

Curriculum vitae

Dr. Ahmed A. H. Siddig

DAAD-PRIME postdoctoral fellow at the Dept. of Biometry & Environmental Systems Analysis - University of Freiburg
Tennenbacher Str. 4, Freiburg, Germany

(asiddig@eco.umass.edu / ahmedsiddig@fas.harvard.edu / ahmed_nyala@yahoo.com)

➤ Other current affiliations:

- Assistant professor of forestry and biodiversity conservation, University of Khartoum,
- Research associate, [Harvard Forest](#) – Harvard University.
- Adjunct Assistant Professor, Dep. Environmental Conservation – UMASS Amherst.

➤ Education:

- **PhD. (May 2015)** - Department of Environmental Conservation, University of Massachusetts Amherst.
 - **Thesis title:** The effectiveness and applicability of indicator species in long-term monitoring of environmental changes in New England forest.
 - **Advisor:** Professor Aaron M. Ellison - Harvard Forest, Harvard University and Departments of Biology and Environmental Conservation, University of Massachusetts.
- **M.Sc. (May 2009)** - University of Khartoum, Institute of Desertification Studies (Sudan).
 - **Thesis title:** Assessment of climate change impacts on wildlife habitats of dry lands Sudan - case of Al-Sabaloka Game Reserve.
 - **Advisor:** Dr. Salwa M. Abdellahameed, UNESCO office in Sudan. Biodiversity Department. Former director of the national wildlife research center.
- **B.Sc. (November 2006) - (Forestry) – University of Khartoum (Sudan).**
 - **Thesis title:** Decadal working plan for management of riparian forests in Sennar state – Sudan (2006 – 2015).
 - **Advisors:** Faculty of forestry teaching members.

➤ Research interests & approach:

- I am applied ecologist and the key words that best describe my research focus are *Population and community ecology, Amphibians, wetlands, Ecological-impacts assessment, Ecological monitoring, Ecological indicators / indices, Conservation biology, North America and Sub-Saharan Africa.*
- My research approach based on a combination of *empirical field data and modeling / simulation methods.*
- **Current projects:**
 - Assessing adaptation potential and resilience of forest ecosystems in Sub-Saharan Africa (2015 – 2017).
 - Understanding the impacts of environmental changes on pond ecosystems in British Columbia (2015 – 2016).
 - Monitoring wildlife diversity and distribution using camera-traps in Dinder national park, Sudan (2015 – 2018).
 - Assessing the impacts of climatic changes on forest diversity and dynamics in arid-land ecosystems (2017 – 2019).

➤ **Work experience and current affiliations:**

Period		Affiliation	Institution	Country
From	To			
11/2016	Present	Postdoctoral Research Fellow	Dept. of Biometry & Environmental Systems Analysis, University of Freiburg	Germany
05/2015	Present	Assistant professor	Faculty of forestry, University of Khartoum	Sudan
11/2015	10/2016	Postdoctoral Research Fellow	Faculty of forestry, University of British Columbia	Canada
09/2015	Present	Adjunct assistant professor	Dept. of Environmental Conservation, University of Massachusetts	USA
05/2015	Present	Research associate	Harvard Forest, Harvard University	USA
05/2013	05/2015	Affiliated graduate student	Harvard Forest, Harvard University	USA
09/2011	05/2015	PhD student	Dept. of Environmental Conservation, University of Massachusetts, Amherst	USA
02/2010	12/2015	Lecturer	Faculty of forestry, University of Khartoum	Sudan
01/2008	12/2010	Teaching assistant	Faculty of forestry, University of Khartoum	Sudan

➤ **Awards, grants and fellowships:**

- **June 2015:** Germany's DAAD's Postdoctoral Researchers International Mobility Experience (P.R.I.M.E.) fellowship for the years 2015 - 2017. Partners: Prof. Dr Carsten Dormann and Prof. John Richardson (value 123,000.00 Euro).
- **April 2015:** Research grant from UMASS Amherst's dept. of environmental conservation for a pilot research project, entitled: Monitoring wildlife distribution and diversity in Dinder National Park, Sudan. Co-investigators Prof. Curtice Griffin and Prof. Todd Fuller (value \$6000).
- **May 2014:** UMass Amherst, Graduate School Dissertation Research Grant (\$972.00).
- **April 2014:** Student grant/registration scholarship, Society for Ecological Restoration (New England Chapter) and the Conway School of Landscape Design, for attendance at the conference "Designing for Success: Ecological Restoration in Times of Change"(value \$100.00).
- **March 2014:** Harvard Forest graduate student travel grant (\$215.00).
- **January 2014:** UMass Amherst ECO graduate students travel grant (\$250.00).
- **December 2013:** Fee waiver scholarship, Cary Institute for Ecosystem Studies, for the course "Fundamentals of ecosystem ecology" (value \$1000.00).
- **August 2010:** PhD Scholarship for Merit in Environmental Sciences from Islamic Development Bank (IDB); 3 years.
- **March 2005:** Prof. Ahmed Al-Hoorey prize for the excellence in the subject of

Agroforestry in the 4th year, Faculty of Forestry – University of Khartoum, Sudan (value \$100.00).

- **September 2002:** The second best student prize in the first year. Faculty of Forestry – University of Khartoum, Sudan (value \$200.00).

➤ **Teaching and Mentoring:**

➤ ***Courses taught:***

- Wildlife ecology and management – University of Khartoum, 2010.
- Topics in Forestry and the Environment (Seminar) - University of Khartoum, 2011.

➤ ***Students mentored:***

Name	Level	Period	University	Topic
Arafat Sanosy	G	2016 – present	Khartoum	Petroleum wastes and forests dynamics
Eisa Omer	G	2016 – present	Khartoum	Monitoring forest conditions in Arid lands
Derek Wies	U	2016	British Columbia	Pond ecosystems and environmental changes
Meriella Becu	U	2016	British Columbia	Pond ecosystems and environmental changes
Anwen Rees	U	2016	British Columbia	Pond ecosystems and environmental changes
Alison Ochs	U	2014	Harvard Forest	Salamanders and soils in the declined hemlocks
Simone Johnson	U	2014	Harvard Forest	Salamanders and microclimate in the declined hemlocks
Claudia Villar-Leeman	U	2014	Harvard Forest	Salamanders and woody debris in the declined hemlocks
Angus Chen	U	2013	Harvard Forest	Monitoring salamanders in the declined hemlocks
Justine Kaseman	U	2013	Harvard Forest	Monitoring salamanders in the declined hemlocks

- Note: U represents undergraduate and G refers to graduate student.

➤ **Professional memberships:**

- American Association for the Advancement of Science (AAAS)
- Ecological Society of America (ESA)
- The Wildlife Society
- Society for Ecological Restoration
- Sudanese Wildlife Society (SDWS).
- Sudanese Society for Combating Desertification (SSCD).

➤ **Workshops and training experiences:**

- **Business writing for professionals**, Postdoctoral fellow office: the University of British Columbia, Vancouver (October 5th, 2016).
- **Time management**, Postdoctoral fellow office: the University of British Columbia, Vancouver (October 4th, 2016).
- **Assessment and evaluation workshop**, Center for teaching, Learning and Technology: the University of British Columbia, Vancouver (August 25th, 2016).

- **Fundamentals of ecosystem ecology course**, Cary Institute of Ecosystem Studies, Millbrook - NY. (January 2 – 17, 2014).
- **Crafting a Teaching Portfolio** - Introduction to the Teaching Portfolio. Organized by UMass Amherst, Center for the Integration of Research, Teaching, and Learning (CIRTL), Campus center 163 - C (Thursday, November 21st, 2013).
- **Anatomy of science paper's workshop**. Organized by UMass Amherst office of professional development (OPD), Campus center 165-69 (Friday, November 2nd, 2013).
- **Remote wildlife monitoring workshop**. Organized by New England chapter of the Wildlife Society – Annual fall workshop (October 24, 2013). Holyoke range, Notch visitor center, Amherst, MA.
- **Workshop of healthy writing habits: *Productivity without Binging***. Introduced by Brian Baldi, UMass Amherst CTFD. (October 16, 2013).
- **Conservation leaders for tomorrow** – Vermont (September 12 – 18, 2013).
- **Agroforestry practices in dry lands** – regional training course in college of natural resources, University of Hawassa – Ethiopia (July 2010).
- **Principles of wildlife sciences**, comprehensive course in Wildlife Research Center (WRC), Sudan (1/11 - 12/11/2009).
- **Development of educational and teaching skills**, training course in staff development center / University of Khartoum (5/10 - 12/11/2009).
- **Desertification and dry lands ecology**, courses in Desertification and Desert Cultivation Studies Institute (DADCS) – University of Khartoum, (21/12 2007- 20/8/2008).
- **Agroforestry practices in dry lands**- training course in Faculty of Forestry, University of Khartoum – Sudan (20/8 – 19/9/2006).
- **Introduction of forest modeling**, training course in Faculty of Forestry/University of Khartoum (22/7- 27/7/2006).
- **Sudanese trees identification and dendrology**, training period in the National Botanical Garden, Khartoum, Sudan (15/8 –15/9/ 2005).
- **Rural Development Strategies and Community Development**, Course in in Management Development Center (MDC) – (23/7- 3/8 / 2005).
- **Botanical specimens' preparation for Herbarium**, training period in the herbarium of the forest research center in Soba, Sudan (15/2 –1/3/ 2005).
- **Forest trees seed germination and seedling establishment**, Training period in tree seed research center in Soba, Sudan (1/2 –1/4/ 2005).

➤ **Conferences, Symposia and invited talks:** (* indicates student co-author)

1. Siddig, A. A. 2015. **Biodiversity in Africa: state, importance, conservation challenges and potential directions for better future**. Invited seminar speaker at Dept. of Forest and Conservation sciences, The University of British Columbia, Canada (*Oral*).
2. Siddig, A. A. 2015. **Why biodiversity data-deficit continues in Africa? *Conservation consequences and potential solutions for better future***. Invited seminar speaker at the Ecology & Evolution seminar, Dept. of Biometry and Environmental system analysis, University of Freiburg, Germany (*Oral*).
3. Siddig, A. A. 2014. **Long-term ecological Research (LTER) in Sudan: importance, challenges and potential solutions for better biodiversity conservation**. Invited

- seminar speaker at the training and Information Unit, Faculty of Forestry, University of Khartoum, Sudan (*Oral*).
4. Siddig, A. A., Ochs*, A., C. Villar-Leeman* and Jonson, S*. 2015. **Does decline of hemlock forests affect demographic structure of red back salamanders' in Harvard Forest?** 26th Annual Harvard Forest Ecology Symposium, Harvard Forest, Harvard University, USA (*Poster*).
 5. Ochs*, A., C. Villar-Leeman*, and A. A. Siddig. 2014. **Salamanders as an indicator species for New England Hemlock Forest decline.** The National Conference of the Council of Undergraduate Research (CUR) on the Research Experience for Undergraduate (REU). US, Washington D.C. (*poster*).
 6. Ellison, A. M., M. V. Patel, and A. A. Siddig. 2014. **Recipes for Success in STEM: The Harvard Forest Summer Research Program in Ecology.** The National Conference of the Council of Undergraduate Research (CUR) on the Research Experience for Undergraduate (REU). US, Washington D.C. (*poster*).
 7. Siddig, A. A. 2014. **Biodiversity of Sudan: status, conservation challenges and urgent management and research needs.** Invited seminar speaker at Harvard Forest, Harvard University, USA (*Oral*).
 8. Siddig, A. A. 2014. **Long-term ecological monitoring: opportunities and importance in the future of biodiversity conservation in Africa.** 10th Annual Symposium of the Center for Tropical Ecology and Conservation (CTEC), Antioch University New England, Keene, NH, USA (*Oral*).
 9. Siddig, A. A. 2014. **Dry Ecosystems Restoration Index (DERI): a system for developing and monitoring the habitat restoration programs in dry lands.** Conference on Designing for Success: Ecological Restoration in Times of Change; Society for Ecological Restoration, New England Chapter and the Conway School of Landscape Design. Hampshire College – Amherst, MA-USA. (*Poster*).
 10. Siddig, A. A. 2013. **Biodiversity of dry lands in Sudan in response to climate change: vulnerabilities and suggested adaptations.** 9th Annual Symposium of the Center for Tropical Ecology and Conservation (CTEC), Antioch University New England, Keene, NH (*Oral*).
 11. Siddig, A. A. and S. M. Abdelhameed. 2013. **Assessment of climate change impacts on wildlife habitats in dry lands ecosystems: the case of the Al Sabaloka Game Reserve, Sudan.** Workshop: Welcome to Africa Scientific Cooperation Network on Climate Change Adaptation, Faculty of Forestry, University of Khartoum and Gum Arabic Research Centre, University of Kordofan (*Poster*).
 12. Siddig, A. A. and A. M. Ellison. 2013. **Applicability of indicator species in long-term monitoring of ecosystems dynamics: a case of amphibians of Harvard Forest.** 24th Annual Harvard Forest Ecology Symposium, Harvard Forest, Harvard University (*Poster*).
 13. Siddig, A. A., A. M. Ellison, J. Kaseman*, and A. Chen*. 2013. **Biomonitoring of environmental changes: lessons from the past to inform the future.** 3rd Annual Life Sciences Graduate Research Symposium, University of Massachusetts, Amherst (*Poster*).
 14. Siddig, A. A. 2012. **Environmental Problems of Sudan (Desertification)** – visiting lecturer for the course of global environmental problems. Department of Environmental Conservation, University of Massachusetts, Amherst (*Oral*).

15. Siddig, A. A. 2012. **Wildlife habitats in response to drought in Dinder National Park, Sudan.** Student Conference on the Use of GIS in Natural Resource Conservation. Department of Environmental Conservation, University of Massachusetts, Amherst (*Poster*).
16. Siddig, A. A. and A. M. Ellison. 2012. **Ecological modeling: lessons from ecological informatics and modeling research at Harvard Forest, 1988-2011.** Triennial All-Scientists Meeting, US LTER Network, Estes Park, Colorado (*Poster*).
17. Siddig, A. A. 2011. **Monitoring long-term dynamics of wildlife populations in response to environmental changes in Sudan.** Graduate Students Research Proposals Conference, Department of Environmental Conservation, University of Massachusetts, Amherst (*Oral*).

➤ **Publications:** (* indicates student co-author)

1. Yagoub, Y. E, Z. Bo, J. Ding-min, and A. A. H. Siddig. *in revisions*. **Detection of drought pattern in Sudan using the Standardized Precipitation-Evapotranspiration Index (SPEI).** *Journal of Arid Land*.
2. Siddig, A. A. H. *In press*. **Pond ecosystems and environmental changes.** *Branchlines (issue# TBD), the University of British Columbia's Forestry news letter*.
3. Ochs, A* and A. A. H. Siddig. *In revisions*. **Response of Red-backed Salamanders (*Plethodon cinereus*) to Changes in Hemlock Forest Soil Driven by Invasive Hemlock Woolly Adelgid (*Adelges tsugae*).** *Environments*.
4. Siddig, A. A. H, A. M. Ellison, and B. G. Mathewson. 2016. **Assessing and predicting the impacts of the decline of eastern hemlock (*Tsuga canadensis*) stands on the occurrence of terrestrial amphibians in New England Forest.** *Ecosphere*.
5. Siddig, A. A. H, A. M. Ellison, A. Ochs*, C. Villar-Leeman* and M. K. Lau. 2016. **How do ecologists select and use indicator species to monitor ecological changes: Insights from 14 years of publication in Ecological Indicators.** *Ecological Indicators* 60 (2016) 223–230. doi:10.1016/j.ecolind.2015.06.036.
6. Ellison, A. M. and A. A. H. Siddig. 2016. **Monitoring Amphibians in the Declined Hemlocks at Harvard Forest 2013-2014.** Harvard Forest Data Archive: HF270.
7. Siddig, A. A. H., A. M. Ellison, and S. Jackson. 2015. **Calibrating abundance indices with population size estimators of red back salamanders (*Plethodon cinereus*) in a New England forest.** *PeerJ* 3: e952.
8. Siddig, A. A. H. 2014. **Biodiversity of Sudan: between the harsh conditions, political instability and civil wars.** *Biodiversity Journal*. 5 (4): 545–555.

9. Siddig, A. A. H. and S. M. Abdelhameed. 2013. **Assessment of climate change impacts on wildlife habitats in dry lands ecosystems: the case of the Al Sabaloka natural Reserve, Sudan.** In the proceeding of the international workshop on Climate Change Adaptation, 3rd to 14th March, in Khartoum and El Obeid, Sudan. Welcome to Africa Scientific Cooperation Network on Climate Change Adaptation project, funded by Germany's Federal Ministry of Education and Research - the DAAD program for higher education institutions.

➤ **Publications in preparation (approximate submission dates are in parenthesis):**

1. Siddig, A. A. H. *In prep.* **Why biodiversity and ecological data-deficit continues in Africa: Perspectives.** *Journal TBD* (December 2016).
2. Siddig, A. A. H. and A. M. Ellison. *In prep.* **Indicator Species Potential (ISP) index: A multimetrics method for assessing and quantifying the efficacy of indicator species in monitoring environmental changes.** *Journal TBD* (December 2016).
3. Siddig, A. A. H. and A. M. Ellison. *in prep.* **The effectiveness of terrestrial amphibians as indicator species in long-term monitoring of environmental changes in Northeastern US forests.** *Journal TBD* (December 2016).

➤ **References:**

No.	Reference	Current position	Contacts
1	Aaron M. Ellison (PhD Advisor)	Senior ecologist - Harvard forest, Harvard University	Tel: +1-978-756-6178 aellison@fas.harvard.edu
2	Curtice R. Griffin (PhD committee member)	Professor and Department Head, Dept. of Environmental Conservation, UMASS Amherst	Tel: +1-413-545-2640 cgriffin@eco.umass.edu
3	Scott Jackson (PhD committee member)	Professor, Dept. of Environmental Conservation, UMASS Amherst	Tel: +1-413-545-4743 sjackson@umext.umass.edu
4	Carsten Dormann (Postdoc Advisor)	Professor and Department Head, <i>Dept. of Biometry & Environmental Systems Analysis - University of Freiburg</i>	Tel: +49 761 203-3749 Carsten.dormann@biom.uni-freiburg.de
5	John S. Richardson (Postdoc Advisor)	Professor and Department Head, <i>Dept. of Forest and Conservation Sciences, University of British Columbia.</i>	Tel: +1-604-822-9102 John.richardson@ubc.ca