Dr Aymar Yaovi Bossa – CV

I. Personal information

- Name(s): **Aymar Yaovi**
- Surname: **Bossa**
- Key Expertise: Operational Hydrology – Integrated Water Resources Management, Environmental Modelling – Flood Forecasting – Climate Risks & Ecosystem Services Assessment - Geospatial & Statistical Analyses - Disaster Risks Reduction/Management – Policy Development, etc.
- Current position: Lecturer-Researcher, National Water Institute (INE), University of Abomey-Calavi, Benin
- Email: aymar.bossa@uac.bj / bossa.aymar@gmail.com / baymar5@hotmail.com
- Phone : +229 69432541
- Skype ID: Bossa.Aymar
- ResearchGate: https://www.researchgate.net/profile/AY_Bossa
- Language: **English and French** (good in both writing and speaking)

II. Education

- 2012- 2014: Post-doctoral studies, University of Bonn, Germany.
- 2008- 2012: PhD in Hydrology and Water Resources Management, University of Bonn, Germany.
- 2005 -2007: MSc. in Natural Resources Management, University of Abomey-Calavi, Benin.
- 2001- 2004: 'Maîtrise' in Sciences and Techniques, University of Abomey-Calavi, Benin.

III. Knowledge and Skills

- **Areas of Expertise in Broad:** Operational hydrology; integrated water and land management; water quality; uncertainty assessment and regionalization; climate and land use change impact assessment; water related ecosystem services assessment; water and soil conservation; small water infrastructures and management scenario development, climate risks assessment; flood disaster risk reduction and management, numerical governance and environment, etc.
- **Analytical skills:** Hydrological and environmental modelling; statistical methods; geospatial methods; multi-variate methods; multi-criteria methods; mathematical programming methods.
- **Computer skills:** Microsoft office; hydrology and water resources management software packages (HEC-RAS, SWAT, UHP-HRU, WEAP, HBV, GR4J, MIKE BASIN, HYDRUS, WASIM, etc.); crop management software packages (EPIC, GEPIC, APEX, WINEPIC, AquaCrop, etc.); GIS, remote sensing and statistical software package (ArcGIS, R, SPSS, MINITAB, etc.); solver platform for optimization and simulation (in Excel).

IV. Employment history

- **Oct. 2015 – to date: Researcher/Lecturer** – National Institute of Water, University of Abomey-Calavi, Benin.
- **Jul. 2014 – Jan. 2020: Researcher** – Head of Department Hydrology and Water Resources Management, West Africa Science Centre for Climate Change and Adapted land use (WASCAL), WASCAL Competence Center, Ouaga, Burkina Faso.
- **2012 – 2014**: Postdoc, at University of Bonn, Dept. of Geography, Hydrology and Water Resources Management, University of Bonn, Germany.
- **2008 – 2012**: PhD researcher at University of Bonn, Dept. of Geography, Hydrology and Water Resources Management, University of Bonn, Germany.
- **2005 – 2007**: Technical assistant on research projects (RIVERTWIN), General Directorate of Water, Benin.

V. Research Interests

My research interests include modelling of hydrological processes, water availability and demand, environmental management options; farm practices and management options; integrated river basin management; trade-off analysis; multi-criteria analysis of environmental decisions; assessing water-related ecosystem services and livelihoods, flood forecasting and management and early warning systems; soil and water conservation; etc.

VI. Contribution to research projects/Institutions

I have thorough experiences in developing and implementing community-based and field measurement strategies at different scales with adequate resolution to assess for instance climate control on flood risks, primary productions and ecosystem services. I developed and use modelling tools to provide guidance to stakeholders in various sectors dealing with water resources and related infrastructures. Currently Lecturer-Researcher at the National Water Institute (INE) of the University of Abomey-Calavi in Benin, I've worked for the West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) over years. My main

assignment at WASCAL was to raise funds through development of research proposals, coordinate and implement research projects and provide technical support to the establishment of a Regional Hydrological Observation Network for West Africa. Works undertaken that best Illustrate my achievements and capabilities are as follows:

1) **Project** (international competitive call)**:** Capacity building in support of weather, water and climate services in Mali and Niger
   Year: 2019-2020
   Location: Mali and Niger
   Funder: World Bank
   Position held: Coordinator
   Activities performed: 1- Provide guidance to the World Bank for strengthening technical and human capacity of all relevant stakeholders in Mali and Niger; 2- provide tailored short courses to strengthen the technical capacity of the technical experts of the national hydrometeorological services in Mali and Niger; 3- Provide guidance to the World Bank on investment planning for effective weather, water and climate services in Mali and Niger.

2) **Project** (international competitive call)**:** Disaster Risk Reduction Practice Research and Capacity Building Support to ECOWAS
   Year: 2018-2019
   Location: 15 ECOWAS countries
   Funder: World Bank
   Position held: Coordinator
   Activities performed: 1- Conduct a baseline study on trans-boundary floods and disasters in the ECOWAS region; 2- Develop a regional flood forecasting system integrating existing regional and national systems and provide guidance on open data management; 3- Develop a policy note on a regional (ECOWAS) approach for post disaster recovery and reconstruction planning (including Post Disaster Needs Assessments), capacity building and support through institutions in the region, such as universities; 4- Facilitate training and capacity enhancement for the ECOWAS Commission and experts from member states related to flood forecasting, disaster preparedness and post disaster recovery planning; 5- Provide guidance on strengthening the academic network related to disaster risk management across different disciplines in West Africa and contribute to relevant regional conferences.

3) **Project** (international competitive call)**:** Participatory assessment of flood-related disaster prevention and development of an adapted coping system in Ghana
   Year: 2018 - 2022
   Location: Ghana
   Funder: German Ministry of Education & research through IKARIM "Disaster and Risk Management" call
   Position held: PI, Hydro
   Activities performed: (1) Investigate the current status, gaps, weaknesses, and challenges of the flood risk management and strategy; (2) identify possible actions on reducing the flood-related risk at national level; (3) develop and implement an innovative web-based DSS tool for an inter/trans-disciplinary participatory decision-making process.

4) **Project** (international competitive call)**:** Managing new risks and opportunities of agricultural development of African floodplains
   Year: 2016-2019
   Location: Senegal and Burkina Faso
   Funder: French Ministry of Foreign Affairs under AGRICORA programme (Agriculture and climatic risk management, tools and research in Africa)
   Position held: Coordinator

Activities performed: 1- Analysis of the evolution of agricultural development policies in floodplains 2- Regional and participatory diagnosis of the diversity of exploitation conditions in floodplains and the problems encountered on a sample of representative sites in the region and intervention policies 3- Assessment of hydro-climatic hazards and the effects of developments on water regimes in floodplains and lowland areas 4- Assessment of current risk management modalities and adaptive and resilient capacities of production systems and communities 5- Strengthening the capacities of national research and stakeholder organizations.

5) **Project** (international competitive call)**:** Climate information for integrated renewable electricity generation
Year: 2017 - 2020
Location: Volta-Niger basins
Funder: German Ministry of Education & research through ER4CS (European Research Area for Climate Services)
Position held: PI, Hydro
Activities performed: (1) Contribute to screening and mapping potentials of hydropower Renewable Electricity Generation (REG) in West Africa (W/A); (2) regional mapping of peak/low flows in the Volta-Niger basins for the identification of potential locations of mixed hydropower demonstrator; (3) perform WASIM model evaluation, potential impacts of extreme events on hydropower REG, mixed-REG suitability for the case study areas.

6) **Project:** Building understanding of climate variability into planning of groundwater supplies from low storage aquifers
Year: 2016 - 2019
Location: Ghana and Burkina Faso
Funder: UPGro Funder
Position held: Focal point
Activities performed: (1) gather in-situ data on plants and soils and assess the spatial variability of the partitioning of evapotranspiration into soil and plant evaporation and plant transpiration; (2) undertake modelling using soil-plant-atmosphere/land surface models to support process understanding; (3) undertake an assessment, based on existing remote sensing data sources, of past and future changes in land use and land cover conditions; (4) develop models at regional scale that will calculate the water balance under changing land use and land cover conditions.

7) **Project:** Supporting Investment Decisions in Water and Land Management across the Rural-Urban Continuum in the Volta - Niger Focal Region
Year: 2014-2016
Location: Burkina Faso
Funder: CGIAR Funders
Position held: Team member
Activities performed: 1- Barriers and Opportunity of soil restoration and conservation techniques adoption (SWC/DSR) in Burkina-Faso: Case of stone bunds; 2- Analysis of investment opportunities in small water infrastructure in the Region Dano in Burkina Faso; 3- Economic valuation of ecosystem services in Burkina Faso: Case of wastewater collected from the Centre of Ouagadougou and runoff water reservoir of Moutouri for vegetable production; 4- Cost-benefit analysis of the use of waste water treated in the production of vegetables; 5- Performance Evaluation and Multi-criteria Comparison of ecosystem services from irrigated agriculture in Burkina Faso: the case of the cities of Koudougou and Reo; 6- Gender and technical efficiency of drip irrigation in Sanguié.

VII. Capacity Building

Supervision/mentorship of thesis

- PhD students: 5
- MSc. students: 15
- Bachelor: 5

Internship/training programme

- PhD students: 14
- MSc. students: 40
- Operational staff (15 West African hydromet services): 30

VIII. Lectures

National Institute of Water, University of Abomey-Calavi

- Generalities on natural resources management
- Sustainable management of natural resources
- Soil hydrodynamics
- Ecohydrological modelling
- Soil and water conservation

IX. Measures of Esteem

I won a considerable number of research grants from various funding agencies such as World Bank, African Union, European Union, French Government, German Federal Ministry of Education and Research. To implement my Ph.D and MSc. projects I was awarded the German Academic Exchange Service (DAAD) Fellowship in 2009 in Germany and the Interuniversity Council of the French community (CIUF) Fellowship in 2005. I'm serving as a reviewer for several high ranked peer-reviewed scientific journals such as Journal of Hydrology, Hydrological Sciences, SOIL, Catena, Agricultural Water Management, Water, etc.

X. Selected publications

Selected research articles

1. Sall, M., Poussin, J.-C.; **Bossa, A.Y.**, Ndiaye, R., Cissé, M., Martin, D., Bader, J.-C., Sultan, B., Ogilvie, A., 2020. Water Constraints and Flood-Recession Agriculture in the Senegal River Valley. Atmosphere 11, no. 11: 1192. https://doi.org/10.3390/atmos11111192.
2. Mutsindikwa, T.C., Yira, Y., **Bossa, A.Y.**, Hounkpè J., Salack S., Saley S.A., Rabani A., 2020. Modeling climate change impact on the hydropower potential of the Bamboi catchment. Model. Earth Syst. Environ. https://doi.org/10.1007/s40808-020-01052-w.
3. Ascott M. J., Macdonald D. M. J., Black E., Verhoef A., Nakohoun P., Tirogo J. Sandwidi W. J. P., Bliefernicht J., Sorensen J. P. R., **Bossa A. Y.**, 2020. In Situ Observations and Lumped Parameter Model Reconstructions Reveal Intra-Annual to Multidecadal Variability in Groundwater Levels in Sub-Saharan Africa. Water Resources Research, 56, e2020WR028056. https://doi.org/10.1029/2020WR028056.
4. Almoradie, A., de Brito, M. M., Evers, M., **Bossa, A.Y.**, Lumor, M., Norman, C., Yacouba, Y., Hounkpè, J., 2020. Current flood risk management practices in Ghana: gaps and opportunities for improving resilience. J. Flood Risk Manag. DOI: 10.1111/jfr3.12664.
5. Quentin, F., **Bossa, A.Y.**, Yira, Y., Preko, K., Sintondji, L.O., van der Ploeg, M., Adebanji, A., 2020. A multi-model approach for analyzing water balance and water-related ecosystem services in the Ouriyori catchment (Benin). Hydrological Sciences Journal. In press.
6. Larbi, I., Obuobie, E., Verhoef, A., Julich, S., Feger, K., **Bossa, A.Y.**, Macdonald, D. 2020. Water balance components estimation under scenarios of land cover change in the Vea Catchment, West Africa. Under review: Hydrological Sciences Journal. DOI: 10.1080/02626667.2020.1802467.
7. **Bossa, A.Y.**; Hounkpè, J.; Yira, Y.; Serpantié, G.; Lidon, B.; Fusillier, J.L.; Sintondji, L.O.; Tondoh, J.E.; Diekkrüger, B., 2020. Managing New Risks of and Opportunities for the Agricultural Development of West-African Floodplains: Hydroclimatic Conditions and Implications for Rice Production. Climate, 8, 11. doi:10.3390/cli8010011.
8. Serpantié, G., Dorée, A., Fusillier, J., Moity-maizi, P., Lidon, B., Douanio, M., Sawadogo, A., **Bossa, A.Y.**, Hounkpè, J., 2019. Nouveaux risques dans les bas-fonds des terroirs soudaniens. Une étude de cas au

Burkina Faso. Cahiers Agricultures 28(19). doi:10.1051/cagri/2019020

9. Salack, S, **Bossa, AY**, Bliefernicht, J, Berger, S, Yira, Y, Sanoussi, KA, Guug, S, Heinzeller, D, Avocanh, AS, Hamadou, B, Meda, S, Diallo, BA, Bado, IB, Saley, IA, Daku, EK, Lawson, NZ, Ganaba, A, Sanfo, S, Hien, K, Aduna, A, Steup, G, Diekkrüger, B, Waongo, M, Rogmann, A, Kunkel, R, Lamers, JPA, Sylla, MB, Kunstmann, H, Barry, B, Sedogo, LG, Jaminon, C, Vlek, P, Adegoke, J and Savadogo, M. 2019. Designing Transnational Hydroclimatological Observation Networks and Data Sharing Policies in West Africa. Data Science Journal, 18: 33, pp. 1–15. DOI: https://doi.org/10.5334/dsj-2019-033.
10. Yira, Y., **Bossa, Y.A.**, Keita, A., Fusillier, J.L., Serpantié, G., Yaméogo, B.T., Idrissou, M., Lidon, B., 2019. Failure of inland valleys development: a hydrological diagnosis of the Bankandi valley in Burkina Faso. Modeling Earth Systems and Environment. https://doi.org/10.1007/s40808-019-00628-5.
11. Yira, Y., **Bossa, A.Y.**, 2019. Agricultural Expansion-Induced Infiltration Rate Change in a West African Tropical Catchment. Applied and Environmental Soil Science, Volume 2019, Article ID 2434512, 9 pages, https://doi.org/10.1155/2019/2434512.
12. Yaméogo, T, **Bossa, A.Y.**, Torou, B, Fusillier, J-L, Da, D, Yira, Y, Serpantié, G, Somé, F & Dama-Balima, M 2018, 'Socio-Economic Factors Influencing Small-Scale Farmers' Market Participation: Case of Rice Producers in Dano', Sustainability, vol. 10, no. 12, p. 4354.
13. Hounkpatin, O.K.L., Op de Hipt, F., **Bossa, A.Y.**, Welp, G., Amelung, W., 2018. Soil organic carbon stocks and their determining factors in the Dano catchment (Southwest Burkina Faso). CATENA 166, 298–309. https://doi.org/10.1016/j.catena.2018.04.013.
14. Fonta, M.W., Kedir, A.M., **Bossa, A.Y.**, Greenough, K.M., Sylla, B.M., Barry, B., 2018. A Ricardian Valuation of the Impact of Climate Change on Nigerian Cocoa Production: Insight for Adaptation Policy. International Journal of Climate Change Strategy and Management. DOI10.1108/IJCCSM-05-2016-0074.
15. Bliefernicht, J., Berger, S., Salack, S., Guug, S., Hingerl L., Heinzeller, D., Mauder, M., Steinbrecher, R., Steup, G., **Bossa, A.Y.**, Waongo, M., Quansah, E., Balogun, A. A., Yira, Y., Arnault, J., Wagner, S., Klein, C., Straub, A., Schonrock, R., Kunkel, R., Rogmann, A., Neidl, F., Jahn, C., Diekkruger, B., Aduna, A., Barry, B., Kunstmann, H. (2018) The WASCAL Hydro-Meteorological Observatory in the Sudan Savanna of Burkina Faso and Ghana. Hydrological observatories, Vadoze Zone Journal 17(1). DOI: 10.2136/vzj2018.03.0065.
16. Balana, B., Kabore, E., Sawadogo, E.R., Trucker, J., **Bossa, A.Y.**, Sanfo, S., Fonta, W.F., 2017. Can drip irrigation help farmers to adapt to climate change and increase their incomes? Results from the 'Supporting investment decisions in water and land management across the rural-urban continuum in the Volta - Niger focal region' project. WLE Briefing Series No. 15.
17. Houessionon, P. Fonta, W.M., **Bossa, A.Y.**, Sanfo, S., Thiombiano, N., Zahonogo, P, Balana, B., 2017. Economic Valuation of Ecosystem Services from Small-Scale Agricultural Management Interventions in Burkina Faso: A Discrete Choice Experiment Approach. Sustainability 6(1672):1-16. DOI10.3390/su9091672.
18. Yira, Y., Diekkrüger, B., Steup, G., **Bossa, A.Y.**, 2017. Impact of climate change on hydrological conditions in a tropical West African catchment using an ensemble of climate simulations. Hydrol Earth Syst Sci 21, 2143–2161. doi:10.5194/hess-21-2143-2017.
19. Yira, Y., Diekkrüger, B., Steup, G., **Bossa, A.Y.**, 2016. Modeling land use change impacts on water resources in a tropical West African catchment (Dano, Burkina Faso). Journal of Hydrology, 537, 187–199.
20. Houessionon, P., Balana, B., Zahodogo, P., Thiombiano, N., **Bossa, A.Y.**, 2016. Sustainable water management and resource recovery and reuse contracts in agriculture in Burkina-Faso for Ecosystem Services sustainability: Using choice experiments to estimate the farmers' welfare. 5th International Conference of the African Association of Agricultural Economists, September 23-26, 2016, Addis Ababa, Ethiopia.
21. Regh, T., **Bossa, A.Y.**, Diekkrüger, B., 2014. Scenario-based simulations of the impacts of rainfall variability and management options on maize production in Benin. African Journal of Agricultural Research 9.46:3393-3410. doi:10.5897//AJAR2014.8757.
22. **Bossa, A.Y.**, Diekkrüger, B., Agbossou, E.K., 2014. Scenario-Based Impacts of Land Use and Climate Change on Land and Water Degradation from the Meso to Regional Scale. Water 6(10), 3152-3181; doi:10.3390/w6103152.
23. **Bossa, A.Y.**, Diekkrüger, B., 2014. Spatio-temporal variability of soil respiration in a spruce-dominated headwater catchment in western Germany. Biogeosciences, 11, 4235-4249, doi:10.5194/bg-11-4235-

2014, 2014.

24. **Bossa, A.Y.**, Diekkrüger, B., Igué, A.M., Gaiser, T., 2012. Analyzing the effects of different soil databases on modeling of hydrological processes and sediment yield in Benin (West Africa). Geoderma, 173–174, 61–74.
25. **Bossa, A.Y.**, Diekkrüger, B., 2012. Estimating scale effects of catchment properties on modeling soil and water degradation. In: R. Seppelt, A.A. Voinov, S. Lange, D. Bankamp (Eds.), Managing Resources of a Limited Planet: Pathways and Visions under Uncertainty, International Environmental Modeling and Software Society (iEMSs), Sixth Biennial Meeting, Leipzig, Germany. ISBN: 978-88-9035-742-8. pp. 2974-2981. Available at http://www.iemss.org/sites/iemss2012//proceedings/I4_0572_Bossa_Diekkrueger.pdf
26. **Bossa, A.Y.**, Diekkrüger, B., Giertz, S., Steup, G., Sintondji, L.O., Agbossou, E.K., Hiepe, C., 2012. Modeling the effects of crop patterns and management scenarios on N and P loads to surface water and groundwater in a semi-humid catchment (West Africa). Agricultural Water Management, 115, 20-37.
27. Sintondji, L.O., Agbossou, K.E., Ahamide, B., **Bossa, A.Y.**, Konnon, D., Igue, A.M., 2009. Modélisation du bilan hydrique dans le bassin du Zou à l'exutoire d'Atchérigbé : Contribution à l'utilisation durable des ressources en eau dans le département des collines, centre-Bénin. Annales de l'Université de Ouagadougou 7 (C), 137-169.

Books

28. Sultan B., **Bossa A.Y.**, Salack S., Sanon M., 2020: Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISSN : 2431-7128. ISBN : 978-2-7099-2820-5, 362p.
29. Adegoke J., Sylla M.B., **Bossa A.Y.**, Ogunjobi K, Adounkpe J (2019): Regional Climate Change series : Floods. WASCAL Publishing, 114 p. ISBN 978-9988-2-8536-4.

Book chapters

30. **Bossa, A.Y.**, 2020. L'aménagement des zones inondables dans un contexte de changement climatique. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 115-119.
31. Serpantié, G., Dorée, A., Douanio, M., Somé, F., Hien, S., **Bossa, A.Y.**, Hounkpè, J., Fusillier, J.L., Lidon, B., Sawadogo, A., Dabiré, N., 2020. Diagnostic rizicole des bas-fonds face aux risques climatiques. Les effets des aléas d'inondation : cas de Lofing-Bankandi (Dano, Ioba, BF). In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 85-97.
32. Serpantié, G., Dorée, A., Douanio, M., Somé, F., **Bossa, A.Y.**, Fusillier, B., Sawadogo, A., Dabiré, N., 2020. Gestion du risque à l'échelle de la parcelle en riziculture de bas-fond (Dano, Burkina Faso). In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 99-113.
33. Dieye, M., Dia, D., Barbier, B., Sylla, E. H. M., Sall, M., Bader, J.C., **Bossa, A.Y.**, Sanfo S., Fall C. S. (2020). L'agriculture de décrue en Afrique de l'ouest et du centre une certaine résilience face à la variabilité climatique et à la régulation des fleuves. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 121-131.
34. Diop N., A., Sylla, E.H.M., Barbier, B., Bader, J-C. , Sall, M., Fall, C. S. Dieye, M., **Bossa, A.Y.**, 2020. L'agriculture de décrue a-t-elle un avenir au Sénégal ? une analyse selon la méthode FFOM : « forces-faiblesse-opportunités- menaces ». In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 133-144.
35. Fall C.S., Dia D., Diop, A., N., Sylla, E. H. M., Sall, M., Barbier B., **Bossa, A.Y.**, Dieye, M., 2020. L'agriculture de décrue au gré de la variabilité des politiques publiques sénégalaises. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 145-152.
36. Fall C.S., Barbier, B., Diop, A. N., Sall, M., Bader, J.C., Sylla, E., H., M., Dieye, M., **Bossa, A.Y.**, 2020. Entre deux eaux : l'agriculture de décrue face aux politiques transfrontalières dans la vallée du fleuve Sénégal. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 153 162.
37. Torou, B.M., Yameyogo, T.B., **Bossa, A.Y.**, Somé, F., Da, E.D., 2020. Diversité des processus de valorisation agricole des bas-fonds et durabilité des aménagements au Burkina Faso. In Sultan B., Bossa

A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 179-188.

38. Hounkpè, J., **Bossa, A.Y.**, Yira, Y., Fusillier, J.L., Keita, A., 2020. Fonctionnement hydrologique et hydraulique du bas-fond réaménagé de Bankandi dans la province du Ioba, Burkina Faso. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 205-215.
39. Serpantié, G., Sawadogo, A., Douanio, M., Dabiré, E., Somé, F., **Bossa, A.Y.**, Fusillier, J.L., 2020. Co-construction d'innovations pour la maîtrise de la conduite du riz de bas-fond en conditions contraignantes et aléatoires. In Sultan B., Bossa A.Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 227-238.
40. Yameyogo, T.B., Torou, B.M., Somé, F., Fusillier, J.L., **Bossa, A.Y.**, Da, E.D., 2020. Adoption des variétés améliorées de riz dans les bas-fonds: une analyse socio-économique des déterminants. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 239-249.
41. Yira, Y., **Bossa, A.Y.**, Hounkpè, J., Yameyogo, T.B., Torou, B.M., 2020. L'aménagement de bas-fonds en diguettes sur courbes de niveau : challenges d'implémentation dans le Sud-ouest du Burkina Faso. In Sultan B., Bossa A. Y., Salack S., Sanon M. (éd.): Risques climatiques et agriculture en Afrique de l'Ouest, Marseille, IRD Editions ISBN : 978-2-7099-2820-5, p. 251-259.
42. Adegoke J, Sylla MB, Taylor C, Klein C, **Bossa AY**, Ogunjobi K, Adounkpe J, 2019. On the 2017 rainy season intensity and subsequent flood events over West Africa. In Adegoke et al.: Regional Climate Change series : Floods. WASCAL Publishing, 114 p. ISBN 978-9988-2-8536-4. DOI: 10.33183/rccs.2019.p10.
43. Badou F.D., Hounkpè J., Yira Y., Ibrahim M., **Bossa A.Y.**, 2019. Increasing devastating flood events in West Africa: who is to blame? In Adegoke et al.: Regional Climate Change series : Floods. WASCAL Publishing, 114 p. ISBN 978-9988-2-8536-4. DOI: 10.33183/rccs.2019.p84.
44. Hounkpè J., Diekkrüger B., Badou F.D., **Bossa A.Y.**, Lawin E., Adounkpe J., Afouda A.A., 2019. How does climate and land use change influence flood hazard in Benin? In Adegoke et al.: Regional Climate Change series : Floods. WASCAL Publishing, 114 p. ISBN 978-9988-2-8536-4. DOI: 10.33183/rccs.2019.p44.
45. Komi K, Amisigo B., Diekkrüger B., Kokou K., **Bossa A.Y.**, Lawin E., Adounkpe J., 2019. Flood risk in the Oti River Basin-Analysis and policy implications. In Adegoke et al.: Regional Climate Change series : Floods. WASCAL Publishing, 114 p. ISBN 978-9988-2-8536-4. DOI : 10.33183/rccs.2019.p36.

Selected project reports:

46. **Bossa, A.Y.**, Hounkpè; J., Yira, Y., Sylla, B.M., 2019. Capacity building in support of weather, water and climate services in Mali and Niger. Deliverable 1: ECOWAS DRR Project Contract 7191987 under World Bank Support. 62p.
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54. **Bossa, A.Y.**, Forkuor, G., Tondoh, E.J., Sylla, B.M., Obuobie, E., Akinluyi, F.O., Hartman, M., Delloro, L., 2019. Evaluation report: regional awareness and technical training to implement flood forecasting and early warning. Deliverable 6.2: ECOWAS DRR Project Contract 7188309 under World Bank Support. 21p.
55. **Bossa Y.A.**, Yira Y., T. B. Yaméogo, Torou B. M., G. Serpentier, J.C Poussin, Balima D. M., B. Lidon, Fusillier J. L., Compaoré H., Da Dapola E., B. Barbier, M. Sall, R. Ndiaye, Madiame Cissé, Mollar, Lavigne-Delville, A. Adamczewski, D. Martin, A. Ogilvie, J. Y. Jamin, Girres. 2018. Managing new risks and opportunities of agricultural development of West African floodplains: Scientific report II.
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61. Hounkpatin, O., Opt de Hipt, F., **Bossa, A.Y.**, Gaiser, T., 2015. Soil map for the Dano catchment. Technical Report: WASCAL (Work Package 2.5), Bonn, Germany.
62. Sylla MB, Ibrahim B, **Bossa A.Y.**, Salack S, Barry A, Vagen J, Barry B, Sedogo L (2015): Report of Workshop on Regional Hydro-Climate Observation Network Set-up (ReHCON) in WASCAL Member Countries. 22-24 January 2015, Palace Hotel, Ouagadougou, Burkina Faso.
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64. **Bossa, A.Y.**, 2007. Méthodes d'évaluation des ressources en eau: vision d'une gestion intégrée. Report, Faculty of Agricultural Sciences – UAC, Benin. http://gwppnebenin.org/dru/node/179.

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65. Quentin, F., **Bossa, A.Y.**, Yira, Y., Preko, K., Sintondji, L.O. Climate change impacts on catchment water balance using an ensemble of climate simulations in Benin, West Africa. Under review: Scientific Reports - Manuscript ID SREP-19-14726-T.
66. Hounkpatin, O., **Bossa, A.Y.**, Igué, A.M., Sinsin, A.B. Assessment of the soil fertility status in Benin—Digital soil mapping using machine learning. Under internal review.
67. Ascott, M.J., Macdonald, D.M.J., Black, E., Verhoef, A., Nakohoun, P., Yofe-Tirogo, J., Sandwidi, W.J.P., Bliefernicht, J., Sorensen, J.P.R., **Bossa, A.Y.** In-situ observations and lumped parameter model reconstructions reveal annual to multi-decadal variability in groundwater levels in sub-Saharan Africa. Under review: Journal of Hydrology.
68. Thomas Mutiso KAVOO, Jean HOUNKPE, Aymar Yaovi BOSSA, Yacouba YIRA, Bernard TISCHBEIN. Intensity duration frequency analysis and peak discharge estimation for the ungauged Gountiyena basin in Niger. Under review: Environmental Earth Sciences - Manuscript ID ENGE-D-20-00989.

Certification

I certify that to the best of my knowledge and believe, this CV correctly describes me, my qualifications, and my experience.

Date: 21/March/2021