifs et fertilisants dans six pays ouest africains* (AmREACCAF), 2013-2014.
- Expert statisticien dans l'étude liée à la mise au point d'un système de gestion des statistiques forestières du secteur forestier du Bénin, 2013.
Expert statisticien dans l'inventaire forestier des forêts de Dan, Atchérigbé, Ouémé Boukou, Mékrou et Kouandé. PGFTR, 2012.
- Expert statisticien dans l'étude relative à l'estimation des besoins en bois-énergie des grands centres de consommation au profit du PGFTR ; PGFTR, 2006 (Cabinet EAR-Development).
- Expert statisticien dans l'étude relative à la réalisation de l'étude ethnobotanique des forêts classées de Tchaourou-Toui-Kilibio au profit du PGFTR. PGFTR, 2008, Cabinet CIDEV.
- Expert statisticien dans la caractérisation morphologique des arbres et capsules de baobab en Afrique de l'Ouest. Ghent University, 2009.
- Expert statisticien pour le traitement des données relatives à la caractérisation morphologique des arbres de baobab (*Adansonia digitata*) et de leurs capsules dans la sous-région Ouest Africaine (Bénin, Sénégal, Burkina Faso, Mali), Université de Ghent, Belgique, 2009.
- Expert formateur pour l'atelier sur la formation des jeunes chercheurs dans la rédaction scientifique, 2012.

SCIENTIFIC PUBLICATIONS

Books

1. Glèlè Kakaï R. (2010). *Règles de classement et taux d'erreur en analyse discriminante*. Edition Européenne Universitaire, Allemagne, 237p.
2. Glèlè Kakaï R., Sodjinou E., Fonton H. N. (2006). *Conditions d'application des méthodes statistiques paramétriques*. Bibliothèque Nationale, Bénin, 106 p.

3. Glèlè Kakaï R., Palm R., Kokode G. (2005). *L'analyse discriminante décisionnelle : aspects théoriques et applications sur ordinateur*. Bibliothèque Nationale, Bénin, 64 p.
4. Glèlè Kakaï R., Kokode G. (2004). *Techniques statistiques univariées et multivariées : applications sur ordinateurs*. Bibliothèque Nationale, Bénin, 67 p.

Scientific papers (Total=302)

- H-Index ([Google Scholar](#)) = 41, Number of citations: 5776 (February 2024)
- 4 books
- 302 scientific articles
- Many scientific communications.

Scientific papers

2024

302. Houetohossou, S. C. A., Ratheil Houndji, V., Sikirou, R., & **Glèlè Kakaï R.** (2024). Finding optimum climatic parameters for high tomato yield in Benin (West Africa) using frequent pattern growth algorithm. *Plos one*, 19(2), e0297983.
301. Gbedomon, R. C., Salako, K. V., Gnansounou, S. C., Gandji, K., Failler, P., Assogbadjo, A. E., & **Glèlè Kakaï R.** (2024). Small-scale marine fishing in Benin, West Africa: A comprehensive assessment of the processed fish value chain. *Marine Policy*, 161, 106032.
300. Gnansounou, S. C., Salako, K. V., Visée, C., Dahdouh-Guebas, F., **Glèlè Kakaï R.**, Kestemont, P., & Henry, S. (2024). The role of local deities and traditional beliefs in promoting the sustainable use of mangrove ecosystems. *Forest Policy and Economics*, 160, 103145.
299. Agbangba, C. E., Aide, E. S., Honfo, H., & **Glèlè Kakaï R.** (2024). On the use of post-hoc tests in environmental and biological sciences: A critical review. *Heliyon*.
298. Tietiambou, S. R. F., Idohou, R., Agounde, G., Lankoande, B., Avocevou, C., Ouédraogo, A., & **Glèlè Kakaï R.** (2024). Modelling the potential impact of climate change on *Carapa procera* DC. in Benin and Burkina Faso (West Africa). *Modeling Earth Systems and Environment*, 1-12.
297. Matazi, A. K., Gongnet, E. E., & **Glèlè Kakaï R.** (2024). Digital soil mapping: a predictive performance assessment of spatial linear regression, Bayesian and ML-based models. *Modeling Earth Systems and Environment*, 10(1), 595-618.

2023

296. Hounou-Dindin, G., Idohou, R., Donou Hounso, M. T., Adomou, A. C., Assogbadjo, A. E., & **Glèlè Kakaï, R.** (2023). Climate change effects on desert date *Balanites aegyptiaca* (L.) Delile in Benin: Implications for conservation and domestication. *Natural Resources Forum* 48(1): 3-15.
295. Sinsin, C. B. L., Bonou, A., Salako, K. V., Gbedomon, R. C., & **Glèlè Kakaï R.** (2023). Economic Valuation of Mangroves and a Linear Mixed Model-Assisted Framework for Identifying Its Main Drivers: A Case Study in Benin. *Land*, 12(5), 1094.
294. Wabi, M. A., Vanhove, W., Idohou, R., Hounkpevi, A., **Glèlè Kakaï R.**, & Van Damme, P. (2023). Détermination des dates favorables aux semaines du riz pluvial au Bénin par simulation mathématique des probabilités de survenue des séquences sèches. Seventh

- RUFORUM Triennial Conference. In RUFORUM Working Document Series 19(1). p.130-140.
293. Yedomonhan, E., Tovissodé, C. F., & **Glèlè Kakaï R.** (2023). Modeling the effects of Prophylactic behaviors on the spread of SARS-CoV-2 in West Africa. *Mathematical Biosciences and Engineering*, 20(7), 12955-12989.
292. Dete H. C., Senou M., Kossi G. E., & **Glèlè Kakaï R.** (2023). Model selection criteria for survival data based on Kullback's divergence: A systematic and critical review. *Afrika Statistika*. Vol. 18 (1), 2023, pages 3379 – 3398.
291. Orounla B. R., Sode A. I., Salako K. V & **Glèlè Kakaï R.** (2023). Empirical Performance of CART, C5.0 and Random Forest Classification Algorithms for Decision Trees. *Afrika Statistika*. Vol. 10 (1): 1399 – 1418.
290. Beh Mba R, Lokonon B. E., & **Glèlè Kakaï R.** (2023). Quality report of infectious disease modeling techniques for point-referenced spatial data: A Systematic review. *Afrika Statistika*. Vol. 10 (1):1368 – 1382.
289. Traore, K., Houenou, D. F., & **Glèlè Kakaï, R.** (2023). Analytical insights of the effects of Non-Pharmaceutical Interventions on SRAS-CoV-2 Dynamic with Application to West African Data. *Contemporary Mathematics*, 1310-1330.
288. Mensah, S., Noulèkoun, F., Dimobe, K., Seifert, T., & **Glèlè Kakaï R.** (2023). Climate and soil effects on tree species diversity and aboveground carbon patterns in semi-arid tree savannas. *Scientific Reports*, 13(1), 11509.
287. Mugumaarhahama, Y., Fandohan, A. B., & **Glèlè Kakaï R.** (2023). Performance of inhomogeneous Poisson point process models under different scenarios of uncertainty in species presence-only data. *Environmental Systems Research*, 12(1), 27. <https://doi.org/10.1186/s40068-023-00312-9>.
286. Houetohossou, S. C. A., Houndji, V. R., Hounmenou, C. G., Sikirou, R., & **Glèlè Kakaï, R.** (2023). Deep learning methods for biotic and abiotic stresses detection and classification in fruits and vegetables: State of the art and perspectives. *Artificial Intelligence in Agriculture*. <https://doi.org/10.1016/j.aiia.2023.08.001>.
285. Wabi, M. A., Vanhove, W., Idohou, R., Hounkpèvi, A., **Glèlè Kakaï, R.**, & Van Damme, P. (2023). Midterm change in rainfall distribution in north and central Benin: implications for agricultural decision making. *Environment, Development and Sustainability*, 1-26. <https://doi.org/10.1007/s10668-023-03766-0>.
284. Zanvo, S. M., Mensah, S., Salako, K. V., & **Glèlè Kakaï R.** (2023). Tree height-diameter, aboveground and belowground biomass allometries for two West African mangrove species. *Biomass and Bioenergy*, 176, 106917. <https://doi.org/10.1016/j.biombioe.2023.106917>.
283. Hounou-Dindin, G., Idohou, R., Agre, P., Hounkpèvi, A., Adomou, A. C., Assogbadjo, A. E., & **Glèlè Kakaï R.** (2023). Habitat range shift and prediction of the potential future distribution of Ricinodendron heudelotii (Baill.) Heckel in Benin (West Africa). *Heliyon*, 9(9). <https://doi.org/10.1016/j.heliyon.2023.e20199>.
282. Kakpo, A. R., Vodounnon, M. J., Agbangba, E. C., Hounou-Dindin, G., Dagbénoubakin, D. G., Amadji, **Glèlè Kakaï R.** (2023). Vulnerability of *Parkia biglobosa*, *Vitellaria paradoxa* and *Vitex doniana* to climate change: wild indigenous agroforestry species in Benin. *Modeling Earth Systems and Environment*, 1-16. <https://doi.org/10.1007/s40808-023-01856-6>.
281. Adjonou, Kossi, Elie A. Padonou, Rodrigue Idohou, Moustapha A. Kolawolé, Issa Adbou-Kerim Bindaoudou, Salako Valère, Fiacre Ahononga, **Romain Glèlè Kakaï**, and Kouami Kokou (2023). How Far the Mono Transboundary Biosphere Reserve Protects Biodiversity in the Dahomey-Gap Corridor, West Africa?. *IntechOpen*.
DOI: [10.5772/intechopen.112884](https://doi.org/10.5772/intechopen.112884).

280. Zanvo, S. M., Salako, K. V., Mensah, S., & **Glèlè Kakaï, R.** (2023). Impacts of harvesting intensity on carbon allocation to species, size classes and pools in mangrove forests, and the relationships with stand structural attributes. *Ecological Indicators*, 155, 111037.
279. Mensah, S., Noulékoun, F., Salako, V. K., Lokossou, C. S., Akouété, P., Seifert, T., & **Glèlè Kakaï, R.** (2023). Structural and taxonomic diversity predict above-ground biomass better than functional measures of maximum height in mixed-species forests. *Applied Vegetation Science*, 26(2), e12732.
279. Mensah, S., Noulékoun, F., Salako, V. K., Lokossou, C. S., Akouété, P., Seifert, T., & **Glèlè Kakaï, R.** (2023). Structural and taxonomic diversity predict above-ground biomass better than functional measures of maximum height in mixed-species forests. *Applied Vegetation Science*, 26(2), e12732.
278. Vihotogbé, R., Avocèvou-Ayisso, C., Djikpo, R., Teka, O., Sinsin, B. and **Glèlè Kakaï, R.** (2023). Folk taxonomical distinction between *Irvingia gabonensis* and *Irvingia wombolu* (Irvingiaceae) in the Volta Forest region, West Africa. *BASE*, 27(1): 1-14.
277. G Hounou-Dindin, R Idohou, MT Donou Hounode, AC Adomou, Assogbadjo A E., **Glèlè Kakaï R.** (2023). Distribution and structural characterization of *Balanites aegyptiaca* (L.) Delile and *Ricinodendron heudelotii* (Bail.) Pierre among phytodistricts and land use types. *Tropical Ecology* 64 (1), 86-104.
276. S Mensah, CJM Lokossou, AE Assogbadjo, **R Glèlè Kakaï** (2023). Seasonal variation of environment and conspecific density-dependence effects on early seedling growth of a tropical tree in semi-arid savannahs. *Global Ecology and Conservation*, 43, e02455.
275. Enangnon Lokonon B, Montcho Y, Klingler P, Frédéric Tovissodé C, **Glèlè Kakaï R.** and Wolkewitz M (2023). Lag-time effects of vaccination on SARS-CoV-2 dynamics in German hospitals and intensive-care units. *Front. Public Health*. 11: 1085991. DOI: [10.3389/fpubh.2023.1085991](https://doi.org/10.3389/fpubh.2023.1085991).
274. Montcho Y, Nalwanga R, Azokpota P, Lokonon EB, Doumate T J, Salako V, Wolkewitz M, and **Glèlè Kakaï R.** (2023). Assessing the Impact of Vaccination on the Dynamics of COVID-19 in Africa: A Mathematical Modeling Study. *Vaccines* 11(4):857. DOI: [10.3390/vaccines11040857](https://doi.org/10.3390/vaccines11040857).
273. Judie Armel Bourobou Bourobou, Adandé Belarmain Fandohan, **Roman Glèlè Kakaï** (2023). Inhomogeneous Spatial Point Process Models for Species Distribution Analysis: A Systematic Review. *Application of Modeling and Simulation* 7: 49-62.
272. Issouf Zerbo, Kolawolé Valère Salako, Achille Houenkèvi, Djirensolo Zozoda, **Roman Glèlè Kakaï** and Adjima Thiombiano (2023). Impact of climate patterns, land-use types and exploitation on the population structure of *Bombax costatum* Pellegr. and Vuillet in West African semi-arid savannas, *Global Ecology and Conservation*. Doi: <https://doi.org/10.1016/j.gecco.2023.e02434>.
271. Sabo Prospère, Ouédraogo Amadé, Lankoandé Benjamin, Salako K. Valère, Ouédraogo Hassane, **Glèlè Kakaï Romain** (2023). Influence of topography on the natural stand structure of *Boswellia dalzielii* Hutch. in a semi-arid environment: insight into hill ecosystems conservation in Burkina Faso. *Global Conservation Sciences*. <https://doi.org/10.1016/j.gecco.2023.e02430>
270. Emilienne Houévo Daï, Juliano Sènanmi Hermann Houndonougbo, Rodrigue Idohou, Amadé Ouédraogo, **Roman Glèlè Kakaï**, Stefan Hotes, Achille Ephrem Assogbadjo (2023). Modeling current and future distribution patterns of *Uvaria chamae* in Benin (West Africa): Challenges and opportunities for its sustainable management. *Heliyon* 9 (2023) e13658.
269. Lokonon, B. E., Gbemavo, C. D. S. J., Agounde, G., Simbo, D., Samson, R., & **Glèlè Kakaï, R.** (2023). Modelling the current and future distribution of *Caesalpinia bonduc* (L.)

- Roxb: Its implication for future conservation of the species in Southern Benin. *African Journal of Ecology*. <https://doi.org/10.1111/aje.13122>.
268. Ehnon Gongnet Romaric Vihotogbé, Tranquillin Affossogbe Sedjro Antoine and **Romain Glèlè Kakaï**. (2023). Practical considerations on data patterns in Bayesian Maximum Entropy Estimation: A systematic and critical review. *J. Appl. Biosci.* 181: 18877–18890.
267. Ahoyo CC, Salako KV, Houehanou TD, Montcho I, **Glèlè Kakaï R.** and Houinato MRB (2023). Sociodemographic, environmental and biological factors affecting uses of plants from open ecosystems: Insights for improved livelihoods and biodiversity conservation. *Front. Conserv. Sci.* 4:1127567. doi: 10.3389/fcosc.2023.1127567.
266. Montcho Y, Klingler P, Enangnon Lokonon B, Frédéric Tovissodé C, **Glèlè Kakaï R.** and Wolkewitz M (2023). Intensity and lag-time of non-pharmaceutical interventions on COVID-19 dynamics in German hospitals. *Front. Public Health*.11:1087580. DOI: 10.3389/fpubh.2023.108.7580.

2022

265. Ciza Arsène Mushagalusa, Adandé Belarmain Fandohan, **Romain Glèlè Kakaï** (2023). Random Forests in Count Data Modelling: An Analysis of the Influence of Data Features and Overdispersion on Regression Performance. *Journal of Probability and Statistics*, <https://doi.org/10.1155/2022/2833537>.
264. Wabi, M. A., Vanhove, W., Idohou, R., Hounkpèvi, A., Kakaï, R. L. G., & Van Damme, P. (2022). Identification of socio-economic characteristics and farmers' practices affecting rice (*Oryza* spp.) yields in Benin (West Africa). *Journal of Agriculture and Rural Development in the Tropics and Subtropics (JARTS)*, 123(2), 257-271.
263. Gaffan, N., Kpozèhouen, A., Dégbey, C., Glèlè Ahanhanzo, Y., **Glèlè Kakaï, R.** & Salamon, R. (2022). Household access to basic drinking water, sanitation and hygiene facilities: secondary analysis of data from the demographic and health survey V, 2017–2018. *BMC Public Health* 22, 1345 (2022). <https://doi.org/10.1186/s12889-022-13665-0>.
262. Behingan, M. B., Mama, A., Houndonougbo, P. V., Koudande, D. O., **Glèlè Kakai, R. L.**, & Chrysostome, C. A. A. M. (2022). Spatial distribution of goat breeds bred in Benin. *International Journal of Biological and Chemical Sciences*, 16(2), 543-554.10.4314/ijbes.v16i2.3.
261. Goudégnon E. O. A., Salako K. V., Teka O., Gouwakinnou G. N., Gandji K., Tohoun R., Oumorou M., Sinsin B., (2022). Effect of seed maturity and morphotype traits on seed germination of *Lannea microcarpa* in the dry Sudanian region of Benin. *Bois et Forêts des Tropiques*, 3-12. <https://doi.org/10.19182/bft2022.352.a36925>.
260. Hounou-Dindin, G., Idohou, R., Donou Hounode, M. T., Adomou, A. C., Assogbadjo, A. E., & **Glèlè Kakaï, R.** (2022). Distribution and structural characterization of *Balanites aegyptiaca* (L.) Delile and *Ricinodendron heudelotii* (Bail.) Pierre among phytodistricts and land use types in Benin (West Africa). *Tropical Ecology*, 1-19. <https://doi.org/10.1007/s42965-022-00244-y>
259. Gnansounou, S. C., Sagoe, A. A., Mattah, P. A. D., Salako, K. V., Aheto, D. W., & **Glèlè Kakaï, R.** (2022). The co-management approach has positive impacts on mangrove conservation: evidence from the mono transboundary biosphere reserve (Togo-Benin), West Africa. *Wetlands Ecology and Management*, 30: 1245–1259.
258. Gongnet, E. E., Agbangba, C. E., Affossogbe, S. A. T., & **Glèlè Kakaï, R.** (2022). Predicting spatial variation in soil nitrogen for sustainable agricultural management in Benin. *African Crop Science Journal*, 30(4), 539-545.

257. Sinsin, L. C. B., Salako, K. V., Tohoun, R. J., & **Glèlè Kakai, R.** (2022). Survival, Growth, and Productivity of Rhizophora racemosa Transplanted in Natural Ecosystems: Implications for Mangrove Restoration. *Wetlands*, 42(6), 1-15.
256. Damien, B. G., Sode, A. I., Bocossa, D., Elanga-Ndille, E., Aguemon, B., Corbel, V., **R. Glèlè Kakai & Remoué, F.** (2022). Bayesian spatial modelling of malaria burden in two contrasted eco-epidemiological facies in Benin (West Africa): call for localized interventions. *BMC Public Health*, 22(1), 1-15.
255. Honfo, S., Taboë, H., & **Glèlè Kakai, R.** (2022). Modeling COVID-19 dynamics in the sixteen West African countries. *Scientific African*, e01408.
254. Janssens I, Janssens de Bisthoven L., Rochette A. J., **Glèlè Kakai R.**, Akpona J. D. T., Dahdouh-Guebas F., Huge J. (2022). Conservation conflict following a management shift in Pendjari National Park (Benin). *Biological Conservation* 272, 109598.
253. Tovissodé C.F., **Glèlè Kakai R.** (2022). A generalized stochastic condensation mechanism for inducing underdispersion in count models. *Statistics*, DOI: 10.1080/02331888.2022.2084095.
252. Sabo P., Salako K. V., Stephen J., **Glèlè Kakai R.**, Ouédraogo A. (2022). Current knowledge and conservation perspectives of *Boswellia dalzielii* Hutch., an African frankincense tree. *Genet Resour Crop Evol*. <https://doi.org/10.1007/s10722-022-01408-4>.
251. Amoussou, B. E. N., Idohou, R., **Glèlè Kakai, R.**, Dauby, G., & Couvreur, T. L. P. (2022). Impact of end-of-century climate change on priority non-timber forest product species across tropical Africa. *African Journal of Ecology*. <https://doi.org/10.1111/aje.13034>
250. Chérif A. A., Sodé A. I., Houndonougbo J. S. H., Idohou R., Fandohan A. B., **Glèlè Kakai R.**, Assogbadjo A. E. (2022). Habitat suitability modeling for the conservation and cultivation of the multipurpose fruit tree, *Balanites aegyptiaca* L., in the Republic of Chad, Sahel. *Modeling Earth Systems and Environment*. <https://doi.org/10.1007/s40808-022-01416-4>.
249. Ahlonsou C., Sodjinou E., **Glèlè Kakai R.** (2022). Distance function approaches for efficiency analysis of organic production units: a critical review. *Journal of Applied Biosciences* 173: 17963 – 17976.
248. Mugumaarhamama, Y., Fandohan, A.B., Mushagalusa, A.C., Sode I. A., **Glèlè Kakai R.** (2022). Inhomogeneous Poisson point process for species distribution modelling: relative performance of methods accounting for sampling bias and imperfect detection. *Model. Earth Syst. Environ.* <https://doi.org/10.1007/s40808-022-01417-3>
247. G. Hounsou-Dindin, Rodrigue Idohou, M. T. Donou Hounsole, A. C. Adomou, A. E. Assogbadjo, **R. Glèlè Kakai** (2022). Distribution and structural characterization of *Balanites aegyptiaca* (L.) Delile and *Ricinodendron heudelotii* (Bail.) Pierre among phytodistricts and land use types in Benin (West Africa). *Tropical Ecology*. <https://doi.org/10.1007/s42965-022-00244-y>.
246. S. Ahouansou Montcho, S. C. Gnansounou, J. F. Chadare, K. V. Salako, Z. Sohou, P. Failler, **R. Glèlè Kakai** and A. E. Assogbadjo (2022). Socio-economic characteristics of the fishing fleets operating in Benin, West Africa. *International Journal of Fisheries and Aquaculture*. 14(1):1-14.
245. J. C. F. Donhouédé, K. V Salako K. Gandji, R. Idohou, R. Tohoun, A. Houkpèvi, N. Ribeiro , A. Ribeiro-Barros, **R. Glèlè Kakai**, A. E. Assogbadjo (2022). Food and medicinal uses of *Annona senegalensis* Pers.: a country-wide assessment of traditional theoretical knowledge and actual uses in Benin, West Africa. *Journal of Ethnobiology and Ethnomedicine* 18(1):10. <https://doi.org/10.1186/s13002-022-00510-2>.
244. S. C. Gnansounou, Raheem A., R. C. Gbedomon, K. V. Salako, G. A. Mensah, and **Romain Glèlè Kakai** (2022). Impact of Covid-19 on Coastal Fishing and Stakeholders' Response Strategies in Benin, West Africa. *Impact of Covid-19 on Coastal Fishing and*

- Stakeholders' Response Strategies in Benin, West Africa. *Journal of Coastal Research* 38(2). DOI: 10.2112/JCOASTRES-D-21-00048.1.
243. Hyacinthe G. Wouyou, Bruno E. Lokonon, Rodrigue Idohou, Alban Zossou-Akete, Achille E. Assogbadjo, **Romain Glèlè Kakaï** (2022). Predicting the potential impacts of climate change on the endangered *Caesalpinia bonduc* (L.) Roxb in Benin (West Africa). *Heliyon* 8(6):e09022. DOI: 10.1016/j.heliyon.2022.e09022.
242. G Hounou-Dindin, R Idohou, A D. M. Akakpo, N Adome, A C. Adomou, A E. Assogbadjo, **R Glèlè Kakaï** (2022). Assessment of wild oil plants diversity and prioritization for valorization in Benin (West Africa): a multivariate approach. *Trees, Forests and People*. <https://doi.org/10.1016/j.tfp.2022.100210>.
241. T M Akplo, F K Alladassi, MCC Zoundji, J Avakoudjo, P Hougnandan, DG Dagbenonbakin, S Aliou, M Benmansour, E Fulajtar, G L Amadji, H A Azontondé, A E Assogbadjo, **R Glèlè Kakaï** (2022). Impact of conservation tillage on runoff, soil loss and soil properties on acrisols and ferralsols in central Benin. *Canadian journal of soil sciences*. <https://doi.org/10.1139/CJSS-2021-0080>.
240. B E Lokonon, C D.S.J. Gbemavo, F E. Sodote, L Manda, **R Glèlè Kakaï**, Brice Sinsin (2022). Effect of provenance on population structure and regeneration of six multiple-use tree species along Ouémé catchment in Benin: Implications for conservation. *Trees, Forests and People*, 7, 100206. [Https://doi.org/10.1016/j.tfp.2022.100206](https://doi.org/10.1016/j.tfp.2022.100206).
239. F.J. Chadare, M. Affonfere, E. Sacla Aide, F.K. Fassinou, K.V. Salako, K. Pereko, B. Deme, P. Failler, **R. Glèlè Kakaï**, A.E. Assogbadjo (2022). Current state of nutrition in West Africa and projections to 2030. *Global Food Security* 32 (2022). 100602.
238. S C Gnansounou, K S Salako, A A Sagoe, P A D Mattah, D W Aheto, Romain Glèlè Kakaï (2022). Mangrove Ecosystem Services, Associated Threats and Implications for Wellbeing in the Mono Transboundary Biosphere Reserve (Togo-Benin), West-Africa. *Sustainability* 2022, 14, 2438. <https://doi.org/10.3390/su14042438>.
237. G. Hounou-Dindin, R. C. Gbedomon, K. V. Salako, A. C. Adomou, A. Assogbadjo, **R. Glèlè Kakaï** (2021). Use and socio-economic values of *Ricinodendron heudelotii* (Bail.) Pierre, a wild oil species in Benin. *International Journal of Biodiversity and Conservation*, 14(1), 14-25. DOI: 10.5897/IJBC2021.1526.

2021

236. G. Hounou-Dindin, R. Idohou, M. T. Donou Hounsoode, A. C. Adomou, A. E. Assogbadjo, Romain Glèlè Kakaï (2021). Effects of seed provenance, pre-treatment and mass on germinability and seedling growth of *Balanites aegyptiaca* (L.) Delile and *Ricinodendron heudelotii* (Bail.) Pierre in Benin (West Africa). *Heliyon*, 7(12), E08540. DOI: <https://doi.org/10.1016/j.heliyon.2021.e08540>.
235. B. E. J. Assogbadjo, A. Hounkpevi, Y. S. S. Barima, G. C. Akabassi, E. A. Padonou, Y. C. S., A. E. Assogbadjo, **R. Glèlè Kakaï** (2021). Diversité et état de conservation des espèces ligneuses alimentaires à la périphérie de la Forêt Classée de la Lama (Bénin). *Int. J. Biol. Chem. Sci.* 15(6): 2456-2474.
234. M. G. S. Zanco, Y. S. S. Barima, K. V. Salako, K. A. N. Koua, M. A. Kolawole, A. E. Assogbadjo, **R. Glèlè Kakaï** (2021). Mapping spatio-temporal changes in mangroves cover and projection in 2050 of their future state in Benin. *Bois et For ts des Tropiques*, 350 : 29-42. Doi : <https://doi.org/10.19182/bft2021.350.a36828>
233. J A Atanassou1, K V Salako, S Mensah, R J Tohoun, B A Djossa, **R Glèlè Kakaï**, A E Assogbadjo (2021). Spatial distribution patterns of *Afzelia africana* (Fabaceae – Detarioideae) in a tropical savanna of Benin: implications for management. *Plant Ecology and Evolution* 154(3): 362–375. <https://doi.org/10.5091/plecevo.2021.1713>.

232. R M. Aguégué, S A. Assogba, H A. A. Salami1, A D. Koda, N A. Agbodjato, O Amogou1, H Sina, K. V Salako, N R. Ahoyo Adjovi, G Dagbénontakin, **R Glèlè Kakaï**, A Adjanohoun, L Baba-Moussa (2021). Organic Fertilizer Based on *Rhizophagus intraradices*: Valorization in a Farming Environment for Maize in the South, Center and North of Benin. *Front. Sustain. Food Syst.* 5: 605610. doi: 10.3389/fsufs.2021.605610.
231. Tchandao Magamana E., **Glèlè Kakaï R.**, Qannary E. M. (2021). A general strategy for setting up supervised methods of multiblock data analysis. *Chemometrics and Intelligent Laboratory Systems*. 217(15). 104388. <https://doi.org/10.1016/j.chemolab.2021.104388>.
230. Odounharo R. G. O., Gnansounou S. C., Salako K. V., Idohou R., Mensah G. A., **Glèlè Kakaï R.**, Assogbadjo A. E. (2021). Medicinal use patterns of *Parkia biglobosa* (Jacq.) Benth. and *Vitellaria paradoxa* (Gaertn. F), two important traditional agroforestry species in Benin, West-Africa. *Advances in Traditional Medicine*. DOI: 10.1007/s13596-021-00583-6.
229. Sinsin Corine B. L., Salako K. V., Fandohan A. B., Zanvo M. G. S., Kouassi K. E., **Glèlè Kakaï R.** (2021). Pattern of seedling emergence and early growth in *Avicennia germinans* and *Rhizophora racemosa* along an experimental salinity gradient. *African Journal of ecology*. DOI: 10.1111/aje.12889.
228. Atanasso J. A., Mensah S., Salako KV, Tohoun R J., **Glèlè Kakaï R.**, Assogbadjo AE (2021). Factors affecting survival of seedling of *Afzelia africana*, a threatened tropical timber species in West Africa. *Tropical Ecology* DOI: 10.1007/s42965-021-00160-7.
227. Kouato O. G., Houndonougbo V. P., Orounladjji B. M., Chabi Adjobo M. A., **Glèlè Kakaï R.** (2021). Comparative analysis of quantitative phenotypic parameters of Djallonke and hybrid (Djallonke × Sahelian) goats in Benin. *Journal of Animal & Plant Sciences* 47(2): 8472-8483.
226. Lokonon B.E., Sodoté F E., Simbo D., **Glèlè Kakaï R.** (2021). Use of local knowledge for contributing to the conservation of *Caesalpinia bonduc* (L.) Roxb in southern Benin (West Africa). *Global Ecology and Conservation*, 27, e01551. DOI: 10.1016/j.gecco.2021.e01551.
225. Dayou, E. D., Zokpodo, K. L. B., Atidegla, C. S., Dahou, M. N., Ajav, E. A., Bamgboye, A. I., & **Glèlè Kakaï, R.** (2021). Analysis of the use of tractors in different poles of agricultural development in Bénin Republic. *Heliyon*, 7(2), e06145.
224. Dayou, E.D., Zokpodo, K.L.B., Dahou, N.M., Bamgboye, A.I., Ajav, E.A. & **Glèlè Kakaï, R.** (2021). Overview of the use of pre-harvest equipment and typology of tractor users in benin republic. *Annales des sciences agronomiques*, Vol 24-2: 109-119,
223. Sabo P., Ouédraogo A., Gbemavo D. S. J. C., Salako K. V., **Glèlè Kakaï R.** (2021). Land use impacts on *Boswellia dalzielii* Hutch., an African frankincense tree in Burkina Faso. *Bois et Forêts des Tropiques*, 349: 51- 63.
222. Wabi, M.A., Vanhove, W., Idohou, R., Hounkpèvi, H., **Glèlè Kakaï, R.** & Van Damme, P. (2021). Risques agro-météorologiques et production du riz pluvial (*Oryza* spp.) au Bénin (Afrique de l'Ouest). *Sciences de la vie, de la terre et agronomie*, 9(2).
221. Aguégué, M.R., Ahoyo Adjovi, N.R., Agbodjato, N.A., Noumavo, P.A., Assogba, S., Salami, H., Salako, V.K., Ramón, R., Baba-Moussa, F., Adjanohoun, A. and **Glele Kakaï, R.** (2021). Efficacy of Native Strains of Arbuscular Mycorrhizal Fungi on Maize Productivity on Ferrallitic Soil in Benin. *Agricultural Research*, pp.1-15.
220. Sinsin, C.B.L., Salako, K.V., Fandohan, A.B., Kouassi E.K., Sinsin B.A., **Glèlè Kakaï, R.** (2021). Potential climate change induced modifications in mangrove ecosystems: a case study in Benin, West Africa. *Environ Dev Sustain* (2021). <https://doi.org/10.1007/s10668-021-01639-y>
219. Amogou, O., P. Noumavo, A., A. Agbodjato, N., Sina, H., Dagbénontakin, G., Y. Adoko, M., K. Salako, V., **Glèlè Kakaï, R.**, Adjanohoun, A., and Baba-Moussa, L.

- (2021). Rhizobacterial inoculation in combination with mineral fertilizer improves maize growth and yield in poor ferruginous soil in center of Benin. *BioTechnologia*, 102(2),
218. Lokossou R.S., Akouèhou G.S., Akponikpè I.P.B., Davakan R., **Glèlè Kakaï R.**, Ganglo J. (2021). Integrated Soil Fertility Management to Address Food Security and Enhance Forest Ecosystems Sustainability in “Trois Rivières” Forest Reserves (Benin, West Africa). In: Ksibi M. et al. (eds) Recent Advances in Environmental Science from the Euro-Mediterranean and Surrounding Regions (2nd Edition). EMCEI 2019. *Environmental Science and Engineering*. Springer, Cham. https://doi.org/10.1007/978-3-030-51210-1_189.
217. Gnansounou, C.S., Toyi, M., Salako, K.V., Ahossou, D.O., Akpona T.J., Gbedomon, R.C., and **Glèlè Kakaï, R.** (2021). Local uses of mangrove and perceived impacts of their degradation in Grand-Popo Municipality, a hotspot of mangrove in Benin, West Africa.” *Trees, Forests and People*, 4: 100080. DOI: 10.1016/j.tfp.2021.100080.
216. Zanvo, M.S., Salako, K.V., Gnanglè, C., Mensah, S., Assogbadjo, A.E. and **Glèlè Kakaï, R.** (2021). Impacts of harvesting intensity on tree taxonomic diversity, structural diversity, population structure, and stability in a West African mangrove forest. *Wetlands Ecology and Management* 29: 433–450.
215. Tovissodé, C. F., Diop, A., & Glèlè Kakaï, R. (2021). Inference in skew generalized t-link models for clustered binary outcome via a parameter-expanded EM algorithm. *Plos one*, 16(4), e0249604.
214. Tovissodé C.F., Doumatè J.T., **Glèlè Kakaï R.** (2021). A Hybrid Modeling Technique of Epidemic Outbreaks with Application to COVID-19 Dynamics in West Africa. *Biology*, 10, 365. <https://doi.org/10.3390/biology10050365>.
213. Lokonon, B. E., Sodoté, F. E., Simbo, D., & **Glèlè Kakaï, R.** (2021). Use of local knowledge for contributing to the conservation of *Caesalpinia bonduc* (L.) Roxb in southern Benin (West Africa). *Global Ecology and Conservation*, e01551.
212. Gnanvi J., Salako V. K., Kotanmi B., **Glèlè Kakaï R.** (2021). On the reliability of predictions on Covid-19 dynamics: a systematic and critical review of modelling techniques. *Infectious disease modeling*, 6: 258-272.
211. Tovissodé, C.F., Honfo, S.H. and Doumatè, J.T., **Glèlè Kakaï, R.** (2021). On the Discretization of Continuous Probability Distributions Using a Probabilistic Rounding Mechanism. *Mathematics*, 555 (9). <https://doi.org/10.3390/math9050555>.
210. Dayou ED, Zokpodo KLB, Montcho M., **Glèlè Kakaï R.** (2021). Design, fabrication and assessment of direct seeder in Benin Republic. *AgricEngInt: CIGR Journal* 23(1): 138:137.
209. Dayou, E. D., Zokpodo, B. K. L., Dahou, N. M., Atidegla, C. S., Ajav, E. A., Bamgboye, I. A., & **Glèlè Kakaï, R.** (2021). Current status of agricultural cooperatives among the various users of agricultural machinery in Bénin Republic. *Bulletin de la Recherche Agronomique du Bénin (BRAB)*, 30(1).

2020

208. Lokonon B. E., Djibril-Moussa Freedath, Diouf Saliou, **Glèlè Kakaï R.** (2020). Empirical performance of estimation methods in Beta mixed models with application to ecological data. *Afrika Statistika*, 15(2): 2279 - 2293.
207. Honfo S., Taboe Beaugard H., **Glèlè Kakai R.** (2020). Modeling COVID-19 dynamics in the sixteen West African countries. MedRxiv. DOI: 10.1101/2020.09.04.20188532.
206. Tovissode F., Lokonon B., **Glèlè Kakaï R.** (2020). On the use of growth models to understand epidemic outbreaks with application to COVID-19 data. *PLoS One*, 15(10): e0240578

205. Taboe H. B., Salako K. V., Tison J., Ngonghala C.N, Glèlè Kakaï R. (2020). Predicting COVID-19 spread in the face of control measures in West-Africa. *Mathematical biosciences*, 328, 108431; DOI: 10.1016/j.mbs.2020.108431.
204. Lokonon B. E., Senou M., **Glèlè Kakaï R.** (2020). Effect of misspecification of random effects distribution on the performance of parameters estimation methods in binary logistic mixed models. *Afrika Statistika* 15(1): 2247-2262.
203. Lokonon B., **Glele Kakaï R.** (2020). Empirical assessment of the performance of four estimation methods in Generalized linear mixed models with binary outcomes. *International Journal of Mathematics and Statistics*, 21(2): 40-56.
202. Hounmenou, C. G., Gneyou, K. E., & **Glélé Kakaï, R.** (2020). An Extension of the Quadratic Error Function for Learning Imprecise Data in Multivariate Nonlinear Regression. *Journal of Probability and Statistics*. DOI.10.1155/2020/9187503.
201. Mensah S., Noulekoun F., Dimobe K., Atanasso J., Salako V. K., Assogbadjo A., **Glèle Kakaï R.** (2020). Revisiting biotic and abiotic drivers of seedling establishment, natural enemies and survival in a tropical tree species in a West Africa semi-arid biosphere reserve. *Journal of environmental management* 276, 111268.
200. Helmstetter, A. J., Amoussou, B. E., Bethune, K., Kandem, N. G., **Glèle Kakaï R.**, Sonké, B., & Couvreur, T. L.(2020). Phylogenomic approaches reveal how climate shapes patterns of genetic diversity in an African rainforest tree species. *Molecular Ecology*. DOI. 10.1111/mec.15572.
199. Adjonou K., Issa A-K B., Kossi N. S., Idohou R., Salako K. V., **Glèle Kakaï R.** and Kokou K. (2020). Land use/land cover patterns and challenges to sustainable management of the Mono transboundary biosphere reserve between Togo and Benin, West Africa. *Int. J. Biol. Chem. Sci.* 14(5): 1734-1751.
198. Dayou, E. D., Ajav, E. A., Zokpodo, K. B., Bamgboye, A. I., & **Glèle Kakaï G.** (2020). Factors Determining Continuous Tractor Use in Benin Republic. *Journal of Agricultural Extension*, 24(3) : 115-124.
197. Lokossou, R. S., Akponikpè, P. I., Akouéhou, G. S., Matilo, A. O., Prudencio, M., Glèle Kakaï R. G., & Ganglo, J. (2020). Trend analysis of growing season characteristics and agro-climatic risks in the “Trois Rivières” forest reserve agro-ecosystems in North Benin. *Theor Appl Climatol*. DOI: 10.1007/s00704-020-03179-3.
196. Mensah S., Egeru A., Assogbadjo A.E., **Glèle Kakaï R.** (2020). Vegetation structure, dominance patterns and height growth in an Afromontane Forest, Southern Africa. *Journal of Forestry Research* 31(2): 453-462.
195. Bodjrenou U.F.S., Amoussa Houkpatin W., Mitchodigni I., Salako V., **Glèle Kakaï R.**, Dadele Y., Ntandou Bouzitou G., Schneider L., Mutanen M., Savy M., Kennedy G., Hounhouigan J. D., Termote C. (2020). Comparing video and poster-based education for improving 6-17 months children feeding practices: a cluster randomized trial in rural Benin. *Progress in nutrition* 22(1): 330-342.
194. Hounponougbo J. S. H., Kassa B., Mensah S., Salako V. K., **Glèle Kakaï R.**, A. E. Assogbadjo A global systematic review on conservation and domestication of *Parkia biglobosa* (Jacq.) R. Br. ex G. Don, an indigenous fruit tree species in Sub-Saharan African traditional parklands: current knowledge and future directions. *Genet Resour Crop Evol* DOI: 10.1007/s10722-020-00892-w.
193. Hounponougbo, J. S. H., B. Kassa, V. K. Salako, R. Idohou, A. E. Assogbadjo, **R. Glèle Kakaï** (2020). Perceived variation of fruit traits, and preferences in African locust bean

- [*Parkia biglobosa* (Jacq.) Benth.] in Benin: implications for domestication. *Genetic Resources and Crop Evolution*: 67:1315–1329.
192. Mensah S., Salako K. V., Assogbadjo A. E., **Glèlè Kakaï R.**, Sinsin B., Seifert T. (2020). Functional trait diversity is a stronger predictor of multifunctionality than dominance: Evidence from an Afromontane forest in South Africa. *Ecological indicators*. DOI: 10.1016/j.ecolind.2020.106415.
191. Dayou E. D., Zokpodo B. K., Montcho M., Ajav E. A., Bamgboye I. A., **Glèlè Kakaï R.** (2020). Current agricultural and environmental policies in Benin Republic. *Sustainable Agriculture Research* 9(2): 87-100.

2019

190. [Tchandao Mangamana, E., Cariou, V., Vigneau, E., Glèlè Kakaï, R., & Qannari, E. M. \(2019\).](#) Unsupervised multiblock data analysis: A unified approach and extensions. *Chemometrics and Intelligent Laboratory Systems*, 103856.
189. [Lokonon B., Beh Mba R., Gbeha M., Glele Kakaï R. \(2019\).](#) Parameters estimations methods in Generalized linear mixed effects models (GLMM) applied in ecology: a critical review. *International Journal of Engineering and Future technology*, 16(3): 13-27.
188. [Honfo S. H., Glele Kakai R. \(2019\).](#) Empirical study of computational techniques used for parameters' estimation in multivariate linear. *Afrika statistika*, 14(3): 2061-2098.
187. [Atanasso, J. A., Mensah, S., Azihou, A. F., Djossa, B. A., Glèlè Kakaï, R., & Assogbadjo, A. E. \(2019\).](#) Heterospecific Tree Density and Environmental Factors Affect *Afzelia africana* Sm. Population Structure in the Pendjari Biosphere Reserve, West Africa: Implications for Management and Restoration. *Tropical Conservation Science*, 12, 1940082918822604.
186. [Thierry D. Houehanou, Kathleen Prinz, Frank Hellwig, Achille E. Assogbadjo, Jens Gebauer, Romain Glele Kakai, Brice Sinsin \(2019\).](#) Morphological trait variation and relationships of *Afzelia africana* Sm. caused by climatic conditions and anthropogenic disturbance in Benin (West Africa). *Genet Resour Crop Evol* 66(5): 1091–1105.
185. [Gnonlonfoun, I., Assogbadjo, A. E., Gnanglè, C. P., & Glèlè Kakaï, R. \(2019\).](#) New indicators of vulnerability and resilience of agroforestry systems to climate change in West Africa. *Agronomy for Sustainable Development*, 39(2), 23. DOI: 10.1007/s13593-019-0566-2.
184. [Salako, V.K., Kégbé, A.M., Chadaré, F.J., Kafoutchoni, K.M., Amagnidé, A., Gbedomon, R.C., Assogbadjo, A.E., Agbangla, C., Glèlè Kakaï, R. \(2019\).](#) Potential for domestication of *Borassus aethiopum* Mart., a wild multipurpose palm species in Sub-Saharan Africa. *Genetic Resources and Crop Evolution*. 66(5): 1129–1144.
183. [Gnonlonfoun, I., Kassa, B., Azihou, F., Mensah, S., Glèlè Kakaï, R., & Assogbadjo, A. E. \(2019\).](#) Perceived Effects of Elephants (*Loxodonta africana* Cuvier) Presence and Impacts on Ecosystem Services Supply in the Pendjari Biosphere Reserve, West Africa. *Tropical Conservation Science*, 12, 1940082919865979.
182. [Gandji, K., Tovissodé, F. C., Azihou, A. F., Akpona, J. D. T., Assogbadjo, A. E., & Glèlè Kakaï, R. \(2019\).](#) Morphological diversity of the agroforestry species *Moringa oleifera* Lam. as related to ecological conditions and farmers' management practices in Benin (West Africa). *South African Journal of Botany*. DOI: 10.1016/j.sajb.2019.10.004.
181. [Honfo, S. H., Houetohossou, A., Assogbadjo, A., & Glèlè Kakaï, R. \(2019\).](#) Effective use of statistical tools in agricultural sciences: a critical review of multivariate modelling methods. *Journal of Applied Biosciences*, 142: 14529-14539.

2018

180. **Lazaro, M., Gbeha, M. and R. Glèlè Kakaï (2018).** Influence of Missing Value Imputations on the Performance of Canonical Correspondence Analysis: Ecological Applications. *African Journal of Applied Statistics* 5(1): 323–337.
179. **Dayou, E. D., Zokpodo, K. L. B., & Glèlè Kakaï, R. (2018).** Assessment of the physical and mechanical properties of the soils in the different agroecological zones of Benin. *Agro-Science*, 16(3), 37-45.
178. **Salako, V. K., Vihotogbé, R., Houéhanou, T., Sodé, I. A., & Glèlè Kakaï, R. (2018).** Predicting the potential impact of climate change on the declining agroforestry species *Borassus aethiopum* Mart. in Benin: a mixture of geostatistical and SDM approach. *Agroforestry Systems*. DOI: 10.1007/s10457-018-0262-2.
177. **Moussa, A. A., Salako, V. K., Gbemavo, D. C., Zaman-Allah, M., Glèlè Kakaï, R., & Bakasso, Y. (2018).** Performances agro-morphologiques des variétés locales et améliorées de maïs au sud-ouest du Niger. *African Crop Science Journal*, 26(2), 157-173.
176. **Salako, K. V., Moreira, F., Gbedomon, R. C., Tovissodé, F., Assogbadjo, A. E., & Glèlè Kakaï, R. (2018).** Traditional knowledge and cultural importance of *Borassus aethiopum* Mart. in Benin: interacting effects of socio-demographic attributes and multi-scale abundance. *Journal of Ethnobi. and Ethnomedicine*. DOI:10.1186/s13002-018-0233-8.
175. **Hounkpevi, A., Kouassi, E. K., & Glèlè Kakai, R. (2018).** Effects of climatic variability and local environment patterns on the ecology and population structure of the multipurpose plant species, *Vitex doniana* Sweet (Lamiaceae) in Benin. *Tropical Ecology*, 59(1), 129-143.
174. **Lokonon, B. E., Mangamana, E. T., Gnonlonfoun, I., Akpona, T. J. D., Assogbadjo, A. E., Glèlè Kakaï, R., & Sinsin, B. (2018).** Knowledge, valuation and prioritization of 46 woody species for conservation in agroforestry systems along Ouémé catchment in Benin (West Africa). *Environment, Development and Sustainability*. DOI: 10.1007/s10668-018-0142-y
173. **Salako, V. K., Kénou, C., Dainou, K., Assogbadjo, A. E., & Glèlè Kakai, R. (2018).** Impacts of land use types on spatial patterns and neighbourhood distance of the agroforestry palm *Borassus aethiopum* Mart. in two climatic regions in Benin, West Africa. *Agroforestry Systems*. DOI :10.1007/s10457-018-0205-y
172. **Savi, M. K., R. Noumonvi, F. J. Chadaré, K. Daïnou, V. K. Salako, R. Idohou, A. E. Assogbadjo, and R. Glèlè Kakaï (2018).** Synergy between traditional knowledge of use and tree population structure for sustainability of *Cola nitida* (Vent.) Schott. & Endl in Benin (West Africa). *Environment, Development and Sustainability*. DOI :10.1007/s10668-018-0091-5.
171. **Sèwadé, C., Lokonon, B.E., Azihou, A.F., Akouèhou, G.S., Mensah, G.A., Glèlè Kakaï, R., & Houinato, M.R.B. (2018).** Use diversity and farmer's preference of 48 local multipurpose fodder trees: a comparative analysis of three sociolinguistic groups of Benin. *Annales des sciences agronomiques* 22(1): 33-52.
170. **Gandji, K., Chadare, F. J., Idohou, R., Salako, V. K., Assogbadjo, A. E., & Glèlè Kakai, R. (2018).** Status and utilisation of *Moringa oleifera* Lam: A review. *African Crop Science Journal*, 26(1) : 137-156.
169. **Mensah, S., Salako, V. K., Assogbadjo, A. E., & Glèlè Kakaï, R. (2018).** Differential Responses of Taxonomic, Structural, and Functional Diversity to Local-Scale Environmental Variation in Afromontane Forests in South Africa. *Tropical Conservation Science*. DOI : 10.1177/1940082918762372.
168. **Adehan, S. B., Adakal, H., Gbinwoua, D., Zoungrana, S., Toé, P., Ouedraogo, M. & Glèlè Kakaï R. (2018).** West African Cattle Farmers' Perception of Tick-Borne Diseases. *EcoHealth*. DOI: 10.1007/s10393-018-1323-8.

167. [Lokonon E. B., Glèlè Kakaï R. \(2018\)](#). Effects of overdispersion and sample size on the Performance of Poisson model and its Extensions in Frame of Generalized Linear Models (GLMs). *Int. J. Appl. Math. Stat.* 57(5): 40-53.
166. [Lokonon E. B. Beh Mba R., Gbeha M., Glèlè Kakaï R. \(2018\)](#). Parameters estimation methods in Generalized linear Mixed models applied in ecology: A critical review. *International Journal of Engineering and Future Technology* 16(3): 11-27.
165. [Banla T, Houehanou TD, Savi MK, Idohou R, Glèlè Kakaï R., Kokou K. \(2018\)](#). Population structure of *Pterocarpus erinaceus* Poir. across a protection gradient in Sudanian savannahs of Togo, West Africa. *Afr J Ecol.* doi.org/10.1111/aje.12556.
164. [Mensah, S., Egeru, A., Assogbadjo, A. E., & Glèlè Kakaï, R. \(2018\)](#). Vegetation structure, dominance patterns and height growth in an Afromontane forest, Southern Africa. *Journal of Forestry Research*, doi.org/10.1007/s11676-018-0801-8.
163. [Amagnide A., Gbeha M., Glèlè Kakaï R. \(2018\)](#). Fitting an optimal variance-covariance structure for longitudinal data under Linear Mixed-Effects Models framework: simulation-based analysis. *African Journal of Applied Statistics*, 5(2): 489:502.

2017

162. [Atanasso, J. A., Chadare, F. J., Padonou, E. A., Ahouansinkpo, E., Koura, K., Houehanou, T., Glèlè Kakaï R., Sinsin, B. \(2017\)](#). Habitats and utilizations of *Lippia multiflora* moldenke: Local perception of four ethnic groups from Benin (West Africa). *Agronomie Africaine*, 29(2): 111-120.
161. [Savi, M. K., Dossou-Yovo, E. R., & Glèlè Kakaï R. \(2017\)](#). Monte Carlo Simulations for Assessing the Performance of Permutation of Residuals Methods in One-way ANOVA. *Turkiye Klinikleri Journal of Biostatistics*, 9(3): 188-196.
160. [Gbedomon, R. C., Salako, V. K., Adomou, A. C., Glèlè Kakaï, R. & Assogbadjo, A. E. \(2017\)](#). Plants in traditional home gardens: richness, composition, conservation and implications for native biodiversity in Benin. *Biodiversity and Conservation*, 26(14): 3307–3327.
159. [Goussanou, C. A., Tente, B. A., Akouehou, G., Salako, V. K., Glele Kakaï, R., & Sinsin, B. A. \(2017\)](#). Structural and spatial patterns of Isoberlinia species in a disturbed community forest (Benin, West Africa). *Kastamonu Üniversitesi Orman Fakültesi Dergisi*, 17(2), 225-237.
158. [Dayou, E. D., Zokpodo, K. L. B., Glèlè Kakaï, R., & Ganglo, C. J. \(2017\)](#). Impacts of the conventional tillage tools and reduced tillage on the soil fertility preservation: critical review. *Journal of Applied Biosciences*, 117:11684-11695.
157. De souza, J. F., Gbemavo, D. S. J. C., Gnangle, P. C., Azontonde, A., Chabi adjobo, M. A., Behingan, M. B., and [Glele Kakaï, R. \(2017\)](#). [Effet du pourghère \(*Jatropha curcas* L.\) Sur la performance agronomique du maïs \(*Zea mays* L.\) et du manioc \(*Manihot esculenta* Crantz\) et sur la fertilité du sol au Sud-Bénin](#). *Annales des sciences agronomiques* 21(2):223-245.
156. [Gbedomon, R.C., Salako, V.K., Fandohan, A.B., Idohou, A.F.R., Glèlè Kakaï, R., Assogbadjo, A.E., 2017](#). Functional diversity of home gardens and their agrobiodiversity conservation benefits in Benin, West Africa. *Journal of ethnobiology and ethnomedicine*. DOI: 10.1186/s13002-017-0192-5.
155. [Sèwadé, C., Azihou, A. F., Fandohan, A. B., Glèlè Kakaï, R., Mensah, G. A., & Houinato, M. R. B. \(2017\)](#). Leaf biomass modeling, carrying capacity and species-specific performance in aerial fodder production of three priority browse species *Afzelia africana*, *Pterocarpus erinaceus* and *Daniellia oliveri* in Benin. *Livestock Research for Rural Development*, 29(10), N°192.

154. Sèwadé, C., Lokonon, B.E., Azihou, A.F., Akouèhou, G.S., Mensah, G.A., **Glèlè Kakaï, R.**, & Houinato, M.R.B. (2017). [Use diversity and farmer's preference of 48 local multipurpose fodder trees: a comparative analysis of three sociolinguistic groups of Benin](#). *Annales des sciences agronomiques* 22(1): 33-52.
153. [Salako, V.K., Houéhanou, T.T., Yessoufou, K., Assogbadjo, A.E., Akoègninou, A. & Glèlè Kakaï R.](#) (2017). Patterns of elephant utilization of *Borassus aethiopum* Mart. and its stand structure in the Pendjari National Park, Benin, West Africa, *Tropical Ecology* 58(2): 1–13.
152. [Inoussa, M. M., Padonou, E. A., Lykke, A. M., Glèlè Kakaï, R., Bakasso, Y., Mahamane, A., & Saadou, M.](#) 2017. Contrasting population structures of two keystone woodland species of W National Park, Niger. *South African Journal of Botany*, 112: 95-101.
151. [Lokonon, B. E., Mangamana, E. T., Glèlè Kakaï, R., & Sinsin, B.](#) 2017. Assessing local conservation priorities of useful woody species within agroforestry systems along Ouémé catchment in Benin (West Africa). *Ethnobiology and Conservation*, 93(3): 1057–1071.
150. [Savi, M. K., Mangamana, E. T., Deguenon, J. M., Hounmenou, C., Glèlè Kakaï R.](#) 2017. Determination of Lethal Concentrations Using an R Software Function Integrating the Abbott Correction. *Journal of Agricultural Science and Technology A* 7:25-30.
149. [Houndonougbo, J. S., Salako, V. K., Idohou, R., Azihou, F. A., Assogbadjo, A. E., & Glèlè Kakaï, R.](#) 2017. Local perceptions of interactions between elephants and *Borassus aethiopum* Mart. (Arecaceae) in the Pendjari National Park in Benin. *Bois et Forêts des tropiques*, 331(1): 33-43.
148. Vihotogbé, R., Watson, C., **Glèlè Kakaï, R.**, Wichern, F., Sinsin, B. and Gebauer, J. (2017). Effects of salinity on seedling emergence and early seedling growth of *Irvingia gabonensis* (Irvingiaceae). *Seed Sci. & Technol.*, 45(2):1-14.
147. [Mensah S., Veldtman R., Assogbadjo A. E., Ham C., Glèlè Kakaï, R. & Seifert T.](#) 2017. Ecosystem service importance and use vary with socio-environmental factors: A study from household-surveys in local communities of South Africa. *Ecosystem Services*, 23: 1-8. DOI: 10.1016/j.ecoser.2016.10.018.
146. [Asamoah-Boaheng M., Adebanji A., & Glèlè Kakaï, R.](#) 2017. Small population size and large dimension performance of some equal mean discrimination functions. *International Journal of Mathematics and Statistics*, 18(1): 77-86.
145. [Paraïso A., Paraïso G., Salako V. K., Abiola W., Kelomey A., Glèlè Kakaï, R., Edorh P. A., Baba-Moussa L., Sanni A. & Glitho A. I.](#) 2017. Compliance of the Morphometric Characteristics of Bees in Benin with Those of *Apis mellifera* Adansonii. *Journal of Entomology* 14: 24-32.
144. [Assogbadjo A. E., Mensah S. & Glèlè Kakaï R.](#) (2017). The relative importance of climatic gradient versus human disturbance in determining population structure of *Afzelia africana* in West Africa. *Southern Forests*. DOI: 10.2989/20702620.2016.1255406.
143. [Gandji K., Salako K.V., Assogbadjo A. E., Orekan V. OA, Glèlè Kakaï R., Sinsin B. A.](#) 2017. Evaluation of the sustainability of participatory management of forest plantations: The case study of Wari-Marø Forest Reserve, Benin. *Southern Forests*. DOI: 10.2989/20702620.2016.1255409.

2016

142. [Gbedomon R. C., Assogbadjo A.E., Salako V.K., Fandohan A.B., and Glèlè Kakaï R.](#) 2016. Exploring the spatial configurations of home gardens in Benin. *Scientia Horticulturae* 213:13–23. DOI:10.1016/j.scienta.2016.10.020

141. [Mensah S., Houehanou T., D. Assogbadjo A., Glèlè Kakaï R. 2016.](#) Latitudinal variation in the woody species diversity of *Afzelia africana* Sm. habitats in West Africa. *Tropical ecology* 57(4):1-10.
140. [Glèlè Kakaï R. 2016.](#) Effectiveness of inventory plot patterns and spatial distribution of trees and recruits in West African forest estimates: Recent findings and perspectives. *RUFORUM Working Document Series* 14(1): 497-506.
139. [Mensah S., Veldtman R., Assogbadjo A., Glèlè Kakaï R., Seifert T. 2016.](#) Tree species diversity promotes aboveground carbon storage through functional diversity and functional dominance. *Ecology and Evolution*. DOI: 10.1002/ece3.2525.
138. [Agbahoungba S., Assogbadjo A., Chadare F. J., Idohou R., Salako S. K., Agoyi E.E., Glèlè Kakaï R. 2016.](#) Ecological diversity and conservation of wild edible fruit tree species in the lama forest reserve in Benin. *Bois et forêts des tropiques* 329(3): 53-65.
137. [Glèlè Kakaï R. 2016.](#) [Strengthening capacity building in data analysis in West African Universities and research institutions: A three-Year experience of the Master programme in Biostatistics at the University of Abomey-Calavi, Benin.](#) *African Journal of Rural Development*, 1(3):253–259.
136. [Sinasson K.S.G., Shackleton C.M., Glèlè Kakaï R., and Sinsin B. 2016.](#) Forest degradation and invasive species synergistically impact *Mimusops andongensis* (Sapotaceae) in Lama Forest Reserve, Benin. *Biotropica* 49(2): 160-169.
135. [Idohou R., Peterson A.T., Assogbadjo A.E., Vihotogbe R.L., Padonou E. and Glèlè Kakaï R. 2016.](#) Identification of potential areas for wild palm cultivation in the Republic of Benin through remote sensing and ecological niche modelling. *Genetic Resource Crops Evolution*. DOI 10.1007/s10722-016-0443-7.
134. Gbedomon R.C., Salako VK., Chadare F.J., **Glèlè Kakaï R.** and Assogbadjo A.E. 2016. [Gendered motivation for home gardening and maintenance of Agrobiodiversity: a case study in Benin, West Africa.](#) *Annales des sciences agronomiques* 20 (2): 93-106.
133. Donou M.T., Houéhanou T., Assogbadjo A.E., **Glèlè Kakaï R.** and Agbangla C. 2016. [Use of Raffias' species \(*Raphia spp.*\) and its impact on socioeconomic characteristics of harvesters in Benin](#) (West Africa). *International Journal of Biomolecules and Biomedicine*, 5(1): 1-19.
132. [Akpona T.J., Idohou R Assogbadjo A.E., Salako VK. and Glèlè Kakaï R. 2016.](#) History, Impact of Soil Types on Stand Structure and Growth of the Dry Zone Mahogany (*Khaya senegalensis* (Desr.) A. Juss.) in Plantation in Benin (West Africa). *Environment and Ecology Research* 4(4):193-199.
131. [Mensah S., Glèlè Kakaï R., Seifert T. 2016.](#) Patterns of biomass allocation between foliage and woody structure: the effects of tree size and specific functional traits. *Annals of Forest Research*. DOI: 10.15287/afr.2016.458.
130. [Mensah S., Veldtman R., Du Toit B., Glèlè Kakaï R., Seifert T. 2016.](#) Aboveground Biomass and Carbon in a South African Mistbelt Forest and the Relationships with Tree Species Diversity and Forest Structures. *Forests*. DOI: 10.3390/f7040079.
129. [Pomalegni S.C.B., Gbemavo D.S.J.C., Kpade C.P., Babatoundé S., Chrysostome C.A.A.M., Koudandé O.D., Kenis M., Glèlè Kakaï R., Mensah G.A. 2016.](#) Perceptions et facteurs déterminant l'utilisation des asticots dans l'alimentation des poulets locaux (*Gallus gallus*) au Bénin. *Journal of Applied Biosciences* 98:930 – 934.
128. [Atidéglia SC., Huat J., Agbossou E.K., Saint-Macary H., Glèlè Kakai R. 2016.](#) Vegetable Contamination by the Fecal Bacteria of Poultry Manure: Case Study of Gardening Sites in Southern Benin. *International Journal of Food Science*. DOI: 10.1155/2016/4767453.
127. [Idohou R., Azihou F., Adomou A., Assogbadjo A.E., Glèlè Kakaï R. 2016.](#) Influence of the landscape context on stand structure and spatial patterns of the doum palm (*Hyphaene*

- thebaica*) in the Republic of Benin (West Africa). *Agroforest Syst.* DOI: 10.1007/s10457-016-9920-4.
126. [Camara M., Gbemavo C.D.S.J., Salako V.K., Kouame F.N., Sambou B., Glèlè Kakaï R. 2016.](#) Woody plant species diversity in the last wild habitat of the Derby Eland (*Taurotragus derbianus* Derbianus Gray, 1847) in Niokolo Koba National Park, Senegal, West Africa. *International Journal of Biodiversity and Conservation* 8(2): 32-40.
125. [Gbedomon C.R., Floquet A., Mongbo R., Salako K.V., Fandohan A.B., Assogbadjo A.E., Glèlè Kakaï R. 2016.](#) Socio-economic and ecological outcomes of community-based forest management: A case study from Tobé-Kpobidon forest in Benin, Western Africa. *Forest Policy and Economics* 64:46–55.
123. [Glèlè Kakaï R., Salako V.K., Lykke A.M. 2016.](#) Techniques d'échantillonnage en étude de végétation. *Annales des Sciences Agronomiques* 20 – Spécial Projet Undesert-UE: 1-13.
122. [Glèlè Kakaï R., Bonou W., Lykke A.M. 2016.](#) Approche méthodologique de construction et d'interprétation des structures en diamètre des arbres. *Annales des Sciences Agronomiques* 20 – Spécial Projet Undesert-UE:99-112.
121. [Glèlè Kakaï R., Lykke A.M. 2016.](#) Aperçu sur les méthodes statistiques univariées utilisées dans les études de végétation. *Annales des Sciences Agronomiques* 20 – Spécial Projet Undesert-UE : 113-138.
120. [Glèlè Kakaï R., Salako V.K., Padonou E.A., Lykke A.M. 2016.](#) Méthodes statistiques multivariées Utilisées En Écologie. *Annales des Sciences Agronomiques* 20 – Spécial Projet Undesert-UE : 139-157.
119. Thiombiano A., [Glèlè Kakaï R., Bayen P., Boussim J.I. Mahamane A. 2016.](#) Méthodes et dispositifs d'inventaires forestiers en Afrique de L'ouest : État des deux et propositions pour une harmonisation. 2016. *Annales des Sciences Agronomiques* 20 – Spécial Projet Undesert-UE: 15-31.
118. [Pomalegni S.C.B., Babatounde S., Glele Kakaï R., Mensah G.A. 2016.](#) Synthèse bibliographique sur l'alimentation, la consommation et la digestibilité alimentaire chez le grand aulacode (*Thryonomys swinderianus*). *Annales des sciences agronomiques* 19(2): 401-417.
117. [Donou Hounso M.T., Assogbadjo Achille E. Houehanou T., Glele Kakaï R. Agbangla C. 2016.](#) Facteurs socio-économiques influençant l'usage des raphias au Bénin (afrique de l'ouest). *Revue Cames*, 4(1):6-21.
116. [Hounkpevi A., Tosso F., Gbemavo D.S.C., Kouassi E.K., Kone D., Glèlè Kakaï R. 2016.](#) Climate and potential habitat suitability for cultivation and in situ conservation of the black plum (*Vitex doniana* Sweet) in Benin, West Africa. *International Journal of Agronomy and Agricultural Reseaerch* 8(4): 67-80.
115. [Hounkpevi A., Azihou A.F. Kouassi E.D.K., Porembski S., Glele Kakaï R. 2016.](#) Climate-induced morphological variation of black plum (*Vitex doniana* Sw.) in Benin, West Africa. *Genet Resour Crop Evol.* DOI 10.1007/s10722-016-0409-9.
114. [Idohou R. Assogbadjo A.E., Glèlè Kakaï R., Peterson A. T. 2016.](#) Spatio-temporal dynamic of suitable areas for species conservation in West Africa: eight economically important wild palms under present and future climates. *Agroforest Systems*. DOI:10.1007/s10457-016-9955-6.

2015

113. [Gbeto Dansou G.J., Amadji L.G., Glèlè Kakaï L.R., Vissoh V.P. 2015.](#) Perception locale du phénomène de la toxicité ferreuse et stratégies de lutte au sud-bénin (Afrique de l'ouest). *Revue le cames Science de la vie, de la terre et agronomie*, 3(1): 1-15.

112. [Salako V.K., Assogbadjo A.E., Adomou C., Agbangla C., Glèlè Kakai R. 2015.](#) Latitudinal distribution, co-occurring tree species and structural diversity of the threatened palm *Borassus aethiopum* (Arecaceae) in Benin, West-Africa. *Plant Ecology and Evolution*, 148(3): 335–349.
111. [Salako V.K., Azihou A.F., Assogbadjo A.E., Houéhanou T.T., Kassa B.D., Glèlè Kakai R. 2015.](#) Elephant-induced damage drives spatial isolation of the dioecious palm *Borassus aethiopum* (Arecaceae) in the Pendjari National Park, Benin. *African Journal of Ecology*. 54 (1): 9-19.
110. [Sinsin F., Glèlè Kakai R., Orthmann B., Sinsin B. 2015.](#) Tree-ring: a suitable implement for spatial and temporal fire distribution analysis in savanna woodland and dry forest. *Journal of Forestry Research* 26(2):435-446.
109. [Gnonlonfoun I., Glèlè Kakai R., Salako V.K., Assogbadjo A.E., Ouédraogo A. 2015.](#) Structural analysis of regeneration in tropical dense forest: combined effect of plot and spatial distribution patterns. *Acta Botanica Gallica*. 162(1):79-87.
108. [Tovissodé F.C., Honfo H.S., Salako V.K., Gnanglè C.P., Mensah S., Glèlè Kakai R. 2015.](#) Population structure of two bamboo species in relation to topographical units in the Republic of Benin (West Africa): implications for sustainable management. *Acta Botanica Gallica: Botany Letters*, 162(1):89-96.
107. [Honfo H., Tovissodé F. C., Gnanglè C., Mensah S., Salako V.K., Assogbadjo A.E., Agbangla C., Glèlè Kakai R. 2015.](#) Traditional Knowledge and Use Value of Bamboo in South-eastern Benin: Implications for sustainable management. *Ethnobotany Research and Applications* 14:139-153.
106. [Padonou E.A., Bachmann Y., Glèlè Kakai R., Lykke A.M., Sinsin B 2015.](#) Spatial distribution of bowal and differences in physicochemical characteristics between bowal and woodland soils in Benin, West Africa. *CATENA*, 124(0):45-52.
105. [Mensah S., Houéhanou T.D., Sogbohossou E. A., Assogbadjo A.E., Glèlè Kakai R. 2015.](#) Effect of human disturbance and climatic variability on the population structure of Afzelia africana Sm. ex pers. (Fabaceae–Caesalpinoideae) at country broad-scale (Bénin, West Africa). *South African Journal of Botany*, 95(0):165-173.
104. [Gbemavo C.J., Gandji K., Gnangle C.P., Assogbadjo A.E., Glèlè Kakai R. 2015.](#) Variabilité morphologiques et conservation des morphotypes de *Jatropha curcas* Linn. (Euphorbiaceae) au Bénin. *Journal of Agriculture and Environment for International Development-JAEID*, 109(1):55-69.
103. [Idohou F.A.R., Assogbadjo A.E., Houéhanou T.D., Glèlè Kakai R.L., Agbangla C. 2015.](#) Variation in *Hyphaene thebaica* Mart. fruit: physical characteristics and factors affecting seed germination and seedling growth in Benin (West Africa). *Journal of Horticultural Science and Biotechnology*, 90(3):291–296.
102. [Gbedomon R.C., Fandohan A.B., Salako V.K., Idohou A.F.R., Glèlè Kakai R., Assogbadjo A.E. 2015.](#) Factors affecting home gardens ownership, diversity and structure: a case study from Benin. *Journal of Ethnobiology and Ethnomedicine* 11(56): DOI: 10.1186/s13002-015-0041-3.
101. [Mensah S., Glèlè Kakai R., Salako K.V., Ago E.E., Assogbadjo A.E. 2015.](#) Accounting for tree spatial distribution in a comparison of plot sizes and shapes in dense forest and woodland in Benin (West Africa). *African journal of ecology*. 79(5). DOI: 10.1111/aje.12269.
100. [Idohou R., Arino H.A., Assogbadjo A.E., Glèlè Kakai R., Sinsin B. 2015.](#) Knowledge of diversity of wild palms (Arecaceae) in the republic of Benin: finding gaps in the national inventory by combining field and digital accessible knowledge. *Biodiversity Informatics* 10(1):40-55.

99. [Akpona T. J. D. Akpona H. A., Djossa B. A. Savi M. K. Dainou K., Ayihouenou B. Glèlè Kakaï R. 2015.](#) Impact of land use practices on traits and production of Shea butter tree (*Vitellaria paradoxa* C.F. Gaertn.) in Pendjari Biosphere Reserve in Benin. *Agroforestry systems*, DOI 10.1007/s10457-015-9847-1.
98. [Agoyi E. E. Padonou E. A., Amoussa W., Assogbadjo A.E., Glèlè Kakaï R., Sinsin B. 2015.](#) Morphological variation, cultivation techniques and management practices of *Moringa oleifera* in Southern Benin (West Africa). *International Journal of Agronomy and Agricultural research* 6(3):97-105.
97. [Padonou EA., Assogbadjo AE., Glèlè Kakaï R., Lykke AM., Sinsin B., Axelsen J. 2015.](#) Investigations of on farm seedling productivity of the rare and declining *Caesalpinia bonduc* in Benin (West Africa) by aid of simulation modelling. *International Journal of Agronomy and Agricultural research* 6(3):116-131.
96. [Padonou E.A., Ahossou O.D., Okou F.O.Y., Assogbadjo A.E., Glèlè Kakaï R., Lykke A. M., Sinsin B. 2015.](#) Impact of climate on seed morphology and plant growth *Caesalpinia bonduc* L. in West Africa. *International Journal of Agronomy and Agricultural research* 6(3):86-96.
95. [Donou Hounsoe M., Glèlè Kakaï R., Azihou F., Ouedraogo A. 2015.](#) Efficiency of inventory plots patterns for the estimation of woody vegetation recruits density in a tropical dense forest. *African journal of ecology* 53(0):355–361.

2014

94. [Azihou A.F., Glèlè Kakaï R., Sinsin B. 2014.](#) Importance of functional traits and regional species pool in predicting long-distance dispersal in savanna ecosystems. *Plant Ecology* 215(6):651-660.
93. [Vihotogbé R, Glèlè Kakaï R., Bongers F., Van Andel, B., Van Den Berg R.G., Sinsin B., Sosef M.S.M. 2014.](#) Impacts of the diversity of traditional uses and potential economic value on food tree species conservation status: case study of African bush mango trees (Irvingiaceae) in the Dahomey Gap (West Africa). *Plant Ecology and Evolution* 147(0):109-125.
92. [Odame O.E., Atinuke O.A., Glèlè Kakaï R. 2014.](#) ARIMA-Noise Model for A Segmented Intervention Analysis of Maternal Health Policy on Assisted Delivery. *International Journal of Applied Mathematics and Statistics* 52(1):62-71.
91. [Yévidé A., Ganglo J.C., Glèlè Kakaï R., De Cannière C., Fonton N.H. 2014.](#) Growth modeling of short rotation coppice teak (*Tectona grandis* L.f) stands in Republic of Benin. *International Journal of Advance Agricultural Research* 2(4):58-66.
90. [Gbemavo D.S.J.C., Gnangle P.C, Assogbadjo A.E., Glèlè Kakaï R. 2014.](#) Analyse Des Perceptions Locales Et Des Facteurs Déterminant L'utilisation Des Organes Et Des Produits du *Jatropha Curcas* Linn. (Euphorbiaceae) Au Bénin. *Agronomie Africaine* 26(1):69-79.
89. [Gbemavo D.S.J.C., Gnangle P.C, Azontonde A., Glèlè Kakaï R.L. 2014.](#) Modélisation du stock de biomasse et dynamique de séquestration minérale et du carbone de *Jatropha curcas* L. sous différents types de sol au Bénin. *Annales des Sciences Agronomiques* 18(1):1-20.
88. [Vitoule E.T., Houéhanou T., Kassa B., Assogbadjo A.E., Glèlè Kakaï R., Djego J., Sinsin B. 2014.](#) Endogenous knowledge and human disturbance impact on abundance of two underutilized wild edible tree species in southern Benin. *QScience Connect* 2014(0):15.
87. [Padonou E.A., Kassa B., Assogbadjo A.E., Fandohan B., Chakeredza S., Glèlè Kakaï R., Sinsin B. 2014.](#) Natural variation in fruit characteristics and seed germination of *Jatropha curcas* in Benin, West Africa. *Journal of Horticultural Science and Biotechnology* 89(1):69-73.

86. [Idohou R., Fandohan B., Salako V.K., Kassa B., Gbedomon R.C., Yédomonhan H., Glèlè Kakaï R.L., Assogbadjo A.E. 2014.](#) Biodiversity conservation in home gardens: traditional knowledge, use patterns and implications for management. *International Journal of Biodiversity Science and Management* 10(2):89-100.
85. [Salako V.K., Fandohan B., Kassa B., Assogbadjo A.E., Idohou F.A.R., Gbedomon R.C., Chakeredza S., Dullo M.E., Glèlè Kakaï R. 2014.](#) Home gardens: an assessment of their biodiversity and potential contribution to conservation of threatened species and crop wild relatives in Benin. *Genetic Resources and Crop Evolution* 61(0):313-330.

2013

83. [Azihou A.F., Glèlè Kakaï R., Sinsin B. 2013.](#) Do isolated gallery-forest trees facilitate recruitment of forest seedlings and saplings in savanna? *Acta Oecologica* 53(0):11-18.
82. [Azihou A.F., Glèlè Kakaï R., Bellefontaine R., Sinsin B. 2013.](#) Distribution of tree species along a gallery forest–savanna gradient: patterns, overlaps and ecological thresholds. *Journal of Tropical Ecology* 29(1):25-37.
81. [Houeto G., Glèlè Kakaï R., Salako K.V., Assogbadjo A., Fandohan B., Sinsin B., Palm R. 2013.](#) Effect of inventory plot patterns in the floristic analysis of tropical woodland and dense forest. *African Journal of Ecology* 52(0):257-264.
80. [Salako V.K., Glèlè Kakaï R., Assogbadjo A., Fandohan B., Houinato M., Palm R. 2013.](#) Efficiency of inventory plot patterns in quantitative analysis of vegetation: a case study of tropical woodland and dense forest in Benin. *Southern Forests* 75(3):137-143.
79. [Ouédraogo A., Glèlè Kakaï R., Adjima Thiombiano A. 2013.](#) Population structure of the widespread species, *Anogeissus leiocarpa* (DC.) Guill. & Perr. Across the climatic gradient in West Africa semi-arid area. *South African Journal of Botany* 88(0):286-295.
78. [Kindomihou M.V., Glèlè Kakaï R., Assogbadjo A.E., Holou R.A.Y., Sinsin B. 2013.](#) Environmentally induced variation in germination percentage and energy of naked caryopses of *Loxodera ledermannii* (Pilger) W.D. Clayton ex Launert in subhumid Benin (West Africa). *Advances in Environmental Biology* 7(2):320-329.
77. [Azonhe T., Glèlè Kakaï R., Atidéglia S., Agbossou K.E. 2013.](#) On the Patterns of the Occurrence of Diarrheas in the Southern Benin. *Journal of Environmental Protection* 4(0):353-360.
76. [Baah P., Adebanji A.R., Glèlè Kakaï R. 2013.](#) Optimal Ratio of Continuous to Categorical Variables for the Two Group Location Model. *International Journal of Applied Mathematics and Statistics* 42(12):18-26.
75. [Houéhanou T.D., Assogbadjo A.E., Glèlè Kakaï R., Kyndt T., Houinato M., Sinsin B. 2013.](#) How far a protected area contributes to conserve habitat species composition and population structure of endangered African tree species (Benin, West Africa). *Ecological Complexity* 13(0):60-68.
74. [Salako V.K., Tinuke A., Glèlè Kakaï R. 2013.](#) On the empirical performance of non-metric multidimensional scaling in vegetation studies. *International Journal of Applied Mathematics and Statistics* 36(6):54-67.
73. [Goussanou C.A., Assogbadjo A.E., Gouwakinnou G.N., Glèlè Kakaï R., Chakeredza S., Sinsin B. 2013.](#) Biomass, root structure and morphological characteristics of the medicinal *Sarcocapnos latifolius* (Sm) EA Bruce shrub across different ecologies in Benin. *QScience Connect* 12(0): DOI: 10.5339/connect.2013.12.
72. [Gnangle C.P., Gbemavo C., Aïhou K., Glèlè Kakaï R., Sokpon N. 2013.](#) Productivity of cotton and sorghum in an agroforestry system of shea trees (*Vitellaria paradoxa*, Gaertn) in northern Benin. *Natural Science* 5(2):207-213.

71. Idohou R., Assogbadjo A.E., Fandohan B., Gouwakinnou G.N., Glèlè Kakaï R.L., Sinsin B., Maxted N. 2013. National inventory and prioritization of crop wild relatives: case study for Benin. *Genetic Resources and Crop Evolution* 60(0):1337-1352.
70. Padonou E.A., Kassa B., Assogbadjo A.E., Chakeredza S., Babatoundé B., Glèlè Kakaï R. 2013. Differences in germination capacity and seedling growth between different seed morphotypes of Afzelia africana Sm. in Benin (West Africa). *Journal of Horticultural Science and Biotechnology* 88(6):679-684.
69. Lokonon B.E., Bonou W.N., Kassa B., Azihou A.F., Assogbadjo A., Babatoundé S., Glèlè Kakaï R. 2013. Structural and ethnobotanical characterization of velvet tamarind (*Dialium guineense* Willd), a multipurpose tree species. *Agronomie Africaine* 25(2):121-131.
68. Aholoukpe H., Vissoh V.P., Amadji G., Deleporte P., Dubos B., Nodichao L., Glèlè Kakaï R., Chotte J.L., Blavet D. 2013. Typologie des plantations villageoises de palmier à huile (*Elaeis guineensis* Jacq.) dans le département du Plateau au Bénin. *International Journal of Biological Chemical Sciences* 7(3):978-999.
67. Kassa B.D., Fandohan B., Azihou A.F., Assogbadjo A.E., Oduor A.M.O., Kidjo F.C., Babatoundé S., Liu J., Glèlè Kakaï R. 2013. Survey of Loxodonta africana (Elephantidae) caused bark injury on Adansonia digitata (Malvaceae) within Pendjari Biosphere Reserve, Benin. *African journal of ecology* 52(4):85-394. DOI: 10.1111/aje.12131.

2012

66. Houehanou T.D., Glèlè Kakaï R.L., Assogbadjo A.E., Kindomihou V., Houinato M., Wittig R.T., Sinsin B. 2012. Change in the woody floristic composition, diversity and structure from protected to unprotected savannahs in Pendjari Biosphere Reserve (Benin, West Africa). *African Journal of Ecology* 51(0):358-365.
65. Djodjouwin L., Glèlè Kakaï R., Sinsin B. 2012. Effets des sols et du taux de recouvrement sur la morphologie des espèces introduites dans les galeries forestières en Zone Soudano-Guinéenne au Bénin. *Agronomie Africaine* 24(2):101-115.
64. Djodjouwin L., Glèlè Kakaï R., Sinsin B. 2012. Croissance Morphologique De Cinq Essences Locales Introduites Dans Les Formations Forestieres Guinéennes Et Soudano-Guinéennes Au Benin. *Agronomie Africaine* 24(2):117-127.
63. Assogbadjo A.E., Glèlè Kakaï R., Vodouhê F.G., Djagoun C.A.M.S., Codjia J.T.C., Sinsin B. 2012. Biodiversity and socioeconomic factors supporting farmers' choice of wild edible trees in the agroforestry systems of Benin (West Africa). *Forest Policy and Economics* 14(0):41-49.
62. Houéhanou T., Glèlè Kakaï R., Assogbadjo A., Kindomihou V., Houinato M., Wittig R., Sinsin B. 2012. Change in the woody floristic composition, diversity and structure from protected to unprotected savannahs in Pendjari Biosphere Reserve (Benin, West Africa). *African Journal of Ecology* 51(0):358-365.
61. Assogbadjo A.E., Chadare F.J., Glèlè Kakaï R., Fandohan B., Baidu-Forson J.J. 2012. Variation in biochemical composition of baobab (*Adansonia digitata*) pulp, leaves and seeds in relation to soil types and tree provenances. *Agriculture, Ecosystems & Environment* 157(0):94-99.
60. Assogbadjo A.E., Fandohan B., Glèlè Kakaï R., Kyndt T., Hardy O.J., Gheysen G., Sinsin B. 2012. Genetic evidence of the contribution of ethnic migrations to the propagation and persistence of the rare and declining scrambling shrub *Caesalpinia bonduc* L.. *Human Ecology* 40(0):117-128.
59. Gnanglè P.C., Yabi A.J., Yégbémey R.N., Glèlè Kakaï R.L., Sokpon N. 2012. Rentabilité économique des systèmes de production des parcs à Karité dans le contexte de l'adaptation au changement climatique du Nord-Bénin. *African Crop Science Journal* 20(2):589-602.

58. Dadio C., Assogbadjo A.E., Fandohan B., Glèlè Kakaï R., Sinsin B., Van Damme P. 2012. Uses and management of black plum (*Vitex doniana* Sweet) in Southern Benin. *Fruits* 67(4):239-248.
57. Gnangle P.C., Egah J., Baco M.N., Gbemavo C.D.S.J., Glèlè Kakaï R., Sokpon N. 2012. Perceptions locales du changement climatique et mesures d'adaptation dans la gestion des parcs à karité au Nord-Bénin. . *International Journal of Biological and Chemical Sciences* 6(1):136-149.
56. Houéto G., Fandohan B., Ouédraogo A., Ago E., Salako V.K., Assogbadjo A.E., Glèlè Kakaï R., Sinsin B. 2012. Floristic and dendrometric analysis of woodlands in the Sudano-Guinean zone: a case study of Belléfoungou forest reserve in Benin. *Acta Botanica Gallica* 159(4):387-394.
55. Adjanohoun A., Noumavo P.A., Sikirou R., Allagbe M., Gotoechan-Hodonou H., Dossa K., Yehouenou B., Glèlè Kakaï R., Baba-Moussa L. 2012. Effets des rhizobactéries PGPR sur le rendement et les teneurs en macroéléments du maïs sur sol ferrallitique non dégradé au Sud-Bénin. *International Journal of Biological and Chemical Sciences* 6(1):279-288.

2011

54. Glèlè Kakaï R., Akpona T.J.D., Assogbadjo A.E., Gaoué O.G., Chakeredza S., Gnangle P.C., Mensah G.A., Sinsin B. 2011. Ecological adaptation of the shea butter tree (*Vitellaria paradoxa* CF Gaertn.) along climatic gradient in Bénin, West Africa. *African Journal of Ecology* 49(0):440-449.
53. Assogbadjo A.E., Glèlè Kakaï R., Adjallala F.H., Azihou A.F., Vodouhè G.F., Kyndt T., Codjia J.T.C. 2011. Ethnic differences in use value and use patterns of the threatened multipurpose scrambling shrub (*Caesalpinia bonduc* L.) in Benin. *Journal of Medicinal Plants Research* 5(9):1549-1557.
52. Babatoundé S., Glèlè Kakaï R., Houinato M., Alkoiret G.A., Mensah G.A. 2011. Intake and Digestibility of Native and Exotic Grasses Fed Ad libitum to Djallonke Sheep in South Benin. *Journal of Agriculture, Science and Technology* 5(4):513-524.
51. Djodjouwin L., Glèlè Kakaï R., Sinsin B. 2011. Influence des voisins sur le développement des espèces locales introduites dans les formations naturelles soudaniennes et guinéennes du Bénin. *International Journal of Biological and Chemical Sciences* 5(4):1403-1413.
50. Djodjouwin L., Glèlè Kakaï R., Sinsin B. 2011. Caractérisation structurale des formations naturelles enrichies en essences forestières locales: cas des vertisols de la Lama (Benin). *International Journal of Biological and Chemical Sciences* 5(4):1628-1638.
49. Gnanglè P.C., Glèlè Kakaï R., Assogbadjo A.E., Vodounon S., Yabi J., Sokpon N 2011. Tendances climatiques passées, modélisation, perceptions et adaptations locales au Bénin. *Climatologie* 8(0):26-40.
48. Adjanohoun A., Baba-Moussa L., Glèlè Kakaï R., Allagbe M., Yehouenou B., Gotoechan-Hodonou H., Sikirou R., Sessou P., Sohounloue C.K.D. 2011. Caractérisation des rhizobactéries potentiellement promotrices de la croissance végétative du maïs dans différents agrosystèmes du Sud-Bénin. *International Journal of Biological and Chemical Sciences* 5(2):433-444.
47. Djogbénou C. P., Arouna O., Glèlè Kakaï R., Sinsin B. 2011. Analyse des perceptions locales des aménagements forestiers participatifs au Bénin. *Vertigo – la revue électronique en sciences de l'environnement* 11(1): DOI: 10.4000/vertigo.10893.
46. Fandohan B., Assogbadjo A.E., Glèlè Kakaï R., Kyndt T., Sinsin B. 2011. Quantitative morphological descriptors confirm traditionally classified morphotypes of *Tamarindus indica* L. fruits. *Genetic Resources and Crop Evolution* 58(0):299-309.

45. Houehanou T.D., Assogbadjo A. E., Glèlè Kakaï R., Houinato M., Sinsin B. 2011. Valuation of local preferred uses and traditional ecological knowledge in relation to three multipurpose tree species in Benin (West Africa). *Forest Policy and Economics* 13(0):554-562.
44. Yévidé A.S.I., Ganglo J.C., Glèlè Kakaï R., De Cannière C. 2011. Effet de la densité, de l'âge et des groupements végétaux de sous-bois sur la vigueur des plantations privées de teck (*Tectona grandis* Lf) gérées en régime de taillis au sud-Bénin (Afrique de l'Ouest). *International Journal of Biological and Chemical Sciences* 5(3):1215-1231.
43. Atidegla S.C., Agbossou E. K., Huat J., Glèlè Kakaï R. 2011. Contamination métallique des légumes des périmètres maraîchers urbains et péri urbains: Cas de la commune de Grand-Popo au Bénin. *International Journal of Biological and Chemical Sciences* 5(6):2351-2361.
42. Natta A.K., Yedomonhan H., Zoumarou-Wallis N, Houndehin J., Ewèdjè E.B.K., Glèlè Kakaï R. 2011. Typologie et structure des populations naturelles de *Pentadesma butyracea* dans la zone soudano-guinéenne du Bénin. *Annales des Sciences Agronomiques* 15(2):137-152.
41. Adjanohoun A., Allagbe M., Noumavo P.A., Gotoechan-Hodonou H., Sikirou R., Dossa K.K., Glèlè Kakaï R., Kotchoni S.O., Baba-Moussa L. 2011. Effects of plant growth promoting rhizobacteria on field grown maize. *Journal of Animal and Plant Sciences* 11(3):1457-1465.
40. Adjanohoun A., Allagbé M., Gotoechan-Hodonou H., Dossa K.K., Aguégué R., Adeyemi J., Bossou M., Babio S., Baba-Moussa L., Glèlè Kakaï R. 2011. Evaluation des effets des rhizobactéries promotrices de la croissance végétative sur la croissance du maïs en condition de serre au Sud-Bénin. *Bulletin de la Recherche Agronomique du Bénin* 70(0):60-66.
39. Assogbadjo A.E., Glèlè Kakaï R., Edon S., Kyndt T., Sinsin B. 2011. Natural variation in fruit characteristics, seed germination and seedling growth of *Adansonia digitata* L. in Benin. *New Forests* 41(0):113-125.
38. Avohou T.H., Houehounha R., Glele Kakai R., Assogbadjo A.E., Sinsin B. 2011. Firewood yield and profitability of a traditional *Danielia oliveri* short-rotation coppice on fallow lands in Benin. *Biomass and Bioenergy* 35(0):562-571.
37. Fandohan B., Assogbadjo A.E., Glèlè Kakaï R., Sinsin B. 2011. Geographical distribution, tree density and fruit production of *Tamarindus indica* L. (Fabaceae) across three ecological regions in Benin. *Fruits* 66(1):53-62.

2010

36. Fandohan B., Assogbadjo A.E., Glèlè Kakaï R., Sinsin B. 2010. Effectiveness of a protected areas network in the conservation of *Tamarindus indica* (Leguminosae–Caesalpinoideae) in Benin. *African Journal of Ecology* 49(0):40-50.
35. Oumorou M., Sinandouwirou T., Kiki M., Glèlè Kakaï R., Mensah G., Sinsin B. 2010. Disturbance and population structure of *Vitex doniana* Sw. in northern Benin, West Africa. *International Journal of Biological and Chemical Sciences* 4(3):624-632.
34. Ndjiondjop M.N., Manneh B., Cissoko M., Drame N.K., Glèlè Kakaï R., Bocco R., Baimey H., Wopereis M. 2010. Drought resistance in an interspecific backcross population of rice (*Oryza* spp.) derived from the cross WAB56-104 (*O. sativa*) × CG14 (*O. glaberrima*). *Plant Sciences* 179(0):364-373.
33. Dagbenonbakin G.D., Agbangba E.C., Glèlè Kakaï R., Goldbach H. 2010. Preliminary diagnosis of the nutrient status of cotton (*Gossypium hirsutum* L) in Benin (West Africa). *Bulletin de la Recherche Agronomique du Bénin* 64(0):32-45.

32. Glèlè Kakaï R., Pelz D.R. 2010. Asymptotic Error Rate of Linear, Quadratic and Logistic Rules in Multi-Group Discriminant Analysis. *International Journal of Applied Mathematics and Statistics* 18(10):69-81.
31. Glèlè Kakaï R., Pelz D.R., Palm R. 2010. On the efficiency of the linear classification rule in multi-group discriminant analysis. *African Journal of Mathematics and Computer Science Research* 3(1):19-25.
30. Fandohan A.B., Assogbadjo A.E., Glèlè Kakaï R., Sinsin B., Van Damme P. 2010. Conservation genetics of baobab (*Adansonia digitata* L.) in the parklands agroforestry systems of Benin (West Africa). *Fruits* 65(1):11-19.
29. Assogbadjo A.E., Glèlè Kakaï R., Sinsin B., Pelz D.R. 2010. Structure of *Anogeissus leiocarpa* Guill., Perr. natural stands in relation to anthropogenic pressure within Wari-Maro Forest Reserve in Benin. *African Journal of Ecology* 48(3):644–653.
28. Fandohan B., Assogbadjo A. E., Glèlè Kakaï R., Kyndt T., De Caluwé E., Codjia J. T. C., Sinsin B. 2010. Women's traditional knowledge, use value, and the contribution of tamarind (*Tamarindus indica* L.) to rural households' cash income in Benin. *Economic botany* 64(3):248-259.
27. Djacoun C.A.M.S., Glèlè Kakaï R., Konnon D-D., Sèwadé C., Kouton M., Bonou W., Gouwakinnou G., Fandohan B. 2010. Potentiel des Ressources Végétales Forestières Alimentaires et Médicinales de la Forêt Classée de l'Ouémedé Supérieur et N'Dali au Nord Bénin. *Fruit, Vegetable and Cereal Science and Biotechnology* 4(1):47-54.
26. Gbémavo D.S.J.C., Glèlè Kakaï R., Assogbadjo A.E., Katary A., Gnanglè P. 2010. Effet de l'ombrage du karité sur le rendement capsulaire du coton dans les agroécosystèmes coton-karité du Nord Bénin. *Tropicultura* 28(4):193-199.
25. Djogbénou P., Glèlè Kakaï R., Sinsin B. 2010. Comparative analyses of stakeholders' perceptions of participatory forest management success in Benin. *International Journal of Biological and Chemical Sciences* 2(12):395-404.
24. Gnanglè P.C., Glèlè Kakaï R., Oumorou M., N'djolosse K., Bonou W., Sokpon N. 2010. Tests de croissance de jeunes plants de néré (*Parkia biglobosa*, Jack, R. Br) en pépinière. *International Journal of Biological and Chemical Sciences* 4(6):1939-1952.
23. Fandohan B., Assogbadjo A.E., Glèlè Kakaï R., Sinsin B. 2010. Provenance variation in seed morphometric traits, germination and early seedling growth performances of *Tamarindus indica* L. *International Journal of Biological and Chemical Sciences* 4(4):1102-1109.

2009

22. Glèlè Kakaï R., Assogbadjo A.E., Sinsin B. 2009. Structure spatiale et régénération naturelle de *Pterocarpus erinaceus* Poir en zone soudanienne au Bénin. *Revue ivoirienne des sciences et technologies* 13(0):199-212.
21. Akpona J.D., Glèlè Kakaï R., Akpona H. 2009. Ethnobotanique et structure des peuplements d'espèces de brosse végétale au Sudet au Centre du Bénin. *Bulletin de la recherche agricole du Bénin* 63(0):1-12.
20. Sounon M., Glèlè Kakaï R., Avakoudjo J., Sinsin B. 2009. Tests de germination et de croissance de *Artemisia annua* L. anamed sur différents substrats au Bénin. *International Journal of Biological and Chemical Sciences* 3(2):337-346.
19. Glèlè Kakaï R., Pelz D.R., Palm R. 2009. Relative efficiency of non-parametric error rate estimators in multi-group linear discriminant analysis. *African Journal of Mathematics and Computer Science Research* 2(10):218-224.

18. Assogbadjo A.E., Amadji G., Glèlè Kakaï R., Mama A., Sinsin B. 2009. Evaluation écologique et ethnobotanique de *Jatropha curcas* L. au Bénin. *International Journal of Biological and Chemical Sciences* 3(5):1065-1077.
17. Hessou C., Glèlè Kakaï, R., Assogbadjo A.E., Odjo T., Sinsin B. 2009. Test de germination des graines de *Caesalpinia bonduc* (L.) Roxb au Bénin. *International Journal of Biological and Chemical Sciences* 3(2):310-317.
16. Glèlè Kakaï R., Palm. R. 2009. Empirical comparison of error rate-estimators in logistic discriminant analysis. *Journal of Statistical Computation and Simulation* 79(2):111-120.
15. Bonou W., Glèlè Kakaï R., Assogbadjo A.E., Fonton H.N., Sinsin B. 2009. Characterisation of *Afzelia africana* Sm. habitat in the Lama forest reserve of Benin. *Forest Ecology and Management* 258(7):1084-1092.
14. Glèlè Kakaï R., Sinsin B. 2009. Structural description of two Isoberlinia dominated vegetation types in the Wari-Maro Forest Reserve (Benin). *South African Journal of Botany* 75(1):43-51.
13. Rodenburg J., Saito K., Glèlè Kakaï R., Touré A., Mariko M., Kiepe P. 2009. Weed competitiveness of the lowland rice varieties of NERICA in the southern Guinea Savanna. *Field Crop Research* 114(3):411–418.
12. Kyndt, T., Assogbadjo A.E., Hardy, O.J., Glèlè Kakaï R., Sinsin B., Van Damme P., Gheysen G. 2009. Spatial genetic structuring of baobab (*Adansonia digitata* L., Malvaceae) in the traditional agroforestry systems of West Africa. *American Journal of Botany* 96(5):950-957.
11. Djogbenou C. P., Arouna O., Glele Kakaï R., Sinsin B. 2009. Analyse des indicateurs de participation des populations locales à l'aménagement forestier au Bénin. *Bulletin de la recherche agricole du Benin* 62(0):1-13.

2008

10. Assogbadjo A.E, **Glèlè Kakaï R.**, Chadare F.J., Thomson L., Kyndt T., Sinsin B. And Van Damme P. 2008. Folk classification, perception and preferences of baobab products in West Africa: consequences for the species conservation and improvement. *Economic Botany*, 62(1): 74-84.
9. Gbangboche, A. B., **Glele Kakaï R.** Salifou S. Albuquerque L. G. Leroy, P. L. 2008. Comparison of four models to describe the growth curve in West African Dwarf sheep. *An International Journal of Animal Bioscience*, 2(7): 1003-1012.
8. **Glele Kakaï R.**, Sinsin B., Palm R. 2008. Etude dendrométrique de *Pterocarpus erinaceus* Poir des formations naturelles de la zone soudanienne au Bénin. *Agronomie Africaine*, 20(3): 233-255.
7. Fandohan B., **Glele Kakaï R.**, Sinsin B. 2008. Caractérisation dendrométrique et spatiale de trois essences ligneuses médicinales dans la forêt classée de Wari-Maro au Benin. *Revue ivoirienne des sciences et technologies*, 12:173 – 186.

2007

6. **Glele Kakaï R.**, Palm R. 2007. Data Driven Choice of The Classification Rule In Discriminant Analysis applied to *Isoberlinia* Stands. *West African Journal of Biophysics and Biomathematics*, 5(1): 21-29.

2006

5. **Glèlè Kakaï R.**, Palm. R. 2006. Methodological contribution to control heteroscedasticity in discriminant analysis studies. *Global Journal of Pure and Applied Sciences*, 12(1): 107-110.

2005

4. **Glèlè Kakaï R.**, Sinsin B., Palm R. 2005. A stepwise Selection Technique Of The Most Discriminant Parameters of Two Groups Applied to *Isoberlinia* Stands in Benin. *Global Journal of Mathematical Sciences*. 4 (1,2), 107-111.
 3. **Glèlè Kakaï R.**, Palm. R. 2005. Minimal Error Rate Of Linear, Quadratic And Logistic Rules In Discriminant Analysis. *Global Journal of Mathematical Sciences*. 4 (1,2), 89-93.

2003

2. **Glèlè Kakaï R.**, Piraux F., Fonton N, Palm R. 2003. Comparaison empirique des estimateurs de taux d'erreur en analyse discriminante, *Rev. Stat Appl.* 51 (2) : 91-104.

2002

1. Fonton N. H., **Glèlè Kakaï R.**, Rondeux J. 2002. Etude dendrométrique de *Acacia auriculiformis* (Cunn A.) en mélange sur du vertisol au Bénin. *Biotechnol. Agron. Soc. Environ.* 6(1): 29-37.

THESES

- Glele Kakaï R.** (2005). Comparaison empirique des règles de classement et des estimateurs des taux d'erreur en analyse discriminante. PhD thesis. Gembloux Agricultural University, Gembloux, 202p.
- Glele Kakaï R.** (2001). Estimation des taux d'erreur en analyse discriminante. MSc Thesis. Gembloux Agricultural University, Gembloux, 73p.
- Glele Kakaï R.** (2000). Etablissement d'une table de cubage de *Acacia auriculiformis* au Sud-Bénin, Mémoire d'Ingénieur Agronome, FSA/UAC, Abomey-Calavi, 110 p.

COMPUTER SKILL

Word Processing: Microsoft office (Word, Excel, PowerPoint, FrontPage, Access).

Statistical Software: R, SAS, Minitab, SPSS, STATISTICA, GENSTAT.

Statistical Language: R, SAS, MATLAB, MINITAB.

LANGUAGE SKILLS

Language	Writing	Speaking	Listening
English	2	2	2
French	4	4	4

1 = Fairly good; 2 = Good; 3 = Very good; 4 = Excellent.

Professor Romain Glèlè Kakaï