

RESUME

Assefa M. Melesse, Ph.D., P.E., D. WRE
Professor
Department of Earth and Environment, ECS 339
Florida International University
Tel. (305) 348-6518; Fax: (305) 348-3877
E-mail: melessea@fiu.edu
Website: <http://faculty.fiu.edu/~melessea/>

PUBLICATION LINKS

[ORCID](#) [RESEARCHERID](#) [Google Scholar](#) [ResearchGate](#) [Academia](#)

EDUCATION

- **Ph.D.**, Agricultural and Biological Engineering
Concentration: Hydrologic Sciences
Minor 1: Environmental Engineering
Minor 2: Remote Sensing
University of Florida, 2002
- **M.E (Master of Engineering)**, Agricultural and Biological Engineering
Concentration: GIS (Geographic Information Systems)
Minor: Civil Engineering
University of Florida, 2000.
- **M. Eng. Sc (Master of Engineering Science)**., Agricultural Engineering
National University of Ireland, 1991.
- **B.Sc.**, Agricultural Engineering
Alemaya University, 1986.
- **Graduate Certificates**
 - Interdisciplinary GIS, University of Florida, 2002
 - GPS for Planners, University of Florida & TRIMBLE, 2001

2011/2012: Fulbright Scholar (Research and Teaching)

2004/2005: Listed in „**Who is Who in Science and Engineering**“ 8th Edition, 2004

2006/2007: Listed in „**Who is Who in Science and Engineering**“ 9th Edition, 2006

Selected for “**Who is Who in America**”, 2007

Selected for “**Who is Who in American Education**”, 2007

REGISTRATION/CERTIFICATION: Professional Engineer (Civil)

- Florida: License#: 58699
- North Dakota: License#: 4980

Diplomate, Water Resources Engineer (D. WRE)

Recognition/Award (2013)

Faculty Award for Excellence in Advising and Mentorship

WORK EXPERIENCE

1. **08/2014-**
 - Professor, Department of Earth and Environment
Florida International University
2. **08/2008-08/2014**
 - Associate Professor, Department of Earth and Environment
Florida International University
3. **08/2004 – 08/2008**
 - *Assistant Professor*, Department of Earth and Environment
Florida International University
4. **09/2002 – 08/2004**
 - *Assistant Professor & Research Assistant Professor*, Earth System Science
Institute, School of Aerospace Sciences, University of North Dakota
 - *Adjunct Asst. Professor*, Department of Civil Engineering, School of
Engineering and Mines, University of North Dakota.
5. **08/1998 – 08/2002:** *Research Assistant*, Department of Agricultural and Biological
Engineering, University of Florida.
6. **03/1995 – 05/1998:** *Assistant Professor II*, Department of Agricultural Engineering,
Alemaya University, Ethiopia.
7. **09/ 1986 – 03/1995:**
 - *Lecturer II (1991-95)*
 - *Asst. Lecturer (1988-89)*,
 - *Graduate Assistant (1986-88)*,
Department of Agricultural Engineering, Alemaya University, Ethiopia.

Affiliated Faculty with:

- Department of Civil and Environmental Engineering, FIU
- Honors College (Research), FIU

RESEARCH/EDUCATION GRANTS:

1. NASA (2009-2014) WaterSCAPES: Science of Coupled Aquatic Processes in
Ecosystems from Space,\$5,000,000, F. Miralles (PI), R. Price, A. Melesse (Co-PI),
H. Fuentes, R. Garcia, D. DeAngelis, D. Fuller, M. Potts, I. Rodriguez-Iturbe, S.
Wdowinski.
2. Caribbean Coastal Scenarios (supplemental funding), IAI (2011-2012), (\$17,252).
Melesse, A. (PI), M. McClain, J. FU, D. Webber, J. Ortiz,
3. Florida-Caribbean Consortium for Agriculture Education and Hispanic Workforce

- Development (FCCAgE), USDA,(2011-2015), \$3.2 million
 Bhat, M., (PI), Jayachandran, Kopter, S., Melesse, A (Senior Personnel)
4. NSF (2010-2011) Water Sustainability and Climate in the Great Lakes Region of East Africa \$136,809, Johnson, T (PI), Melesse (Senior Personnel) and others
 5. Internationalization of Biofuel Research, Curriculum and Business, USDA, \$100,000, M. Bhat (PI), Jayachandran, A. Melesse (Co-PI) (2008-2011)
 6. Curriculum Enrichment, Instrumentation and Experiential Learning in Agroecology, USDA, \$292,000, M. Bhat (PI), Jayachandran, A. Melesse (Co-PI), and S. Kopter, J. Onsted. (2008-2011).
 7. Geospatial and remote sensing application in mapping hotspots of soil erosion in the Minnesota River basin, University of Minnesota, NCED, \$34, 155 (2008-2009) PI
 8. Transboundary Water for Biodiversity and Human Health in the Mara River Basin, Kenya and Tanzania, USAID: (2008-2010), (\$1,200,000) (Renewal).
 M. McClain (PI), A. Melesse (co-PI)
 9. Nile Basin Hydrology and Ecology under Extreme Climatic Conditions.
 NSF, (2007-2008), (\$38,048), Melesse, A. (PI), Senay, G.
 10. Multicultural Undergraduate Scholars in Agroecology and Urban Landscape at Florida International University: An Interdisciplinary Approach, USDA, (2007-2012) (\$150,000)
 Jayachandran (PI), M. Bhat, A. Melesse (Co-PI)
 11. Limits to Growth in Agriculture and Emerging Sustainable Farming Systems in Developing Countries, USDA (2006-2008), (\$100, 000).
 M. Bhat (PI), Jayachandran, A. Melesse (Co-PI), M. Allen and A. Ravinet
 12. Caribbean Coastal Scenarios, IAI (2006-2012), (\$427,426).
 A. Melesse (PI: 2009-2012), M. McClain, J. FU, D. Webber, J. Ortiz,
 13. Transboundary Water for Biodiversity in the Mara River Basin, Kenya and Tanzania, USAID: (2005-2007), (\$700,000).
 M. McClain (PI), A. Melesse (Co-PI)
 14. Planning visit to study the effects of vegetation and cropping pattern on soil moisture dynamics and river flow in the Upper Blue Nile Basin, Ethiopia, NSF, (2005-2006) (\$9,896). A. M. Melesse (PI), G. Senay

15. Curricular Development and Capacity Building in Agroecology Sciences, USDA, (2005-2007), (\$229,839).
M. Bhat (PI), Jayachandran, A. Melesse (Co-PI), and S. Kopter
16. Global Water for Sustainability (GLOWS), USAID (PI: McClain), 2004-2009, \$3,750,000.
Melesse: Lead Investigator for hydrological modeling component
17. Northern Great Plains Center for People and the Environment - Year 3, NASA (2003- 04), (\$2,700,000)
Seielstad, G.A (PI), O. Beerli, A. Melesse, P. Carter, R. Hanley, , G. Johnson, S. Laguette, R. Phillips, S. Seelan, X. Zhang
18. Northern Great Plains Center for People and the Environment - Year 4. NASA (2004-05), (\$2,149,000)
Seielstad, G.A (PI), O. Beerli, A. Melesse, P. Carter, R. Hanley, , G. Johnson, S. Laguette, R. Phillips, S. Seelan, X. Zhang
19. Quantifying Environmental Benefits from Precision Agriculture, USDA-ARS: (2003-2004) (\$347, 000)
Seielstad, G.A, R. Phillips (PI) and A. Melesse
20. Team Express: Crop Range Alert System-Phase 4, Raytheon, 2003 (\$ 688,265)
Seielstad, G.A (PI), O. Beerli, P. Carter, A. Melesse, R. Hanley, G. Johnson, S. Laguette, R. Phillips, S. Seelan, X. Zhang
21. Team Express: Crop Range Alert System-Phase 5, Raytheon, 2004 (\$275,000)
Seielstad, G.A (PI), O. Beerli, P. Carter, R. Hanley, A. Melesse, G. Johnson, S. Laguette, R. Phillips, S. Seelan, X. Zhang.

Research activities in the Blue Nile River basin, Ethiopia

1. Capacity building of water resources professionals and provide trainings on GIS, remote sensing and hydrological modeling (May-July, 2011).
Funding: The SWHISA Project and Amhara Regional Water Resources Bureau
2. Geospatial mapping of irrigation schemes in Amhara Region (Dec. 2008-June 2010)
Funding: The SWHISA Project and Amhara Regional Water Resources Bureau

3. Development of technical manual and guideline for hydrometereological data collection and analysis in the Blue Nile basin (May –Nov. 2011)
Funding: The SWHISA Project and Amhara Regional Water Resources Bureau
4. Training on climate change and remote sensing hydrology (Feb-March 2012)
Funding: Lake Tana Basin Water Authority

Postdocs and students

Post-doctoral scientist

Dr. Shimelis G. Setegn, 2009-2012

Graduate Students

	Name	Degree	Dept./University	Tentative Graduation
Graduated				
1	Jason Oberg	M.Sc	Civil Engineering (UND)	2004
2	Pavel Terselich	M.Sc	Earth and Environment (FIU)	2007
3	John Stiefel	M.Sc	Earth and Environment	2007
4	Christina Hoffman	M.Sc	Earth and Environment	2007
5	Himadri Biswas	M.Sc	Earth and Environment	2008
6	Nenpan Tukunda	M.Sc	Earth and Environment	2009
7	Sirikanth Pilli*	M.Sc	Civil and Env. Engineering	2009
8	Luam Azmera*	M.Sc	Civil and Env. Engineering	2009
9	Sejal Kunchwar*	M.Sc	Civil and Env. Engineering	2009
10	Liya Mango	M.Sc	Earth and Environment	2010
11	Fukhrudin K. Maalim	M.Sc	Earth and Environment	2010
12	Matilde Dugue	M.Sc	Earth and Environment	2010
13	Mengistu B. Defersha	M.Sc	Earth and Environment	2010
14	Genevieve Diamond	M.Sc	Earth and Environment	2011
15	Juliana Msagahaa	M.Sc	Earth and Environment	2012
16	Yirgalem A.Chebud	Ph. D	Earth and Environment	2012
17	Shimelis Behailu	Ph. D	Earth and Environment	2013
18	Leigh Ammon	M.Sc	Earth and Environment	2013
19	Cristobal Ceron	M.Sc	Earth and Environment	2014

20	Audrey Becnel*	M.Sc	Earth and Environment	2014
21	Hari Prasad Kandel	Ph. D	Earth and Environment	2015
22	Tara Blakely	Ph. D	Earth and Environment	2015
23	Mohammad Haji Gholizadeh*	Ph. D	Civil and Environment Engineering	2016
Current				
24	Anteneh Zewdie Abiy	Ph. D	Earth and Environment	2019
25	Ikechukwu Onwuka*	Ph. D	Earth and Environment	2020
26	Samuel Kent	M.Sc	Earth and Environment	2018
27	Manzar Abbas	M.Sc	Earth and Environment	2018

* Co-Advisor

Graduate student supervision at other institutions (International collaboration and research)

	Name	Degree	University	Graduation
28	Mulate Mekonnen	M.Sc	Bahir Dar University, Ethiopia	2009 (Graduated)
29	Tigist Bekele	M.Sc	Bahir Dar University, Ethiopia	2009 (Graduated)
30	Meaza Tefera	M.Sc	Bahir Dar University, Ethiopia	2009 (Graduated)
31	Haile Getachew	M.Sc	Bahir Dar University, Ethiopia	2012 (Graduated)
32	Fiseha Behulu*	Ph. D	Roma Tre University, Italy	2013 (Graduated)
33	Anwar Assefa	M.Sc	Bahir Dar University, Ethiopia	2013 (Graduated)
34	Mulatu Liyew*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
35	Solomon Berhane*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
36	Moges Asfaw*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
37	Mahtsente Tibebe*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
38	Hassen Mohamed*	Ph. D	Harmaya University, Ethiopia	2014 (Graduated)
39	Fitsum Berhe	Ph. D	Addis Ababa University, Ethiopia	2015 (Graduated)
40	Belete Berhanu*	Ph. D	Addis Ababa University, Ethiopia	2015 (Graduated)
41	Temesgen Enku	Ph. D	Bahir Dar University, Ethiopia	2016 (Graduated)
Current				
42	Hagos Gebreselasie*	Ph. D	Addis Ababa University, Ethiopia	2018
43	Fikru Fentaw*	Ph. D	Addis Ababa University, Ethiopia	2018
44	Eyaya Belay	Ph. D	Entoto Observatory Institute, Addis Ababa University, Ethiopia	2019
45	Agenagne Asfaw	Ph. D	Entoto Observatory Institute, Addis Ababa University, Ethiopia	2019
46	Alemu Osore*	Ph. D	Addis Ababa University, Ethiopia	2019
47	Surafel Mamo*	Ph. D	Addis Ababa University, Ethiopia	2019

Graduate Committee membership

	Name	Degree	Department
1	Celeste Diaz-Consul	Ph. D	Civil and Environment Engineering, FIU
2	Mehrnoosh Mahmoudi	Ph. D	Earth and Environment, FIU
3	David Lagomasino	Ph. D	Earth and Environment, FIU
4	Adelaide Hummel	Ph. D	Civil and Environment Engineering , FIU
5	Yao Yan	Ph. D	Civil and Environment Engineering, FIU
6	Diana K. Ter-Ghazaryan	Ph. D	International Relations, FIU
7	Mauro Nalesso	Ph. D	Civil and Environment Engineering , FIU
8	Yu Chen	Ph. D	Economics, FIU
9	Beth McCarthney	M.Sc	Earth and Environment, FIU
10	George Atisa	M.Sc	Earth and Environment, FIU
11	Erin Hanan	M.Sc	Earth and Environment, FIU
12	Estefania Sandoval	M.Sc	Earth and Environment, FIU
13	Kelly Gustafson	M.Sc	Earth and Environment, FIU
14	John B. Brakeall	M.Sc	Earth and Environment, FIU
15	Elena Neibaur	M.Sc	Earth and Environment, FIU
16	Wondwossen M. Seyoum	Ph.D	Dept. of Geology, University of Georgia
17	Mario London	M.Sc	Earth and Environment, FIU
18	Amirmasoud Hamedi	Ph.D	Civil and Environment Engineering, FIU
19	Tasnuva Mahjabin	M.Sc	Civil and Environment Engineering, FIU
20	Mohamed Islam	M.Sc	Civil and Environment Engineering, FIU
21	Diana Alexis	M.Sc	Earth and Environment, FIU
22	Daniel Bekele	Ph.D	Soil and Water Engineering, Haramaya University, Ethiopia
23	Mustafa Kamal Sikder	M.Sc	Earth and Environment, FIU
24	Dillon Reio	M.Sc	Earth and Environment, FIU
25	Michael Kiflai	Ph. D	Earth and Environment, FIU
26	James Dautel	M.Sc	Earth and Environment, FIU

Supervised Research/Independent study projects

Graduate Students

- Renato Stela, 2016, Geo-Spatial Evaluation of Groundwater Monitoring System in South Florida.
- Genevive Diamond, 2008. Rainwater Harvesting for Agriculture in the Bahamas –
A Feasibility Study

- Nenpan Tunkuda, 2008, Utilizing GIS and Remote Sensing for Watershed Analysis in the Milk River basin, Jamaica
- Sejal Kuchwar, 2008, Statistical Downscaling for simulating climate change using SDSM
- Sirikanth Pilli, 2008, Estimation of Evapotranspiration using SEBAL Model for the Landsat 7 ETM+ Imagery of South Florida
- Matilde Dugue, 2008, Evaluation of wildlife's habitat restoration in the Lake Apopka.
- Luam Azmera, 2009. GIS-based estimation of ravines sediment load from upland agricultural field for Le Sueur River watershed in Minnesota.
- Yirgalem A. Chebud, 2009. Lake Tana Stage Level and Volumetric Simulation Using Stochastic Approaches

Undergraduate students

- Debra Deras Coastal Flooding mapping using GIS (2006)
- Imrul Hack Climate change and water resources of South Florida (2006)
- Melisa Miano Land-use change analysis of South Florida (2006)
- Ashley Thomas Sediment analysis and estimation in the Le Suer River, Minnesota (2008)
- Tania Alfred Dams (2010)
- Tempestt Newton Water usage in renewable energy systems & conventional energy systems, (2014)
- Jessica Egan The Hydrologic Impacts of Ethiopia: Brought On By and Effecting Human Communities (2014)
- Nathassha Astorga Fog Harvesting: Technology, sustainability and future Panorama (2014)

International Research Scientists and Visiting Scholars hosted

- Antonio Anis, (Visiting Scholar), September, 2016-February, 2017, University of Florence, Italy.

- Belete Berhanu, (Courtesy Research Associate), Addis Ababa Institute of Technology, Addis Ababa University, August 1- October 31, 2013.
- Fitsum Tesfaye, (Courtesy Research Associate), Addis Ababa Institute of Technology, Addis Ababa University, September 1-Nov. 30, 2011.
- Orville Grey, University of West Indies at Mona (Ph. D student), Jamaica, July 2011
- Fiseha Behulu (Courtesy Research Associate), Civil Engineering Department, Roma Tre University, Nov. 2010-October 2011
- P. K. Singh (Fulbright Scholar), Maharana Pratap University of Agriculture and Technology, India, Sep. 2009-Jan. 2010
- Flavio Lupia, Italian National Institute for Agricultural Economics, Italy, July-August, 2009
- Shimelis G. Setegn, Royal Institute of Technology, Sweden, March –Nov. 2009

Courses developed/taught at FIU

GIS 3048 Int. to GIS
 GIS 5050/EVR 4934 Environmental GIS
 EVR 3010 Energy Flow
 EVR 4211 Water Resources
 EVR 4920 Senior Seminar
 EVR 5219 Water Resources Assessment
 EVR 7056 GIS in Water Resources
 EVR 6268 Remote Sensing in Hydrology

Courses taught at University of North Dakota

GLY 427 Groundwater Modeling Fall 2003

Courses taught at Alemaya University, Ethiopia

Ag En 201	Int. to Agricultural Engineering	(1986-87)
Ag En 211	Descriptive Geometry	(1986-87)
Ag En 222	Technical Drawing	(1987-89)
Ag En 331	Engineering Materials	(1991-92)

Ag En 561	Design of Farmstead Structures	(1992-96)
Ag En 332	Strength of Materials	(1994-96)
Agri 162	Int. to Agri. and Forestry	(1995-96)

RESEARCH EXPERIENCE AND INTERESTS

- Spatially distributed hydrologic modeling and scaling
- Climate change and water resources variability
- Integration of hydrological models and remote sensing data into GIS
- Surface and groundwater interactions modeling
- Sediment transport
- Spatial and temporal land cover dynamics and scaling, spatial analysis
- Watershed characterization and modeling using Remote sensing and GIS
- Ecohydrology
- Climate change water resources variability
- ANN, Neuro-fuzzy and data fusion techniques
- Water, carbon and energy flux coupling
- Evapotranspiration estimation using satellite imagery

Reserach geographic area and basin

- Nile River basin (Blue Nile River, Ethiopia)
- Mara River basin (Lake Victoria basin, Kenya & Tanzania)
- South Florida: Everglades, USA
- Caribbean hydrology
 - Jamaica: Rico Cobre River and Great River watersheds
 - Dominican Republic: Haina River and Yuna River watersheds
 - Puerto Rico: Rio Manati and Rio Plat Watersheds

PROFESSIONAL AND UNIVERSITY SERVICE

- Editor-in-Chief, [Sensors](#), Remote Sensor section
- Editor, Nile River: Climate, land use and hydrology, Springer Science Book

- Guest Editor, Special Issue: Climate, weather and hydrology of East African Highlands" as part of the journal [Hydrology and Earth System Sciences \(HESS\)](#)
- Member, Fulbright Panel Review committee, Fulbright, 2012
- Member, Southwest Florida Water Management District (SWFWMD) Agricultural Advisory Committee
- Guest Editor, Special Issue: Climate change, land-use dynamics and ecohydrology of the Nile River basin, [Hydrological Processes](#)
- Member, Editorial Advisory Board, [J. of Spatial Hydrology](#), 2009-2012
- Editor-in-Chief, [J. of Spatial Hydrology](#) (2006-2009)
- Guest Editor, *Special Issue: [Remote Sensing of Natural Resources and the Environment](#)* for *Sensors* journal
- Editor, Proceedings of the [Nile workshop](#) on the hydrology and ecology of the Nile River under extreme conditions.
- Guest Editor, Special issue [Land surface Fluxes](#), Remote Sensing journal
- Guest Editor, Special issue [Hydrologic System Analysis, Patterns, and Predictions for Arid and Semi-arid Environment](#), Water journal
- Member, Editorial Advisory Board for [Sensors](#) journal (RS section)
- Member, Editorial Board, [Remote Sensing](#) journal
- Member, Graduate Admission Committee (EVR) (2004-2008), 2009-2011
- Member, University-wide Mentor Advisory Board
- Faculty Senate, Alternate Member
- Library Representative, E & E, 2012
- Chair, Curriculum Committee (EVR) 2008-2009
- Member, Curriculum Committee (EVR) (2007-2011)
- Member, Human Resources Committee (E & E) (2012-)
- Secretary, Departmental Faculty Meeting (2005/06)
- Member, Science Task Force (EVR) (2005-2006)
- Member, University-wide Remote Sensing and GIS Advisory Committee (FIU) 2004-
- Member of College-wide School of the Environment exploratory Committee (2005)

- Member faculty search committee (Climatology position) (2011)
- Member faculty search committee (Meteorology position) (2010)
- Member, Faculty Advisory Council for Center for African New World Studies
- Chair, Coordinating Committee for Graduate Certificate in Water, Environment, and Development Studies (WEDev), (EVR)
- Chair, Undergraduate Certificate in Environmental Studies
- Member, Coordinating Committee for Certificate in Agroecology, (EVR)
- Member, Coordinating Committee for Certificate in GIS (FIU) 2007-
- Member, Sustainability Degree Committee, CAS
- Florida Chapter Representative in SWFWMD, American Society of Agricultural and Biological Engineers (ASABE).
- Alternate FIU Representative, Consortium of Universities for the Advancement of Hydrological Science (CUAHSI)
- Faculty Advisor, FIU AWRA Student Chapter
- Member, EORSA Program Committee, Second International Workshop on Earth Observation and Remote Sensing Applications (EORSA 2012), Tongji University, Shanghai City from June 8 to June 11, 2012.
- Advisory Committee member, [4th International Symposium on Sensor Science \(I3S2015\)](#)
- Advisory Committee member, [5th International Symposium on Sensor Science \(I3S2016\)](#)

PROFESSIONAL MEMBERSHIP

- Member, Academy of American Water Resource Engineers, 2009-present
- Order of the Engineer, 2000 – present.
- Member, American Geophysical Union (AGU), (1999 - present)
- Member, American Society of Agricultural Engineers (ASAE), (1999 - present)
- Member, Gamma Beta Chapter of Alpha Epsilon, (2000 - present)

JOURNAL/BOOK CHAPTER REVIEWER

- Water Resources Research

- Hydrology and Earth System Sciences (HESS)
- Advances in Water Resources
- Journal of Hydrology
- Remote Sensing of Environment
- Hydrological Processes
- Journal of Environmental Management
- Brazilian Geophysical Society
- Sensors
- Geocarta International
- Natural Hazards Review
- Journal of American Water Resources Association
- Transactions of American Society of Agricultural Engineers: Soil and Water Division
- Transactions of American Society of Agricultural Engineers: Information & Electrical Technologies Division
- Hydrobiologia
- Hydrological Sciences Journal
- Journal of Water Resources Management
- Atmospheric Research
- Photogrammetric Engineering and Remote Sensing (PE&RS)
- Journal of Coastal Research
- Journal of Environmental Quality

Book/Book Chapter Review

- Book Review, Springer
- Book Review CRC Press/Taylor & Francis Group
- Scaling issue in Remote sensing, Book review, John Wiley & Sons

Dissertation/Thesis Review

- University of Engineering and Technology, Texila, 3 dissertations
- Bahir Dar University, 3 theses
- University of United Arab Emirates, 1 thesis

- Conference of Southern Graduate Schools Thesis Award

PANEL MEMBER/PROPOSALS REVIEWER

- NSF EPSCoR RSV (Panel Review)
- NSF EPSCoR RII, Track-1 Program (Panel Review)
- Oak Ridge Associate Universities (ORAU), Ralph Powe Award Program Review
- Belgian Earth Observation Programme, STEREO III Programme
- Washington Fellowship For Young African Leaders, President Obama Initiative
- Fulbright Program Panel Review 2012-
- NASA Postdoc Program Review
- NSF Environmental Sustainability Program (Panel Review)
- Netherlands Space Office (NSO)
- NSF, Geography and Regional Science Program
- United States Department of Agriculture (USDA)
- U.S. Civilian Research & Development Foundation, Cooperative Grants Program
- National Institute for Space Research Program, Bureau External Research (The Netherlands), Earth Observation Research
- BARD, the United States - Israel Binational Agricultural Research & Development Fund
- NIWR-USGS National Competitive Grants Program
- Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)
- Wageningen Institute for Environment and Climate Research (WIMEK,) Wageningen University, Netherlands
- AWRA's Richard A. Herbert Scholarship Award
- National Center for Science and Technology Evaluation, Kazakhstan

PUBLICATIONS

345+ books, journal articles, book chapters, proceedings, edited special issues, conference abstracts/presentations

PUBLICATION LINKS

[Google Scholar](#) [ORCID](#) [RESEARCHERID](#) [RESEARCHGATE](#) [ACADEMIA](#)

*Post-doctoral

**Graduate student advised

***Undergraduate student advised

Books

1. Melesse, A., Abtew, W. (Editors). 2016. [*Landscape Dynamics, Soil and Hydrological Processes in varied Climates*](#), ISBN 978-3-319-18787-7, Springer Science Publishers, pp839.
2. Melesse, A.M., Abtew, W., Setegn, S. (Editors). 2013 [*Nile River Basin; Ecohydrological Challenges, Climate Change and Hydropolitics*](#), Springer Science Publishers, ISBN 978-3-319-02720-3, DOI: 10.1007/978-3-319-02720-3, 718p
3. Abtew, W, and **Melesse, AM** 2012. [*Evaporation and Evapotranspiration: Measurements and Estimations*](#), Springer Science Publishers ISBN 978-94-007-4737-1, DOI: 10.1007/978-94-007-4737-1, 206p.
4. Melesse, AM. (Editor), 2011. [*Nile River Basin: Hydrology, Climate and Water Use*](#), Springer Science Publisher, 433p. ISBN 978-94-007-0689-7, DOI 10.1007/978-94-007-0689-7, 419p.
5. Abtew, W, and **Melesse, AM**. (Editors) 2008, [*Proceedings of the Nile Workshop on the hydrology and ecology of the Nile River under extreme conditions*](#), Aardvark Global Publishing, 387p. ISBN 978-1-4276-3150-3

Peer-reviewed published/in-press journal articles

2017

6. Muluken L. Alemu, Fasikaw Atanaw, Shree K. Giri, Seifu A. Tillahun, Essayas K. Ayana , **Melesse, A.M.**, Hassan M. Mosa, Muhabe Geset and Tammo S. Steenhuis, *Spatial and temporal trends of recent dissolved phosphorus concentrations in Lake Tana and its four main tributaries*, Land Degradation and Development, in press
7. **Abiy, A., **Melesse, A.M.**, 2017. *Evaluation of Watershed Scale Changes in Groundwater and Soil Moisture Storage with the application of GRACE Satellite Imagery data*, Catena, 153:50-60, <http://dx.doi.org/10.1016/j.catena.2017.01.036>.
8. **Mohammad Haji Gholizadeh, **Melesse, A.M.** 2017 *The Evaluation of Spatiotemporal Variations in Surface Water Quality of South Florida Using*

Discriminant Analysis and Cluster Analysis, Catena, 151:247–258,
<http://dx.doi.org/10.1016/j.catena.2016.12.018>.

2016

9. **Enku, T., Melesse, A.M., Admasu, S., Ayana, E., Abate, M., Steenhuis, T. 2016 *Surface-groundwater interactions in sub-humid monsoon climate: The Lake Tana floodplain, Ethiopia*, Land Degradation and Development, doi: 10.1002/ldr.2650.
10. **Tara Blakey, Melesse, A.M., Michael C. Sukop, Georgio Tachiev, Dean Whitman, and Fernando Miralles-Wilhelm, *Developing benthic class specific, chlorophyll-a retrieving algorithms for optically-shallow water using SeaWiFS*, Sensors 2016, 16, 1749; doi:10.3390/s16101749
11. Daniel Bekele, Tena Alamirew, Asfaw Kebede, Gete Zeleke, Melesse, A.M., 2016. *Analysis of rainfall trend and variability for agricultural water management in Awash River Basin, Ethiopia*, Journal of Water and Climate Change; DOI: 10.2166/wcc.2016.04
12. **Mohammad Haji Gholizadeh, Melesse, A.M., and Reddi. L 2016. A *Comprehensive Review of Water Quality Assessment Using Remote Sensing Techniques*, Sensors, 16:1298, doi:10.3390/s16081298.
13. Omid Rahmati, Hamid Reza Pourghasemi, Melesse, A.M. *Assessment of groundwater potentiality and quality with a new methodological framework: application of Dempster–Shafer theory and GIS/RS*, Science of the Total Environment 568 (2016) 1110–1123
14. **Mohammad Haji Gholizadeh, Melesse, A.M., and Reddi. L. 2016 *Water Quality Assessment and Apportionment of Pollution Sources using APCS-MLR receptor modeling technique in three major rivers of South Florida*, Science of the Total Environment, 566-567: 1552–1567,
<http://dx.doi.org/10.1016/j.scitotenv.2016.06.046>.
15. **Mohammad Gholizadeh, Melesse, A.M., and Reddi. L 2016. *Discriminant Analysis Application in Spatiotemporal Evaluation of Water Quality in South Florida*, *Journal of Hydroinformatics*, 18 (6) 1019-1032; DOI: 10.2166/hydro.2016.023
16. Sandoval, E., Price, R.M., Whitman, D., Melesse, A.M. 2016. : *Long-Term (11 Years) Study of Water Balance, Flushing Times and Water Chemistry of a Coastal Wetland Undergoing Restoration, Everglades, Florida, USA*, Catena 144:74-83.
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113. Daniel Bekele, Tena Alamirew, Gete Zeleke, **Melesse, A.M.** Modelling the Impacts of Land Use and Land Cover Change on Hydrological processes and Sediment Yield of the Keleta Watershed, Ethiopia

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114. **Kandel, H., **Melesse, A.M.** *Radar Based Convective Rainfall in South Florida: A Spatiotemporal Analysis Featuring the Effect of Land Use/Land Cover Change*, Remote Sensing
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Edited special issues as Guest Editor

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Book Chapters

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331. Bhat, M. G., K. Jayachandran, Melesse, A.M, J. Onsted, and S. Koptur. “Curriculum Enrichment, Instrumentation, Experiential Learning in Agroecology: Annual Report for Period ending July 2011.” Submitted to the Department of Agriculture under the Cooperative Agreement 2008-38422-19209, Department of Earth and Environment, Florida International University, Miami, October 2011.
332. Melesse, A., Setegn, S., McClain, M, Vicioso, F., Veloz, F., Fu, J, Webber, D., Ortiz, J, Nunez, F. “Caribbean Coastal Scenarios Project”, Fifth year Final Report submitted to IAI under the agreement CRN II-061, Department of Earth and Environment, Florida International University, May 2011, pp 104.
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334. Bhat, M. G., G. Philippidis, K. Jayachandran, and Melesse, A.M. “Internalization of biofuel research, curriculum, and business promotion: Annual Progress Report for Period ending August 2010.” Submitted to the Department of Agriculture under the Cooperative Agreement 2008-51160-04356, Department of Earth and Environment, Florida International University, Miami, August 2010.

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Agriculture under the Cooperative Agreement 2005-38422-15940,
Department of Environmental Studies, Florida International University,
Miami, October 2008.

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“Limits to Growth in Agriculture and Sustainable Farming Systems.” Annual
Progress Report Submitted to the US Department of Agriculture under the
Cooperative Agreement 2006-51160-03409, Department of Environmental Studies,
Florida International University, Miami, January 2008.
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Agroecology.” Annual Progress Report Submitted to the US Department of
Agriculture under the Cooperative Agreement 2008-38422-19209, Department
of Environmental Studies, Florida International University, Miami, February
2009.
345. Melesse, A., Tien, K., Judge, J., Jordan, J. Remote Sensing and Geographic
Information System in Land Cover Study and Runoff Coefficient
Estimation for Irrigated Regions in southern Taiwan.
User's Manual for Tsao-Jiin Research Project Grant, April 2002.
346. Melesse, A., Judge, J., Jordan, J. Remote Sensing and Geographic Information
System in Runoff Coefficient Estimation for Irrigated Regions in Southern Taiwan.
Final Report for Tsao-Jiin Research Project Grant, March 2002.

Invited Seminars/Lectures

1. **Transboundary Water Resources Management: Challenges and Lessons**
GLOWS Presentations for Study tour for Ghana Community Water and Sanitation
Agency participants, September 16, 2014.
2. **Human and climate induced changes and impacts on hydrologic regimes of
selected river basins**, Department of Earth and Environment, Jan. 16, 2013
3. **Water Resource Management challenges in the 21st century: Human and
climate induced changes and impacts on hydrologic and sediment regimes of
selected river basins**, Mekele University, April 03, 2012.
4. **Hydrologic response of river basins to the human and climate induced changes:
Examples from selected studies**, Melkasa Agricultural Research center April 4,
2012.
5. **Water Resource Management challenges in the 21st century: Human and
climate induced changes and impacts on hydrologic and sediment regimes of
selected river basins**, Arba Minch University, April 6, 2012.

6. **WaterSCAPES: Hydrology of Wetlands from Space**, Department of Civil Engineering, Haramaya University, Feb. 13, 2012
7. **Water Resource Management challenges in the 21st century: Human and climate induced changes and impacts on hydrologic and sediment regimes of selected river basins**, Hawassa University, Feb. 7, 2012.
8. **WaterSCAPES: Hydrology of Wetlands from Space**, Department of Civil Engineering, Addis Ababa University, Dec. 16, 2011
9. **Water Resources challenges in the 21st century: An overview of need-driven research activities across the spectrum of various ecohydrologically diverse regions**, Ethiopian Water Institute, Addis Ababa University, Nov. 22, 2011.
10. **Climate Change and Coastal Resources: Caribbean Coastal Scenarios experience**, Ministry of Environment, Dominican Republic, June 29, 2011
11. **Hydrology of the Upper Blue Nile River Basin: Facts, Trends and Indicators of Changes**, January 28, 2011, Department of Earth and Environment, FIU.
12. **Understanding the ecohydrological response of impacted watersheds to restoration: Remote sensing and GIS application**, National Center for Earth-Surface Dynamics, An NSF Center of Excellence, Oct. 30, 2006: University of Minnesota.
13. **Evapotranspiration mapping using remote sensing** (Video conference Lecture), April 2005, Department of Earth Systems and Policy, University of North Dakota.
14. **Evapotranspiration mapping using remote sensing** (Video conference Lecture), April 2006, Department of Earth Systems and Policy, University of North Dakota.
15. **The role of science in integrated water resources management**, July 2006, Alemaya University, Ethiopia.
16. **Water Resources Research: Challenges and opportunities**, 2006, Civil and Environmental Engineering, FIU.
17. **The role of GIS and remote sensing in water resources Research**, 2006, Honor's College, FIU.
18. **GIS and remote sensing in water resources research: Application examples**, Feb. 2006, GIS Day, FIU.
19. **Impervious surface area dynamics and storm runoff response**, Sep. 2006, Environmental Studies, FIU.
20. **Impervious surface Dynamics in South Florida**, Oct. 2006, Applied Research Center, FIU.

Technical Trainings/workshops offered

21. Potential irrigation area mapping in Amhara Region using GIS and Remote Sensing, Ziway, Ethiopia, December 19-31, 2016.
22. Potential irrigation area mapping in Oromia Region using GIS and Remote Sensing, Bahir Dar, Ethiopia, June 04-16, 2016.
23. Advanced GIS: Application to water resources Engineering, Addis Ababa Institute of Technology, Addis Ababa University, May 7-18, 2012.
24. Climate Change and Water Resources, Bahir Dar University, March 14-17, 2012.
25. Remote Sensing in Hydrology, Bahir Dar University, March 19-23, 2012.
26. Impacts of human and climate change induced drivers on the ecohydrology of the Mara River basin, Egerton University, Kenya, Feb. 16-23, 2012.
27. Impacts of human and climate change induced drivers on the ecohydrology of the Mara River basin, University of Dar es Salaam (UDSM), Tanzania, Feb. 24-29, 2012.
28. Advanced GIS, Bureau of Water Resources, ANRS, SWHISA, 2010, Bahir Dar, Ethiopia.
29. GIS in Water Resources, Bureau of Water Resources, ANRS, SWHISA, 2010, Bahir Dar, Ethiopia.
30. Image Analysis, Bureau of Water Resources, ANRS, SWHISA, 2010, Bahir Dar, Ethiopia.
31. Principles of GIS, Bureau of Water Resources, ANRS, SWHISA, 2009, Bahir Dar, Ethiopia
32. SWAT application in the Caribbean Islands. May 26-27, 2009, Santa Domingo, Dominican Republic.
33. SWAT application in the Caribbean Islands. May 29-30, 2009, Kingston Jamaica.
34. SWAT: Theory and application, May 17-18, 2008, Quito, Ecuador.
35. SWAT application to watershed modeling in the Mara River basin, June 26-27, 2006, Kissimu, Kenya.