

## Curriculum vitae

# **Issa Ouedraogo (PhD)**

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), West Africa  
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

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### **PRESENT POSITION**

- Scientist – Coordinator the CINSERE project (Climate information services for increased resilience and productivity in Senegal: <https://ccafs.cgiar.org/climate-information-services-increased-resilience-and-productivity-senegal#.Wor0S6hl82w>), CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), West Africa, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Dakar, Senegal

### **PERSONAL INFORMATION**

- Date of Birth: 31<sup>st</sup> December 1973
- Marital status: married
- Nationality: Burkinabe
- Language proficiency: French and English

### **PROFESSIONAL EXPERTISE/RESEARCH INTERESTS**

- Natural Resource Management
- Land use architecture, matrix and transition
- Population and environment nexus
- Agricultural soil and water conservation
- Water harvesting technologies
- Adaptation and mitigation measures
- Climate change and climate information services

### **EDUCATION AND QUALIFICATIONS**

- 2007 - 2010: PhD (Natural Resource Management with specialization in GIS and Remote Sensing), Swedish University of Agricultural Sciences (SLU), Alnarp, Sweden
- 2005 - 2006: Master of Science (Geography) University of Cape Coast, Ghana
- 2000 - 2002. BSc (Geography), Université de Ouagadougou, Burkina Faso

### **OTHERS EXPERTISES**

- Geographic Information System (GIS)
- Remote Sensing (RS)
- Participatory Geographic Information System (PGIS)

### **CAREER SUMMURAY AND WORK EXPERIENCE**

- October 2016 to Present: Scientist – Coordinator of Project (CINSERE: climate information services for increased resilience and productivity in Senegal), CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), West Africa, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Dakar, Senegal.

- January 2016 – September 2016: Consultant Scientist at the International Livestock Research Institute (ILRI – Ouagadougou, Burkina Faso) and at International Water Management Institute (IWMI – Accra, Ghana)
- January 2014 – December 2015: Post-Doctoral Fellow at World Agroforestry Centre (ICRAF), Nairobi, Kenya.
- July 2012 – December 2013: Post-Doctoral Fellow at Stockholm Resilience Centre (SRC), Stockholm, Sweden
- April 2012 – June 2012: Visiting scientist at the University of Frankfurt, Frankfurt, Germany
- January 2010 – April 2012 : Research Scientist at the Institut de l'Environnement et de Recherche Agricoles (INERA), Ouagadougou, Burkina Faso

## SCIENTIFIC PRODUCTION

### • Published papers

1. **Ouedraogo, I.**; Diouf, N.S.; Ouédraogo, M.; Ndiaye, O.; Zougmore, R.B., **2018**. Closing the gap between climate information producers and users: Assessment of needs and uptake in senegal. *Climate*, 6(13).
2. Malmborg, K.; Sinare, H.; Enfors Kautsky, E.; **Ouedraogo, I.**; Gordon, L.J., **2018**: Mapping regional livelihood benefits from local ecosystem services assessments in rural sahel. *PLOS ONE* 13(?)
3. Savadogo M., K. Ouattara K., **Ouedraogo I.**, **2017** : propriétés hydriques des sols dans deux zones à écosystèmes contrastés au Sahel. *Agronomie Africaine* 29(1):119-129
4. Mwenda P., Mbow C., and **Ouedraogo I.**, **2017**: Linking temporal climate factors with staple cereal yields in Southern Burkina Faso. *International Journal of Environmental and Ecological Engineering* 5(2).
5. Savadogo OM., Ouattara K., Pare S., **Ouedraogo I.**, Sawadogo-Kaboré S., Barron J., Zombre NP., **2016**. Structure, composition spécifique et diversité des ligneux dans deux zones contrastées en zone Sahélienne du Burkina Faso. *VertigO* 16(1).
6. Savadogo OM., Ouattara K., **Ouedraogo I.**, Zombre NP. **2016**. Vegetation improvement and soil biological quality in the Sahel of Burkina Faso. *International Journal of Biological and Chemical Sciences* 10(3).
7. Tondoh, J. E., **Ouedraogo I.**, Bayala J., Tamene L., Sila A., Vågen T. G., and Kalinganiré A.. **2016**. Soil organic carbon stocks in semi-arid West African drylands: implications for climate change adaptation and mitigation. *SOIL Discuss.* **2016**:1-41.
8. Borona, M., Mbow C., and Ouedraogo I. **2016**. Unstacking high temporal resolution meteorological data for multidimensional analysis of climate variability in southern Burkina Faso. *Geografisk Tidsskrift-Danish Journal of Geography* 116:176-189
9. **Ouedraogo I.**, Barron J., Tumbo SD., Kahimba FC., **2015**. Land cover transition in northern Tanzania. *Land Degradation & Development*, DOI: 10.1002/ldr.2461
10. **Ouedraogo, I.**; Mbow, C.; Balinga, M.; Neufeldt, H., **2015**. Transitions in Land Use Architecture under Multiple Human Driving Forces in a Semi-Arid Zone. *Land* 2015, 4, 560-577.
11. Borona M, Mbow C, **Ouedraogo I**, Coe R. **2015**. Associating multivariate climatic descriptors with cereal yields: A case study of Southern Burkina Faso. ICRAF Working Paper No. 207 Nairobi: World Agroforestry Centre. DOI: <http://dx.doi.org/10.5716/WP15273.PDF>
12. Savadogo OM., Ouattara K., Barron J., **Ouedraogo I.**, Gordon L., Enfors E., Zombre NP., **2015**. Etats des écosystèmes sahéliens : reverdissement, perte de la diversité et qualité des sols. *Afrique Science*, 11(5), 433-446.
13. de Bruin A, Pateman R, Barron J, Balima M, **Ouedraogo I**, Da Dapola E, Fosu M, Annor Fo, Magombeyi M, Kileshye Onema J-M., **2015**. Setting up Agricultural Water Management

interventions – learning from successful case studies in the Volta and Limpopo river basins. *Water Resources and Rural Development*. DOI: <http://dx.doi.org/10.1016/j.wrr.2015.09.001>

14. Mbow C., Brandt B., **Ouedraogo I.**, Leeuw j., **2015**. What Four Decades of Earth Observation Tell us about Land Degradation in the Sahel? *Remote Sensing* 7: 4048-4067
15. Kaboré Séraphine S., **Ouédraogo Issa**, Traoré San, **2015**. Staff aging and turnover in agricultural research: a case study on the Burkina Faso Environment and Agricultural Research Institute. *Agricultural Science & Technology Indicators (ASTI)* – IFPRI
16. **Ouedraogo I.**, Runge j., Eisenberg J., Sawadogo/Kaboré S., Barron J., **2014**. The re-greening of the Sahel: natural cyclicity or human-made changes? *Land* 2014, 3, 1075-1090; doi:10.3390/land3031075.
17. Dibloni O. T., Soulama S., **Ouedraogo I.**, Guenda W., **2012**. Feeding Habits of Hippopotamus amphibius and Carrying Capacity in the Biosphere Reserve of "Mare aux Hippopotames" in the South-Sudanian Zone of Burkina Faso. *Pakistan J. Zool.*, vol. 44(2), pp. 433-442, 2012.
18. **Ouedraogo I.**, Savadogo P., Tigabu M., Dayamba SD., OdénPC., **2011**. Systematic and Random Transitions of land cover types in Burkina Faso, West Africa. *International Journal of Remote Sensing*, DOI:10.1080/01431161.2010.495095.
19. **Ouedraogo I.**, Savadogo P., Tigabu M., Cole R., OdénPC., Ouadba JM., **2011**. Trajectory Analysis of Forest Cover Change in the Tropical Dry Forest of Burkina Faso, West Africa. *Landscape Research*, Vol. 36, No. 3, 303-320.
20. **Ouedraogo I.**, Tigabu M., Savadogo P., Compaoré H., Odén PC., Ouadba JM., **2010**. Land cover change and its relation with population dynamics in Burkina Faso, West Africa. *Land Degradation & Development*, 20, pp. 217-230.
21. **Ouedraogo I.**, Savadogo P., Tigabu M., Cole R., OdénPC., Ouadba JM., **2009**. Is rural migration a threat to environmental sustainability in southern Burkina Faso? *Land Degradation & Development*, 21(5), pp. 453-462.
22. **Ouedraogo I.**, **2006**. Land use dynamics in Bieha District, Sissili Province, southern Burkina Faso, West Africa. *Umoja* 1(2), pp. 18 - 34.
23. Koné N., Balima / Dama M., **Ouedraogo I.**, **2005**. Inventaire cartographique des bas-fonds et plaines de la boucle de Mouhoun par fusion de données LandsatEtm+ panchromatique et multispectrales. *Cahier du Centre d'Etude et de Recherche en Lettre, Sciences Humaines et Sociales* (CERLESHS) Numéro Spécial, pp37 - 50. Université de Ouagadougou.

- **Book chapters**

1. Kaboré/Sawadogo S., Ouattara K., Balima M., **Ouedraogo I.**, Traoré S., Savadogo M and Gowing J., **2013**: Burkina Faso: a cradle of farm-scale technologies. In *Water Harvesting in Sub-Saharan Africa*. Edited by: W. Critchley and J. Gowing. CTA, pp 51-69. ISBN: 1136273050, 9781136273056
2. **Ouedraogo I.**, Ouattara K., Kaboré/Sawadogo S. Paré S., Barron J. **2012**. Permanent internal migration as response to food shortage: implication to ecosystem services in southern Burkina Faso. In "*Food Production: Approaches, Challenges and Tasks*", INTECHopen: ISBN: 979-953-307-284-4, pp 41 - 54

- **Academic theses**

1. **Ouedraogo I.**, **2010**. Land use dynamics and demographic change in Southern Burkina Faso. Doctorate Thesis, Swedish University of Agricultural Sciences, Alnarp, Sweden. 143p. [http://diss-epsilon.slu.se:8080/archive/00002355/01/Ouedrago\\_I\\_100928.pdf](http://diss-epsilon.slu.se:8080/archive/00002355/01/Ouedrago_I_100928.pdf)
2. **Ouedraogo I.**, **2006**. Land use dynamics in Bieha District, Sissili Province, Southern Burkina Faso. Master thesis. University of Cape Coast, Faculty of Social Science, Department of

- **Conference presentations**

1. Mbow C., Brandt M., Fensholt R., **Ouedraogo I.**, Tagesson T., Mwenda M., Marshall M., **2015**. Thematic gaps in assessing land degradation trends in the Sahel. AGU conference, 14 – 18 December 2015, San Francisco, CA, USA.
2. **Ouedraogo I.**, Toure I., Borona M, Mbow C. ICRAF's Science Week **2014** (8-12 Septembre in Nairobi): presentation of 6 posters:
  - Human and Climate Drivers of Land Cover Transition in Southern Burkina Faso
  - Direct benefits from trees on farm in Cassou
  - Cassou land cover change and transition from 1990 to 2013
  - Trees links to ecosystem services in Cassou
  - Local processes of forest cover change in Cassou
  - Leverage of real drivers of change in Cassou
3. **Ouedraogo I.** and Barron J., **2013**. Detecting water harvesting based agricultural land dynamics in Makanya while accounting for persistence. 14<sup>th</sup>WaterNet/WARFSA/GWP-SA conference. Dar-es-Salaam, 30 October – 01 November 2013.
4. **Ouedraogo I.** and Barron J., **2013**. Environmental Impacts of Water Harvesting Technologies in Sub-Saharan Africa: key-messages. WHaTeR conference, Addis Ababa: 08 – 12 July 2013.
5. **Ouedraogo I.** Barron J., and Balima/Dama M., **2012**. Successful water management techniques for vegetable production in Burkina Faso: PGIS as tool of assessment. 15th SearNet International Conference, November 04 - 09, 2012, Naivasha, Kenya.
6. **Ouedraogo I.**, Runge J., Eisenberg J., **2012**. The re-greening of the Sahel: contribution to the current debate. AdG Conference, June 22-23 2012, Hamburg, Germany.
7. **Ouedraogo I.**, Savadogo P., Tigabu M., OdénPC., **2010**. Systematic and random cover transitions in the tropical dry forest of Burkina Faso, West Africa. Conference of the Association of American Geographers (**AAG**), Washington DC, April 14-18 2010.
8. **Ouedraogo I.**, Tigabu M., Savadogo P., OdénPC., Ouadba JM., **2009**. Is rural migration a threat to environmental sustainability in southern Burkina Faso? Annual conference of the International Union for the Scientific Study of the Population (**IUSSP**), Marrakech in Sept 27 – 2 October 2009.
9. **Ouedraogo I.**, Savadogo P., Tigabu M., OdénPC., Ouadba JM., **2009**. Land-cover Change Trajectories in Southern Burkina Faso, West Africa, Conference of the Association of American Geographers (**AAG**), Las Vegas, March 2009.
10. **Ouedraogo I.**, Tigabu M., Savadogo P., OdénPC., Ouadba JM., **2008**. Impact of private company's management regimes on land cover change in the state owned protected areas in Burkina Faso. Conference of African Association of the Remote Sensing of the Environment (**AARSE**), Accra 25-31 October 2008
11. Compaoré H., Hendrickx JMH., **Ouedraogo I.**, Friesen J., NCV Giesen , & PLG Vlek, **2008**. Land use change effects on the energy balance terms at local scale in the Navrongo area, northern Ghana. Conference of African Association of the Remote Sensing of the Environment (**AARSE**), Accra 25-31 October 2008
12. **Ouedraogo I.**, Söderberg U., Sandewall M., Ouadba, JM., **2008**. Land use change as response to migrant's pressure. Annual conference of the Association of American Geographers (**AAG**), Boston, MA, 15-19 April 2008.

- **Supervision of Master and PhD student's works**

1. **Eva Arabella Troguish** (Master Student, University of Frankfurt, 2013-2014): challenges and opportunities of the soil water conservation technologies in Burkina Faso, case of Arbole.
2. **Nikiema Emmanuel** (Master Student, Université Sigtet-A, Ouagadougou, Burkina Faso, 2014-2015). Analyse des facteurs de dégradation des cours d'eau au Sahel Burkinabe. Cas de Gourouol et de Goudebo dans le Seno.
3. **Savadogo Alain** (Master Student, Université Senghor, Alexandrie – Egypte 2014-2015). Dynamique de l'occupation et de la restauration des terres dans un écosystème soumis à l'exploitation de l'or : cas de Sabcé au Burkina Faso.
4. **Toure Ibrahim** (PhD student, University of Finland, 2015-). Appraisal tool for rapid carbon estimates in land use systems of the sudan-sahelian zone in West Africa (co-supervision).
5. **Bagagna Abdoul Rasmane** (PhD candidate from April 2016): vulnerability and adaptation to climate change of small scale farmers in Burkina Faso.
6. **Kekele Adama** (PhD candidate, university of Ouagadougou, from January 2016): Estimation et réhabilitation du stock de carbone et la dynamique spatiale le long des grands cours d'eau au Burkina Faso: cas de la galerie forestière du Mouhoun.

### Professional affiliations (member of)

1. International Union of the Scientific Study of Population (IUSSP)
2. Union for African Population Studies (UAPS)
3. Association of American Geographers (AAG)
4. African Specialty Group (ASG) of the Association of American Geographers (AAG)
5. EIS-Africa, A Network for Co-operative Management of Environmental Information in Africa
6. Africa GIS
7. African Association of Remote Sensing of the Environment (AARSE)
8. Global Spatial Data Infrastructure Association (GSDI-Association).
9. WaterNet
10. South and East Africa Rain water Association (SEARNet)

### Experience in proposal development

| Year | Title  | Funder                | Role        | Status       |
|------|--|-----------------------|-------------|--------------|
| 2012 | The influence of population growth and climate change on forest cover dynamics in Burkina Faso   | ACCFP-START           | Leader      | successful   |
| 2012 | Re-greening trend of the vegetation cover in the Sahel of Burkina Faso   | DFG-TWAS              | Leader      | successful   |
| 2013 | Enhancing climate science and policy engagement to advance adaptation and resilience of vulnerable communities in the semi-arid regions of Africa and South Asia                         | CARIAA                | Contributor | Unsuccessful |
| 2013 | Rebuilding ecosystem resilience through soil water conservation in Burkina Faso  | FORMAS-Sida           | Leader      | Unsuccessful |
| 2014 | Building resilience through inclusive participatory learning and innovative land and water productivity information delivery in mixed tree-crop-livestock farming systems in Niger River | WLE                   | Contributor | unsuccessful |
| 2015 | Cassou CAF Carbon – community forest   | Plan Vivo             | Leader      | Successful   |
| 2016 | Unlocking the untapped potential of water harvesting technologies for livelihood improvement in rural areas in Burkina Faso, West Africa (WHaTeL)  | Volkswagen Foundation | Leader      | Successful   |

### Awards

1. January **2011**: Attaché de Recherche (Research Assistant) by the Minister of Research and Innovation of Burkina Faso
2. July **2013**: Chargé de Recherche (Senior Scientist) by the CAMES (African Council for High Education ([www.lecames.org](http://www.lecames.org))).