

## CV - Gaspard Rwanyiziri, Ph.D.



### 1. Contact Information

- Office Location: University of Rwanda, Nyarugenge Campus, Admin Block, 2<sup>nd</sup> Floor, A35
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- Skype: @rwanyiziri

### 2. Identification

- Nationality: Rwandese
- Status: Married
- Date of Birth: 4<sup>th</sup> September 1972
- Languages: Kinyarwanda (Excellent), English (Excellent) & French (Excellent), Swahili (Fair)
- ORCID: <https://orcid.org/0000-0001-8138-2538>
- Researcher ID: AAK-8163-2020

### 3. Profile

Gaspard Rwanyiziri (Ph.D.) is a Senior Lecturer of Geographical and Environmental Sciences at the Department of Geography and Urban Planning of University of Rwanda. From August 2011 up to now, he is also the Director of the Centre for Geographic Information Systems and Remote Sensing (CGIS). He did his PhD in Geography and Planning at Université de Pau et des Pays de l'Adour (France), his Master's Degree in Geography and Planning at Université Michel Montaigne - Bordeaux 3 (France), and his Bachelor's Degree in Physical and Human Geography at University of Rwanda (formerly National University of Rwanda). His research interests are environment, natural resources management (especially protected areas, wetlands & land resources), climate change, green growth, environmental sustainability, spatial thinking, GIS and applications. In addition, he contributed to the drafting of various policies and national reports in Rwanda and in East Africa.

### 4. Academic Qualification

#### 4.1 Highest Qualification: Ph.D.

Year of Award:	2009
Research Field:	Geography and Planning
Major:	Environment and Sustainable Development

Institution: Université de Pau et des Pays de l'Adour

Country of Award: France

#### 4.2 Advanced Qualification: Master of Arts (MA)

Year of Award: 2002

Research Field: Geography and Planning

Major: Environment and Sustainable Development

Institution: Université Michel Montaigne Bordeaux 3

Country of Award: France

#### 4.3 Qualification: Bachelor Degree of Arts (BA)

Year of Award: 1999

Research Field: Geography

Major: Physical and Human Geography

Institution: National University of Rwanda

Country of Award: Rwanda

### 5. Professional Career

- **9th August 2011 – to date:** Director of the Centre for Geographic Information Systems and Remote Sensing ([www.cgis.ur.ac.rw](http://www.cgis.ur.ac.rw)), College of Science and Technology (CST), University of Rwanda ([www.ur.ac.rw](http://www.ur.ac.rw)).
- **1st July 2010 - to date:** Senior Lecturer of Geographical and Environmental Sciences, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda (UR).
- **May 2010 – July 2011:** Academic Secretary, Department of Geography, Faculty of Science, National University of Rwanda (NUR).
- **1st April 2004 - 30th June 2010:** Lecturer, Department of Geography, National University of Rwanda (NUR).
- **1st June 2000 – 31st March 2004:** Assistant Lecturer, Department of Geography, former National University of Rwanda (NUR).

### 6. Publications

#### 6.1 Papers in Peer-reviewed Journals

- **Rwanyiziri, G.,** Kayitesi, C., Mugabowindekwe, M., Byizigiro, R-V., Muyombano, E., Kagabika, M-B., and Bimenyimana, T. (2020). Spatio-temporal Analysis of Urban Growth and Its Effects on Wetlands in Rwanda: The Case of Rwampara Wetland in the City of Kigali. *Journal of Applied Sciences and Environmental Management*, 24(9): 1495-1501. Doi: <https://dx.doi.org/10.4314/jasem.v24i9.2>
- Byizigiro, R-V., **Rwanyiziri, G.,** Mugabowindekwe, M., Kagoyire, C. and Byabarema M. (2020). Estimation of Soil Erosion Using RUSLE Model and GIS: The Case of

- Satsinkyi Catchment, Western Rwanda. *Rwanda Journal of Engineering, Science, Technology and Environment*, 3, Special Issue: 14-33. doi: <https://doi.org/10.4314/rjeste.v3i1.2S>
- Tuyishimire, J., Nsengiyumva P., **Rwanyiziri, G.** and Mugabowindekwe, M. (2020). Spatial Modelling of Common Chimpanzees' (*Pan troglodytes schweinfurthii*) Ecological Niche in the Western Part of Rwanda. *Rwanda Journal of Engineering, Science, Technology and Environment*, 3, Special Issue: 107-118. doi: <https://doi.org/10.4314/rjeste.v3i1.7S>
  - Kayijamahe, C-B., **Rwanyiziri, G.**, Mugabowindekwe, M. and Tuyishimire, J. (2020). Integrating Remote Sensing and GIS to Model Forest Fire Risk in Virunga Massif, Central -Eastern Africa. *Rwanda Journal of Engineering, Science, Technology and Environment*, 3, Special Issue: 145-166. doi: <https://doi.org/10.4314/rjeste.v3i1.10S>
  - **Rwanyiziri, G.**, Mugabowindekwe, M. and Havugimana, E. (2020). Evolution des politiques d'aménagement et de gestion des aires protégées du Rwanda (1925–2019). *Geo-Eco-Trop*, 44(2): 109-124. Accessible at: [http://www.geoecotrop.be/uploads/publications/pub\\_442\\_09.pdf](http://www.geoecotrop.be/uploads/publications/pub_442_09.pdf)
  - **Rwanyiziri, G.**, Uwayezu, E., Mugabowindekwe, M., Hategekimana, S., Muyombano, E. and Hitimana, J-P. (2020). Using Social Network Analysis (SNA) to Assess the Availability of Spatial Data and Data Sharing Mechanisms in Rwanda. *African Journal of Land Governance and Geospatial Sciences*, 3(2): 32-52. Accessible at: <https://revues.imist.ma/index.php?journal=AJLP-GS&page=article&op=view&path%5B%5D=19854>
  - Byizigiro, R-V., Byabarema, M., **Rwanyiziri, G.** (2020). Alleviating some Environmental Impacts resulting from Artisanal and Small-scale Mining Sector: A Critical Review. *Rwanda Journal of Engineering, Science, Technology and Environment*, 3(1): 1-19. doi: <https://dx.doi.org/10.4314/rjeste.v3i1.4>
  - Mugabowindekwe, M. and **Rwanyiziri, G.** (2020). Comparative Assessment of Homogeneity Differences in Multi-Temporal NDVI Strata and the Currently Used Agricultural Area Frames in Rwanda. *South African Journal of Geomatics*, 9(1): 89-107. doi: <http://dx.doi.org/10.4314/sajg.v9i1.7>
  - **Rwanyiziri, G.**, Uwiragiye, A., Tuyishimire, J., Mugabowindekwe, M., Mutabazi, A., Hategekimana, S. and Mugisha, J. (2019). Assessing the Impact of Climate Change and Variability on Wetland Maize Production and the Implication on Food Security in the Highlands and Central Plateaus of Rwanda. *Ghana Journal of Geography*, 11(2): 77-102. Accessible at: <https://www.ajol.info/index.php/gjg/article/view/191987>
  - Mugabowindekwe, M., Muyizere, A., Li F., Qiao Y. and **Rwanyiziri, G.** (2018). Application of Multi-Temporal MODIS NDVI Data to Assess Practiced Maize Calendars in Rwanda. *Journal of Resources and Ecology*, 9(3): 273-280. doi: <https://doi.org/10.5814/j.issn.1674-764x.2018.03.007>.
  - **Rwanyiziri, G.**, Tuyishimire J. and Havugimana, E. (2017). Enjeux socio- économiques du tourisme dans les aires protégées d'Afrique Orientale: L'expérience rwandaise/Socio-economic Aspects of Tourism in East African Protected Areas. The Rwandan Experience. *Revue Canadienne de Géographie/Tropical Canadian Journal of Tropical Geography*, 4(2): 34-47. Accessible at: [http://www3.laurentian.ca/rcgt-cjtg/wp-content/uploads/2017/12/Article\\_4\\_Gaspard\\_Rwanyiziri\\_vol\\_4\\_1\\_2017-2.pdf](http://www3.laurentian.ca/rcgt-cjtg/wp-content/uploads/2017/12/Article_4_Gaspard_Rwanyiziri_vol_4_1_2017-2.pdf)
  - **Rwanyiziri, G.** and Mugabowindekwe M. (2016). Assessing Local Farmers' Awareness and Perceptions towards Wetland Protection and Conservation Strategies: The Case of Bugesera District, Rwanda. *Donnish Journal of Geography and Regional Planning*, 2(3): 22-28. Accessible at: <http://donnishjournals.org/djgrp/pdf/2016/october/Rwanyiziri-et-al.pdf>
  - **Rwanyiziri, G.** and Rugema, J. (2013). Climate Change Effects on Food Security in Rwanda: Case Study of Wetland Rice Production in Bugesera District. *Rwanda Journal, Series E: Agricultural Sciences*, 1(1): 33 -51. doi: <http://dx.doi.org/10.4314/rj.v1i1.3E>

- **Rwanyiziri, G.**, (2009). La gouvernance des aires protégées au Rwanda: l'intégration des populations locales en question/The Governance of Protected Areas in Rwanda: The Integration of Local Population's Issues. *Scientific Review of Kigali Independent University*: 15: 38-72.
- **Rwanyiziri, G.** (2008). Les aires protégées à l'épreuve de la pression démographique et de la pauvreté. Le Cas du Parc National des Volcans (Rwanda)/Protected Areas under Pressure from Demographic Expansion and Poverty. The Case of the Volcanoes National Park (Rwanda). *International Journal of Sustainable Development*, 1(4): 17-28.
- **Rwanyiziri, G.** (2008). Le tourisme pratiqué dans les aires protégées du Rwanda (1974-2008): évolution, politiques et acteurs/Tourism in Protected Areas of Rwanda (1974-2008): Evolution, Policies and Actors. *Scientific Review of Kigali Independent University*, 11: 44-75.

## 6.2 Peer-reviewed Conference Proceedings

- Tomaszewski, B., Vodacek, A. and **Rwanyiziri, G.** (2018). Innovation for Education, Spatial Thinking and GeoICT: A Rwandan Case Study. In: *2018 IEEE Global Humanitarian Technology Conference (GHTC)*. San Jose: IEEE. doi: 10.1109/GHTC.2018.8601758
- Pilesjö, P., Mansourian, A., Shindyapin, A., Assane, A-A., Muheca, E-L., **Rwanyiziri, G.**, Mugisha, J., Bamutaze, Y., Nakileza, B., Maiga, G., Kayondo, L-M. (2018). Harmonizing GIS Education: South – North Perspectives. Lessons learnt from Mozambique, Rwanda, Sweden, and Uganda. In: *2018 AGILE Conference - Geospatial Technologies for All*. Lund: Lund University. Accessible at: <https://lup.lub.lu.se/search/publication/e23b2a43-ba64-403c-accf-74049ef5f16c> (Publisher: AGILE, Association of Geographic Information Laboratories for Europe).

## 6.3 Book Chapters

- **Rwanyiziri, G.** (2013). Climate. In: D. Ben Yahmed and & N. Houstin *Africa Atlases. Rwanda*. Paris: Les Éditions du Jaguar, pp. 82-83, ISBN: 978-2-86950-483-7
- **Rwanyiziri, G.** (2013). Fauna and Flora. In: D. Ben Yahmed and Houstin. *Africa Atlases. Rwanda*. Paris: Les Éditions du Jaguar, pp. 84-85.
- **Rwanyiziri, G.** (2013). Environment and Biodiversity. In: D. Ben Yahmed and N. Houstin. *Africa Atlases. Rwanda*. Paris: Les Éditions du Jaguar, pp. 86-87.

## 6.4 Unpublished Technical Reports

- **Rwanyiziri, G.**, Nyandwi, E., Tuyishimire, J., Mugabowindekwe, M., Kagoyire, C. and Mulinga, N. (2019a). *Review of Policies and Strategies related to Ecosystem Management and Climate Resilient Agricultural System towards Environmental Sustainability Requirements in Rwanda*. Kigali: Wildlife Conservation Society – Rwanda Country Program.
- **Rwanyiziri, G.**, Nyandwi, E., Tuyishimire, J., Mugabowindekwe, M., Kagoyire, C. and Mulinga, N. (2019b). *Vital Signs Data Analysis for Ecosystem Management and Climate Resilient Agricultural System towards Environmental Sustainability Requirements in Rwanda*. Kigali: Wildlife Conservation Society – Rwanda Country Program.
- **Rwanyiziri, G.**, Nyandwi, E., Mugabowindekwe, M., Tuyishimire, J. and Kagoyire, C. (2019c). *Rwanda Atlas. Environment, Agriculture & Livelihood Options*. Kigali: Wildlife Conservation Society – Rwanda Country Program.
- **Rwanyiziri, G.**, Nyandwi, E., Tuyishimire, J., Mugabowindekwe, M., Kagoyire, C. and Mulinga, N. (2019d). *Ecosystem Management and Climate Resilient Agricultural System towards Environmental Sustainability Requirements in Rwanda. Policy Brief*. Kigali: Wildlife Conservation Society – Rwanda Country Program.

- **Rwanyiziri, G.** and Uwayezu E. (2014). *Inventory on Available Spatial Data, Data Sharing Habits, and Knowledge Base on Spatial Data Infrastructure (SDI) Development in Rwanda*. Kigali: SKAT International.
- **Rwanyiziri, G.** and Uwayezu, E. (2012). *Assessment on the Current Status of Policies on Use of EO Data in Land Degradation Mitigation (LDM) and Natural Habitat Conservation (NHC) in Rwanda*. Nairobi: AMESD IGAD.
- Nsengimana, H. and **Rwanyiziri, G.** (2011). *Rwanda Environmental Research Strategy*. Kigali: Rwanda Environment Management Authority.
- **Rwanyiziri, G.** (2007). *Guide for community conservation as regards nature conservation in Rwanda*. Kigali: Rwandan Office of Tourism and National Parks (ORTPN).
- **Rwanyiziri, G.,** Kayijamahe, E., Lasry, F. and Schilling, M. (2005). *Plan de Zonage du Parc National de l'Akagera*. Kigali: Rwandan Office of Tourism and National Parks (ORTPN) & DED.
- **Rwanyiziri, G.** and Kayijamahe, E. (2004). *Plan de Zonage du Parc National des Volcans*. Kigali: Rwandan Office of Tourism and National Parks (ORTPN) & International Gorilla Conservation Programme (IGCP).

## 7. Research Activities

### 7.1 Awards for Research Grants

- **November 2017 – October 2021:** Enhancing Food Security in AFRICan AgriCULTUral Systems with the Support of REMote Sensing (a 4 years project funded by EU Horizon2020). Role: Collaborator.
- **November 2014 – June 2020:** Effects of Climate Change and Variability on Wetland Agricultural Production and Food Security in Rwanda. Case Study of Rulindo, Kamonyi and Bugesera Districts (under UR-Sweden Cooperation funding). Role: Principal investigator.
- **February 2012 – March 2016:** Trade-Offs and Synergies in Managing Wetlands Resources for Improved Food Security and Adaptation to Climate Change in the Lake Victoria Basin (under ViCres/IUCEA funding) (PI: Prof. Mnason Tweheyo, Makerere University/Uganda). Role: Principal investigator on the side of University of Rwanda.
- **February 2012 – March 2016:** Promoting Spatial Thinking in Natural Resources Management through Community Mapping: The Case of Urban and Rural Secondary Schools of Rwanda (under Innovation for Education/DFID)(PI: Prof. Tony Vodacek, Rochester Institute of Technology/USA); Role: Principal investigator on the side of University of Rwanda.

### 7.2 Coordination of Research Projects

- **November 2017 – October 2020:** Coordinator, Enhancing Food Security in AFRICan AgriCULTUral Systems with the Support of REMote Sensing (a 4 years project funded by EU Horizon2020).
- **January 2016 – December 2020:** Local Coordinator, Strengthening Education for Agricultural Development Project - SEAD, a NUFFIC fully funded project.
- **January 2015 – December 2019:** Coordinator, Strengthening East Africa Land Administration Network (SEALAN), a NUFFIC fully funded project.
- **July 2013 – June 2020:** Team Leader of GIS Subprogram, UR Sweden Programme for Research, Higher Education and Institutional Advancement.
- **January 2011 – December 2019:** Coordinator, Cooperation Agreement in the Field of Geographic Information Systems between University of Rwanda and ESRI Deutschland Group GmhH.

### 7.3 Conference Organization

- **November 2018 – November 2019:** Chair of the Local Organizing Committee of AfricaGIS 2019 International Conference entitled: "Innovations in Geospatial Technologies for Achieving the Sustainable Development Goals in Africa", Kigali Convention and Exhibition Village (KCEV), 18<sup>th</sup> – 22<sup>nd</sup> November 2019 (<https://www.eis.africa/africagis-2019/>). Best papers from the conference were published in Rwanda Journal for Engineering, Science, Technology and Environment (RJESTE), Volume 3(1), Special Issue, 2020. Those papers are available at: <https://www.ajol.info/index.php/rjeste/issue/view/19024>
- **May – August 2016:** Member of the Organizing Committee of the Second Annual Research and Innovation Week in Science & Technology (ARIST) (Kigali, 23 – 26 August 2016).
- **March – November 2015:** Chair of the Local Organizing Committee of the International Conference entitled: "Geospatial Technologies for Sustainable Urban and Rural Development - GeotechRwanda2015" (<https://www.geotechrwanda2015.com>). Best papers from the conference were published in Rwanda Journal, Series D, Volume 1, 2016. Those papers are available at: <https://www.ajol.info/index.php/rj/issue/view/15590>
- **July – August 2015:** Member of the Organizing Committee of the First Annual Research and Innovation Week in Science & Technology (ARIST) (Kigali, 25 – 28 August 2015)
- **August – November 2012:** Member of the Local Organizing Committee of the 5<sup>th</sup> NUR International Scientific Research Conference (ISRC).

### 7.4 Conference Attendance (Oral Presentations)

- Byizigiro, R.-V., **Rwanyiziri, G.**, Mugabowindekwe, M., Biryabarema, M. (2019). Soil erosion risk in the Gatumba Mining Sector. In *AfricaGIS 2019 Conference and Exhibition*, Kigali, Rwanda, 18-22 November 2019.
- **Rwanyiziri G.**, Mutabazi A., Hategekimana S, Munyeshyaka J.-D., (2016). Understanding the Vulnerability to Climate Change Effects in East Africa. Case Study of Rice Farmers in Bugesera District, Rwanda. In *Symposium on Climate Change Adaptation in Africa*, Addis Ababa, Ethiopia, 21-23 February 2016.
- **Rwanyiziri, G.** (2014). Community-based Tourism around Protected Areas of Rwanda. Case Study of Kinigi and Nyange Community Walk Activities around Volcanoes National Park (VNP), Musanze District. In "*Understanding Oneself and the Others: New Domestic and International Tourism Practices and the Promotion of Heritage and Tourism in East Africa*"(a symposium organized by French Institute for Research in Africa (IFRA-Nairobi) in collaboration with Nairobi National Museum.
- **Rwanyiziri, G.** & Mukanyandwi, M.C. (2014). The Use of GIS Technologies in Analyzing Challenges and Opportunities for the Management of Urban Green Spaces in Kigali City, Rwanda. In *International Conference InterCarto-InterGIS 20*, Kigali, Rwanda, 29<sup>th</sup> August 2014.
- **Rwanyiziri, G.** and Rugema, J. (2012). Climate Change Effects on Food Security in Rwanda: Case Study of Wetland Rice Production in Bugesera District. In the *5<sup>th</sup> International Scientific Research Conference*, 5<sup>th</sup> to 7<sup>th</sup> December 2012, National University of Rwanda.
- **Rwanyiziri, G.** (2011). Minor Natural and Cultural Heritage Sites in East Africa. Case study of Buhanga and Cyamudongo Sites in Rwanda. In *Minor Natural and Cultural Heritage Sites in East Africa*, French Institute of Research in Africa (IFRA), Nairobi, 17-18 January, 2011 (Oral Presentation).

### 7.5 PhD/MSc/MA Supervision

#### 7.5.1 PhD Supervision

- **Ndikubwimana Jean Baptiste**: "Analyzing the Conflicts related to Natural Resources Management in Rwanda: Case Study of Akagera National Park in the Eastern Province", PhD Program in Human Rights, University of Nairobi, Co-Supervisor (February 2016 – to date).
- **Twahirwa Anthony**: "Examining the Benefits of Using Climate Information amongst the Smallholder Farmers in Musanze District, Rwanda", PhD Program in Climate Change and Adaptation, Institute of Climate Change and Adaptation (ICCA), University of Nairobi, Co-Supervisor (February 2020 – to date).

### 7.5.2 MSc/MA Supervision

- In total **5 MSc Students** have been supervised within the MSc in Geo-information Science for Environment and Sustainable Development, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda
  1. **Kayitesi Christine (2019)**. Spatial Temporal of Urban Growth Impact on Wetlands' Resources in Rwanda. A Case Study of Rwampara Wetland in the City of Kigali. MSc Thesis in Geo-information Science for Environment and Sustainable Development, University of Rwanda (Main Supervisor).
  2. **Nishimwe Odette (2019)**. The Role of Wetland Agriculture in Alleviating Poverty among Local Frmers in Rwanda. Case Study of Bahimba Wetland in Rulindo District. MSc Thesis in Geo-information Science for Environment and Sustainable Development, University of Rwanda (Main Supervisor).
  3. **Kayijamahe Birasa Charles (2016)**. Modelling Forest Fire Risk Using Remote Sensing and GIS", MSc Thesis in Geo-information Science for Environment and Sustainable Development, University of Rwanda (Main Supervisor).
  4. **Munyeshyaka Jean Damascene (2016)**. Understanding Socio-economic Vulnerability of Smallhoder Farmers to Climate Variability Effects in Rwanda: Case Study of Rubuvu and Nyaburiba Rice Farmers in Bugesera District. MSc Thesis in Geo-information Science for Environment and Sustainable Development, University of Rwanda, 2017 (Main Supervisor).
  5. **Ntaganira Jean Bosco (2016)**. Spatial and Temporal Dynamics of Green Spaces in Rwanda: The Case of Kigali City. MSc Thesis in Geo-information Science for Environment and Sustainable Development, University of Rwanda, Main Supervisor.
  
- In total **6 MSc Students** have been supervised within the MSc Programme in Biodiversity and Natural Resources Management, School of Science, College of Science and Technology, University of Rwanda
  1. **Mukankiko Berenice (2012)**. Assessment of Conflicts related to Nyabarongo Wetland Management and Biodiversity Conservation in Runda Sctor, Kamonyi District. MSc Thesis in Biodiversity Conservation, former National University of Rwanda (Main Supervisor).
  2. **Banamwana Celestin (2012)**. Human-Wildlife Conficts in and around Akagera National Park (ANP): The Case of Munini, Kageyo and Kiyove Cells. MSc Thesis in Biodiversity Conservation, former National University of Rwanda (Main Supervisor).
  3. **Musabyimana Godelive (2012)**. Evaluation of Local Community Participation in the Conservation of Rugezi Wetland: The Case of Butato and Ruhunde Sectors of Burera District. MSc Thesis in Biodiversity Conservation, former National University of Rwanda (Main Supervisor).
  4. **Ishimwe Yvonne (2012)**. Assessment of Integration of Indigenous People in Conservation of Protected Areas in Rwanda: The Case of Batwa Community

- Groups Around Volcanoes National Park (VNP). MSc Thesis in Biodiversity Conservation, former National University of Rwanda (Main Supervisor).
5. **Mukanyandwi Marie Claire (2012)**. Challenges and Opportunities in Managing Urban Green Spaces in Kigali City, Rwanda. MSc Thesis in Biodiversity Conservation, National University of Rwanda (Main Supervisor).
  6. **Musana Abel (2012)**. Changes in Crop-raiding by Primates and Conservation Implications: The Case of Mountain Gorillas (*Gorilla berengei berengei*) at Volcanoes National Park, Rwanda. MSc Thesis in Biodiversity Conservation at former National University of Rwanda (Co-Supervisor).
- In total **17 MSc Students** have been supervised within the MA in Development Studies, School of history and Administrative Studies, College of Arts and Social Sciences, University of Rwanda
1. **Ndagijimana Jean Damascene (2018)**. Assessment of Challenges in Implementing Rural Settlement Policy in Hilly and Mountainous Areas of Rwanda. Case study of Kinama – Gahigiro and Nyabitare villages in Gitesi Sector of Karongi District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  2. **Uwiragiye Anatole (2016)**. Impacts of Climate Change and Variability on Agricultural Production in Rwanda: Case Study of Maize Production in Bahimba and Bishenyi Wetlands. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  3. **Niyonsenga Michel (2016)**. Assessing Farmers’ Challenges towards Safety Measures on Pesticide Use in Rwanda. Case Study of Vegetable Growers in Kamonyi District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  4. **Akanyana Sharon (2016)**. Assessing Knowledge and Skills of Smallholder Farmers on the Effects of Chemical Fertilizers on Local Environment in Rwanda. Case Study of COVEMABA Cooperative Members in Rulindo District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  5. **Nyiransabimana Aloysie (2014)**. Socio-economic and Environmental Impacts of Mining Sector on Local Livelihoods in Rwanda. A Case Study of Karengye Sector in Rwamagana District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  6. **Ngandahayo Venant (2014)**. Assessment of Major Challenges faced by Local Government Authorities in Implementing Villagisation Policy in Rwanda: Case Study of Kimonyi and Kinigi Sectors in Musanze District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  7. **Ndayiragije Bertin (2014)**. Urbanization Process as a Major Factor of Rural Transformation in Rwanda: The Case of Kibeho Centre in Nyaruguru District", MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  8. **Uwamariya Olive (2013)**. The Socio-economic Impact of Rural Electrification in Rwanda: Case Study of Kibeho Sector in Nyaruguru District", MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  9. **Kabanda Robert (2013)**. Tourism as a Tool for Sustainable Development in Rwanda: Case Study of Poverty Alleviation around Volcanoes National Park – VNP. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
  10. **Ndikubwimana Jean Baptiste (2013)**. Assessing Opportunities and Challenges to Sustainable Development in Rwanda. Case Study of Girinka Pro-poor Policy Analysis in Kibeho Sector of Nyaruguru district. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).



11. **Hakizimana Jean Pierre (2013)**. Governance of Water Resources in Rwanda. The Case of Clean Water in Rural and Urban Areas of Muhanga District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
12. **Bakundukize Redempta (2013)**. Linkages between Poverty and Environmental Degradation in Rwanda. Case Study of Land Degradation in Save Sector, Gisagara District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
13. **Kabira Marie Chantal (2013)**. Assessment of the Role of Community-Based Organizations (CBOs) in Managing Solid Waste in Rwanda: The Case of CAFAB in Ngoma Sector of Huye District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
14. **Bikorimana Gerard (2013)**. The Impact of Population Growth on the Environment: Case Study of Deforestation in Nyabimata Sector of Nyaruguru District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
15. **Mukeshimana Marie Rose (2013)**. Assessment of the Impacts of Pesticides on Environmental Degradation in Rwanda. The Case of Kitabi Sector of Nyamagabe District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
16. **Niyibizi Avril Pacifique (2013)**. Multiple Use Water Service (MUS): A New Approach for Sustainable Use of Water Resources in Rwanda. Case Study of Rwinkwavu Sector in Kayonza District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).
17. **Ndungutse Emmanuel (2013)**. Assessment of Grouped Settlements in Sustainable Development in Rwanda. The Case of Environmental Education and Awareness in Karama Grouped Settlement, Ruhashya Sector in Huye District. MA Thesis in Development Studies, University of Rwanda (Main Supervisor).

## 8. Teaching Activities

### 8.1 Curriculum Development

- **MSc. in Geo-information Science for Land Administration**, Centre for Geographical Information Systems and Remote Sensing (CGIS), University of Rwanda (2014-2016). Role: Chair.
- **MSc. in Geo-information Science for Environment and Sustainable Development**, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda (2010-2012). Role: Team Member.
- **BSc. Geography and Urban Planning**, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda (2006-2007). Role: Team Member.

### 8.2 Teaching in Postgraduate Programmes

- **July 2013 – to Date**: Module of "**Environmental Governance**" (MSc. Program in Geo-information Science for Environment and Sustainable Development, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda).
- **July 2012 – to Date**: Module of "**Environment and Sustainable Development**" (MA Program in Development Studies, College of Arts and Social Sciences, University of Rwanda).
- **November 2017 – to Date**: Module of "**Local Environmental and Climate Change Mitigation**" (Master of Social Sciences in Local Governance College of Arts and Social Sciences, University of Rwanda).

- **Between February and June 2018:** Module of "**Research Methodology**" (MSc. Program in Geo-information Science for Environment and Sustainable Development, School of Science, College of Science and Technology, University of Rwanda (February 2017 – June 2018).
- **July 2011 - May 2015:** Module of "**Community Conservation**" (MSc. Program in Biodiversity Conservation and Natural Resources Management, School of Science, College of Science and Technology, University of Rwanda).
- **Between September and December 2018:** Module of "**Regional Environmental Planning and Management**" (MSc. of Environmental and Development Studies, School of Environmental Studies, University of Lay Adventists of Kigali).

### 8.3 Teaching in Undergraduate Programmes

- **November 2018 – to date:** Component of "**Climate Change and Sustainable Development**" within the Module of "Environment, Climate Change and Sustainable Development" (3<sup>rd</sup> Year Environment Planning, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda). Role: Team Member
- **January 2013 to Date:** Module of "**Regional Ecology and Environmental Degradation**" (3<sup>rd</sup> Year Environmental Planning, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda). Role: Overall Module Coordinator
- **January 2012 to Date:** Module of "**Research Project for Environmental Planning and Management**" (3<sup>rd</sup> Year Environmental Planning, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda). Role: Overall Module Coordinator
- **April 2018:** Module of "**Principles of Meteorology**" (3<sup>rd</sup> Year Social Sciences, Bachelor of Social and Military Sciences, Rwanda Military Academy – Gako). Role: Overall Module Coordinator
- **January 2013 – to Date:** Module of "**Geographical Thoughts and Approaches to Science**" (2<sup>nd</sup> Year, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda). Role: Overall Module Coordinator
- **January 2013 to Date:** Component of "**Climatology**" within the module of "**Climatology and Hydrology**" (1<sup>st</sup> Year, Department of Geography and Urban Planning, School of Architecture and Built Environment, College of Science and Technology, University of Rwanda). Role: Overall Module Coordinator

### 8.4 Reviewer of Academic Programs for the Higher Education Council, Ministry of Education, Republic of Rwanda

- **13<sup>th</sup> – 14<sup>th</sup> July 2017:** Review of the program entitled "Rural and Urban Development" at ICK (Institut Catholique de Kabgayi).

### 8.5 External Examination

- **January 2014:** MSc. Thesis of Mr. Vincent Kayigema "An Assessment of Girinka (One Cow per Poor Family) Program and Poverty Alleviation in Rwanda". University of Kwazulu-Natal, College of Agriculture, Engineering and Science.

## 9. Professional Trainings/Workshops

- **14<sup>th</sup> – 18<sup>th</sup> Sept 2020:** "Academic Staff Development Online Training" (organized by Rwanda Development Board and delivered by Maastricht School of Management);
- **3<sup>rd</sup> – 6<sup>th</sup> March 2020:** "Sensitization Workshop for the Curricula Development Team", Ibis Styles, Nairobi, Kenya (Organized by the Network of Excellence on Land Governance in Africa - NELGA);

- **3<sup>rd</sup> – 4<sup>th</sup> October 2019:** "Workshop on Geo-information for Informed Policy and Decision making", Best Western Plus Hotel, Addis Ababa, Ethiopia (Organized by the Regional Centre for Mapping of Resources for Development);
- **18<sup>th</sup> – 20<sup>th</sup> July:** "Pre-workshop on Sustainability Plan of Eastern Africa Land Administration Network", Ngalawa Hotel & Resort, Zanzibar, Tanzania;
- **29<sup>th</sup> April – 2<sup>nd</sup> May 2019:** "University Leadership and Management Workshop", Nobleza Hotel, Kigali, Rwanda (a workshop organized by the Association of African Universities);
- **10<sup>th</sup> January 2018:** "Practical Workshop on Policy Briefs", University of Rwanda, College of Business and Economics, Kigali, Rwanda (a workshop organized by UR – Sweden Program for Research, Higher Education, Institutional Advancement);
- **9<sup>th</sup> – 13<sup>th</sup> November 2017:** "Training Workshop on Effective Land Administration in Africa", UNECA Conference Centre, Addis Ababa, Ethiopia (organized by the Regional Centre for Mapping of Resources for Development - RCMRD, GIZ, Land Policy Initiative LPI, UN-Habitat and the Global Land Tool Network -GLTN);
- **24<sup>th</sup> – 28<sup>th</sup> January 2015:** "Inception Workshop on strengthening the regional EALAN network to build capacity in Land Administration and Land Governance in the Great Lakes Region – NICHE/GLR/262", RCMRD – Nairobi, Kenya (a conference organized by EALAN);
- **28<sup>th</sup> – 30<sup>th</sup> May 2014:** "CAAST-Net Plus Regional Workshop on Climate Change", Sports View Hotel, Kigali;
- **10<sup>th</sup> – 14<sup>th</sup> March 2014:** "Household Economy Analysis (HEA) for Food Security Analysis" (a training organized by USAID -FEWS NET in Musanze District, Rwanda) (certificate);
- **30<sup>th</sup> September – 11<sup>th</sup> October 2013:** "Project and Programme Management", Arusha, Tanzania (a course conducted by MDF - ESA Training & Consultancy in Arusha)(certificate);
- **7<sup>th</sup> - 9<sup>th</sup> August 2013:** "Social Sciences Research Methods", Bujumbura, Burundi (a workshop organized by RCEAR in collaboration with University of Burundi/Biology Department)(certificate);
- **15<sup>th</sup> - 17<sup>th</sup> May 2013:** "Illegal Timber Trade in Greater Virunga", Lake View Hotel-Entebbe, Uganda (a workshop organized by Greater Virunga Transboundary Cooperation, GVTC);
- **9<sup>th</sup> - 19<sup>th</sup> December 2012:** "Use of Geographic Technologies for Climate Change, Food Security, and Agriculture, and of Professional Development of Fellow and Mentors", RCMRD-Nairobi (a workshop organized by NASA-AAG under My Community, our Earth SERVIR East Africa)(certificate);
- **3<sup>rd</sup> - 7<sup>th</sup> December 2012:** "Use of Geographic Technologies for Planning and Sustainable Development", CGIS-NUR (a training workshop organized by EIS-Africa and AAG) (certificate);
- **17<sup>th</sup> July – 10<sup>th</sup> September 2010:** "Education Programme on Climate Change and Biodiversity Conservation in Albertine Rift", Institute of Resources Assessment/University of Dar es Salaam, Tanzania (Sponsored by Pan-African START and International START) (Certificate);
- **22<sup>th</sup> February – 5<sup>th</sup> March 2010:** "Competing Claims on Natural Resources. Professional Qualities for Managing Conflict in NRM towards Sustainable Development", Wageningen/Netherlands, Wageningen UR Centre for Development Innovation (Certificate);
- **23<sup>rd</sup> November – 6<sup>th</sup> December 2009:** "Training on Wetlands Rapid Assessment Procedure and Biodiversity Inventories of Lake Kivu Islands", Butare and Lake Kivu islands, UNESCO/NUR (Certificate);
- **17<sup>th</sup> November 2009:** Workshop for the "Establishment of the MAB National Committee and Programme in Rwanda", Kigali, Ninzi Hotel, REMA/RNCU;

- **5<sup>th</sup> – 16<sup>th</sup> October 2009:** "Use of Low cost Earth Observation Data in Environment and Climate Monitoring Applications", CGIS-NUR/ITC, Butare, Rwanda Certificate);
- **7<sup>th</sup> – 17<sup>th</sup> August 2008:** Bergen Summer Research School "Global Development Challenges: Rich and Poor Countries: Global History Matters". University of Bergen, Bergen/Norway (Certificate);
- **3<sup>rd</sup> January – 31<sup>st</sup> March 2006:** "Geo-Information for Biodiversity Conservation", International Institute for Geo-information Science and Earth Observation (ITC/Netherlands) (Certificate);
- **4<sup>th</sup> – 8<sup>th</sup> August 2003:** Workshop on "Ecotourism in Protected Areas of Sub-Saharan Africa", Kigali, Novotel Hotel (Certificate);

#### **10. Professional Conferences/Meetings**

- **22<sup>nd</sup> – 26<sup>th</sup> July 2019:** AGM and Conference of Eastern Africa Land Administration Network, Ngalawa Hotel & Resort, Zanzibar, Tanzania (a meeting organized by Eastern Africa Land Administration Network - EALAN).
- **17<sup>th</sup> – 18<sup>th</sup> 2019:** "Landscape Management Regional Technical Committee", La Palme Hotel, Musanze Town, Rwanda (a meeting organized by Greater Virunga Transboundary Collaboration – GVTC).
- **31<sup>st</sup> July 2018:** "Landscape Management & Law Enforcement Regional Technical Committee", Hill View Hotel, Rubavu Town, Rwanda (a meeting organized by Greater Virunga Transboundary Collaboration – GVTC).
- **9<sup>th</sup> – 13<sup>th</sup> July 2018:** "ESRI International User Conference", San Diego-California, USA (a conference organized by ESRI USA).
- **8<sup>th</sup> – 9<sup>th</sup> June 2017:** "Participation to the Northern Corridor Integration Projects Human Resource Capacity Building Strategy Validation Workshop", Jomo Kenyatta University of Agriculture and Technology - JKUAT", Nairobi, Kenya.
- **5<sup>th</sup> – 6<sup>th</sup> June 2017:** "Presentation of the Comprehensive Skills Audit and the Draft of Human Resource Capacity Building Strategy to the Regional Technical Oversight Committee of the Northern Corridor Human Resource Capacity Building Cluster", Makerere, University, Kampala, Uganda.
- **29<sup>th</sup> April – 5<sup>th</sup> May 2017:** "University of Rwanda – Sweden Program Annual Planning Meeting", Lund, Sweden (a meeting organized by UR – Sweden Program for Research, Higher Education, Institutional Advancement).
- **9<sup>th</sup> – 13<sup>th</sup> January 2017:** "Landscape Management & Law Enforcement Regional Technical Committee", Ihusa Hotel, Goma Town, Democratic Republic of Congo (a meeting organized by Greater Virunga Transboundary Collaboration – GVTC).
- **14<sup>th</sup> – 17<sup>th</sup> November 2016:** "27<sup>th</sup> Annual Meeting of the World Academy of Sciences for the Advancement of Science in Developing Countries", Kigali Convention Centre, Kigali, Rwanda.
- **21<sup>st</sup> - 23<sup>rd</sup> July 2013:** "The 2016 Eastern Africa Land Administration Network - EALAN Annual General Assembly and Conference", Dar es Salaam, Tanzania (a conference organized by EALAN).
- **27<sup>th</sup> June – 1<sup>st</sup> July 2016:** "ESRI International User Conference", San Diego-California, USA (a conference organized by ESRI USA).
- **5<sup>th</sup> – 12<sup>th</sup> May 2016:** "University of Rwanda – Sweden Program Annual Planning Meeting", Gothenburg, Sweden (a meeting organized by UR – Sweden Program for Research, Higher Education, Institutional Advancement).
- **1<sup>st</sup> – 10<sup>th</sup> May 2015:** "University of Rwanda – Sweden Program Annual Planning Meeting", Uppsala, Sweden (a meeting organized by UR – Sweden Program for Research, Higher Education, Institutional Advancement).
- **12<sup>th</sup> – 16<sup>th</sup> May 2014:** "University of Rwanda – Sweden Program Annual Planning Meeting", Linkoping, Sweden (a meeting organized by UR – Sweden Program for Research, Higher Education, Institutional Advancement).

- **8<sup>th</sup> - 12<sup>th</sup> July 2013:** "ESRI International User Conference", San Diego-California, USA (a conference organized by ESRI USA).

#### 11. International Networking

- *October 2011 – to date:* Research Collaborator with Ardhi University - Tanzania
- *October 2011 – to date:* Research Collaborator with Lund University - Sweden
- *March 2011 – to date:* Research Collaborator with Royal Institute of Technology – (KTH) - Sweden
- *March 2012 – to date:* Research Collaborator with Antioch University New England – USA

#### 14. Community Outreach

- **May 2010 – May 2011:** Vice Chair Person of Board of Directors (BOD) for Ecole Internationale des Parents de Butare (EIPB), Huye Town, Southern Province, Rwanda
- **May 2011 – May 2012:** Chair Person of Board of Directors (BOD) for Ecole Internationale des Parents de Butare (EIPB), Huye Town, Southern Province, Rwanda
- **July – September 2019:** Candidate to the National Senatorial Elections in Rwanda representing the Northern Province.

#### 15. Memberships

- **August 2020 – to date:** Member of Academic and Research Staff Organization of the University of Rwanda;
- **July 2020 – to date:** Member of Rwanda Association of Professional Environmental Practitioners (RAPE – [www.rapep.org](http://www.rapep.org)) as Lead Expert (Reg. Number RAPEP/EA/129);
- **June 2020 – to date:** Member of Rwanda Association of Geomorphologists (RWAGeom), a National Scientific Member of the International Association of Geomorphologists (IAG - [www.geomorph.org](http://www.geomorph.org));
- **July 2017 – to date:** Member of Youth Mappers as School Advisor of University of Rwanda Nyarugenge Campus Chapter ([www.youthmappers.org](http://www.youthmappers.org));
- **January 2016 – to date:** Member of the Eastern African Land Administration Network (EALAN – [www.ealan.network.org](http://www.ealan.network.org)) as the overall coordinator representing University of Rwanda;
- **June 2010 - to date:** Member of the Landscape Management Committee of Greater Virunga Transboundary Collaboration (GVTC – [www.greatervirunga.org](http://www.greatervirunga.org)) representing University of Rwanda;
- **23<sup>rd</sup> September 2013 – to date:** Member of the College Management Council of College of Science and Technology at University of Rwanda ([www.ur.cst.ac.rw](http://www.ur.cst.ac.rw)) as a representative of the Centre for Geographic Information Systems and Remote Sensing (CGIS)

#### 16. Contact Persons

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Done at Kigali, 14<sup>th</sup> February 2021

(Sé)

Gaspard Rwanyiziri, Ph.D.