

RESUME

Assefa M. Melesse, Ph.D., P.E., D. WRE
Professor
Department of Earth and Environment, ECS 339
Florida International University
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EDUCATION

- **Ph.D.**, Agricultural and Biological Engineering
Concentration: Hydrologic Sciences
Minor 1: Environmental Engineering
Minor 2: Remote Sensing
University of Florida, 2002

Dissertation: Spatially Distributed Storm Runoff Modeling using Remote Sensing and GIS. *Chair:* Prof. Wendy Graham
- **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

200620/07: 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. Caribbean Coastal Scenarios (supplemental funding), IAI (2011-2012), (\$17,252).
Melesse, A. (PI), M. McClain, J. FU, D. Webber, J. Ortiz,
2. 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)
3. 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
4. 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.
 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 as PI in the Blue Nile River basin, Ethiopia with local support

- 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 hydrometeorological 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	Yirgalem A.Chebud	Ph. D	Earth and Environment	2012
16	Juliana Msagahaa	M.Sc	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
Current				
23	Anteneh Zewdie Abiy	Ph. D	Earth and Environment	2019
24	Mohammad Haji Gholizadeh*	Ph. D	Civil and Environment Engineering	2018

* Co-Advisor

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

	Name	Degree	University	Graduation
25	Mulate Mekonnen	M.Sc	Bahir Dar University, Ethiopia	2009 (Graduated)
26	Tigist Bekele	M.Sc	Bahir Dar University, Ethiopia	2009 (Graduated)
27	Meaza Tefera	M.Sc	Bahir Dar University, Ethiopia	2009 (Graduated)
28	Fiseha Behulu*	Ph. D	Roma Tre University, Italy	2013 (Graduated)
29	Haile Getachew	M.Sc	Bahir Dar University, Ethiopia	2012 (Graduated)
30	Fitsum Berhe	Ph. D	Addis Ababa University, Ethiopia	2015 (Graduated)
31	Belete Berhanu*	Ph. D	Addis Ababa University, Ethiopia	2015 (Graduated)
32	Anwar Assefa	M.Sc	Bahir Dar University, Ethiopia	2013 (Graduated)
33	Mulatu Liyew*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
34	Solomon Berhane*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
35	Moges Asfaw*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
36	Hassen Mohamed*	Ph. D	Harmaya University, Ethiopia	2014 (Graduated)
37	Mahtsente Tibebe*	M.Sc	Addis Ababa University, Ethiopia	2013 (Graduated)
38	Temesgen Enku	Ph. D	Addis Ababa University, Ethiopia	2016
39	Berhanu Mengistu	Ph. D	Haramaya University, Ethiopia	2016

Graduate Committee membership

	Name	Degree	Department
1	Celeste Diaz-Consul	Ph. D	Civil and Environment Engineering
2	Mehrnoosh Mahmoudi	Ph. D	Earth and Environment
3	David Lagomasino	Ph. D	Earth and Environment
4	Adelaide Hummel	Ph. D	Civil and Environment Engineering
5	Yao Yan	Ph. D	Civil and Environment Engineering
6	Diana K. Ter-Ghazaryan	Ph. D	International Relations
7	Mauro Nalesso	Ph. D	Civil and Environment Engineering
8	Yu Chen	Ph. D	Economics
9	Beth McCarthey	M.Sc	Earth and Environment
10	George Atisa	M.Sc	Earth and Environment

11	Erin Hanan	M.Sc	Earth and Environment
12	Estefania Sandoval	M.Sc	Earth and Environment
13	Kelly Gustafson	M.Sc	Earth and Environment
14	John B. Brakeall	M.Sc	Earth and Environment
15	Elena Neibaur	M.Sc	Earth and Environment
16	Wondwossen M. Seyoum	Ph.D	Dept of Geology, University of Georgia
17	Mario London	M.Sc	Earth and Environment
18	Amirmasoud Hamedi	Ph.D	Civil and Environment Engineering
19	Tasnuva Mahjabin	M.Sc	Civil and Environment Engineering
20	Mohamed Islam	M.Sc	Civil and Environment Engineering
21	Diana Alexis	M.Sc	Earth and Environment
22	Daniel Bekele	Ph.D	Soil and Water Engineering, Haramaya University, Ethiopia

Supervised Research/Independent study projects

Graduate Students

- 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)

Post-doctoral supervision

Shimelis G. Setegn, Modeling of land use and climate change impact in the Caribbean, 2009-2012

International Research Scientists and Visiting Scholars hosted

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

Courses developed/taught at FIU

GIS 5050/EVR 4934 Environmental GIS
EVR 3010 Energy Flow
EVR 4211 Water Resources
EVR 4920 Senior Seminar
GIS 3043 Int. to GIS
EVR 5215 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)
- Coordinator, 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 \(I3S2015\)](#)
- [Program Co-chair, IEEE Nanotechnology Materials and Devices](#), Anchorage Alaska, on 13-16th September, 2015

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

Dissertation/Thesis Review

- University of Engineering and Technology, Taxila, 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 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

310+ journal articles, books, book chapters, proceedings, edited special issues, conference abstracts/presentations and project reports

<http://scholar.google.com/citations?user=CD4qUOkAAAAJ>

Peer-reviewed published/in-press journal articles

* Post-doctoral

** Graduate student advised

*** Undergraduate student advised

2015

1. **Birhanu, B., Seleshi, Y, Demessie, S., **Melesse, A.M.** 2015. *Flow Regime Classification and Hydrological Characterization of Ethiopian Rivers*, **Water** **7**, 3149-3165; doi:10.3390/w7063149.
2. **Blakey, T, **Melesse, A.M** , Cecile S. Rousseaux. 2015. *Toward connecting subtropical algal blooms to freshwater nutrient sources using a long-term, spatially distributed, in situ chlorophyll-a record*, *Catena* 133, 119-127.
3. **Blakey, T, **Melesse, A.M** , Hall, M. 2015. *Supervised classification of time-series benthic reflectance in shallow subtropical waters using image-based end-members*, *Remote Sens.* 2015, 7(5), 5098-5116; doi:10.3390/rs70505098
4. **Cereon, C., **Melesse, A.M.**, Price, R., Dessu, S.B, Kandell, H 2015. *Operational Actual Wetland Evapotranspiration Estimation for the Everglades Using MODIS Imagery*, *Remote Sens.* 2015, 7, 3613-3632; doi:10.3390/rs70403613
5. **Mohammed, H., Alamirew, T., Assen, M., **Melesse, A.M.** 2015. *Detecting land use/land cover changes in Lake Hayq drainage basin: 1957 to 2007*, *Lakes & Reservoirs: Research and Management* in press
6. Ehsan Olyaiea, Hossein Banejad, **Melesse, A.M.**, K.W.Chau. 2015. *A comparison of various softcomputing approaches performance for estimating suspended sediment load of river systems*, *Environ Monit Assess* (2015) 187:189
DOI 10.1007/s10661-015-4381-1.
7. Mekonnen, M, **Melesse, A.M.** 2015 *Evaluating sediment storage dams: structural off-site sediment trapping measures in northwest Ethiopia*, *Cuadernos de Investigación Geográfica*, in press
8. **Mohammed, H., Alamirew, T., Assen, M., **Melesse, A.M** 2015. *Modeling of sediment yield in Maybar gauged watershed using swat, northeast Ethiopia*, *CATENA*, 127, 191–205.
9. Essayas K. Ayana, William D. Philpot, **Melesse, A.M.**, Tammo S. Steenhuis, 2015.

Assessing Potential of MODIS Images Generated Data in Modeling Total Suspended Solid Emission to Lake Tana, Ethiopia, International Journal of Applied Earth Observation and Geoinformation, 36: 13-21.

2014

10. David Lagomasino, Rene M. Price, Dean Whitman, **Melesse, AM**, Steven Oberbauer. 2014 *Spatial and temporal variability in spectral-based evapotranspiration measured from Landsat 5TM across two mangrove ecotones*, Agricultural and Forest Meteorology, accepted
11. David Lagomasino, Rene M. Price, Dean Whitman, Petya K.E. Campbell, **Melesse, AM**. 2014. *Estimating major ion and nutrient concentrations in two coastal mangrove estuaries using leaf and satellite reflectance*, Remote Sensing of Environment 154 (2014) 202–218
12. Grey, O.P. Dale F. St. G. Webber, S. G. Setegn, and **A. M. Melesse** 2014. *Application of the Soil and Water Assessment Tool (SWAT Model) on a Small Tropical Island State (Great River Watershed, Jamaica) as a tool in Integrated Watershed and Coastal Zone Management*, International Journal of Tropical Biology and Conservation, 62(3): 293-305.
13. **Assegid, Y., Melesse, A. M. and Naja, G. M. 2014, *Spatial relationship of groundwater–phosphorus interaction in the Kissimmee River basin, South Florida*. Hydrol. Process. doi:10.1002/hyp.10241
14. *Setegn, S., **Melesse, A.M.**, Grey, Haiduk. A., O., Webber, D, Wang, X., McClain, M. 2014 *Spatiotemporal distribution of fresh water availability in the Rio Cobre Watershed, Jamaica*, CATENA, 120:81-90.
(<http://dx.doi.org/10.1016/j.catena.2014.04.005>)
15. **Behulu, F., Setegn, S., **Melesse A.M.**, Romano, E., Fiori A. 2014. *Impact of Climate change on the Hydrology of Upper Tiber River Basin Using Bias Corrected Regional Climate Model*, Water Resources Management, 1 - 17
doi: 10.1007/s11269-014-0546-x
16. Ambachew S., Alamirew, T., **Melesse, A.M.**, 2014. *Performance of Mungbean to Deficit Irrigation Application under Semiarid Highlands of Ethiopia*, Agricultural Water Management 136 (2014) 68–74.
17. **Dessu, S. B., **Melesse, A.M.**, Bhat, M., McClain, M. 2014 *Assessment of Water Resources Availability and Demand in the Mara River Basin*, CATENA 115 104–114.

2013

18. **Berhe, F., Melesse, A.M., Hailu, D., Seleshi, Y. 2013. *Water use allocation modeling using MODISM in the Awash River basin*, Catena, 109: 118–128. DOI: 10.1016/j.catena.2013.04.007
19. Michael E McClain, Amanda L Subalusky, Elizabeth P Anderson, Shimelis Behailu Dessu, Assefa M Melesse, Preksedis M Ndomba, Joseph OD Mtamba, Rashid A Tamatamah, Cosmas Mligo *Comparing flow regime, channel hydraulics and biological communities to infer flow-ecology relationships in the Mara River of Kenya and Tanzania*, Hydrological Sciences Journal, DOI:10.1080/02626667.2013.853121
20. **Berhe, Melesse, A.M., F., Fanta, A., Alamirew, T., *Characterization of the effect of tillage practices on furrow irrigation hydraulics and soil water storage*, Catena (110): 161-175, DOI: 10.1016/j.catena.2013.06.003.
21. **Mohammed, H., Alamirew, A., Assen, M., Melesse, A. 2013. *Bathymetry Study of Lake Haik, Ethiopia*, Lakes and Reservoirs: Research and Management, 18(2): 155–165, DOI: 10.1111/lre.12024.
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215. ** Kandel, H., **Melesse, A.M**, 2013. Land Cover Change and Its Hydro-climatic Impact in South Florida, Florida AWRA Conference, Jan. 25, 2013, Ft. Meyers, FL.
216. Sandoval1, E., Price, R.M., Whitman, D., **Melesse, A.M** 2012. Ten year study on restoration projects and their effects on flushing times, water quality, water chemistry, and water sources in the coastal Everglades, 2012 GSA Annual Meeting in Charlotte (4–7 November 2012).
217. ** Dessu , S.B., **Melesse, A.M**, Evaluation Of Satellite Estimates And GCMs Outputs As Alternative Rainfall Data Sources In The Mara River Basin, Kenya/Tanzania, AWRA Meeting, Tallahassee, FL, Nov. 12-15, 2012
218. ** Dessu, S.B., **Melesse, A.M**, Application of GCMs output in small Tropical Watershed: The Mara River Basin, Kenya/Tanzania, AGU Fall Meeting, 3-7 Dec., 2012, San Francisco CA.
219. ** Kandel, H., **Melesse, A.M**, Change in minimum temperature as a response to

land cover change in south Florida, , AGU Fall Meeting, 3-7 Dec., 2012, San Francisco CA.

220. **Ammon, L; **Melesse, A.** 2012. DRASTIC Vulnerability Index for the Broward County Portion of the Biscayne Aquifer, GIS Symposium: Discovering technology-based Solutions, October 17, 2012, Naples, FL.
221. **Kandel, H., **Melesse, A.M.**, 2012. Pre and Post-drainage South Florida: Land Cover Change and Temperature Response, GIS Symposium: Discovering technology-based Solutions, October 17, 2012, Naples, FL.
222. Melesse, A. 2012. Blue Nile River Basin: State of knowledge, gaps, challenges and opportunities, Presented at the National Workshop on “Challenges & Opportunities of Water Resources Management in Tana Basin, Upper Blue Nile Basin, Ethiopia” 26 - 27 March 2012.
223. Sandoval1, E., Price, R.M., Whitman, D., **Melesse, A.M.** 2012. Water Residence Time and Water Quality in Taylor Slough – Everglades National Park, FL, USA, INTECOL Conference, Orlando, FL from June 3-8, 2012
224. *Setegn, S., **Melesse, A.M.**, 2011 Combined land use and climate change impact on Surface and Ground water resources in the Rio Cobre and Great River basin, Jamaica, AGU Fall Meeting, San Francisco, CA, Dec. 5-9, 2011.
225. **Behulu, F., Setegn, S., **Melesse, A.**, Aldo, F., 2011. Impact of climate Change on Groundwater Recharge in the Tiber River Basin (Central Italy) Using Regional Climate model Outputs, AGU Fall Meeting, San Francisco, CA, Dec. 5-9, 2011.
226. **Kandel, H., **Melesse, A.M.**, 2011. Analysis of Land Use Change and Possible Influence on Rainfall Pattern in South Florida, GIS Symposium: Inspiration Through Technology and Networking, November 9, 2011, Naples, FL.
227. *Setegn, S., **Melesse, A.M.**, Vicioso, F., Veloz, R., Nunez, F., 2011. Assessment of land use change impact on water resources variability using GIS and hydrological model, GIS Symposium: Inspiration Through Technology and Networking, November 9, 2011, Naples, FL.
228. **Msaghaa, J., **Melesse, A.** 2011. Integration of GIS technology and Soil erosion models towards tropical watershed management GIS Symposium: Inspiration Through Technology and Networking, November 9, 2011, Naples, FL.
229. **Ammon. L., **Melesse, A.**, 2011. Spatiotemporal Trends of Contaminants in the Broward County Portion of the Biscayne Aquifer GIS Symposium: Inspiration Through Technology and Networking, November 9, 2011, Naples, FL

230. Melesse, A., Miralles, F. 2011. Assessing the hydrologic response of wetlands to restoration: A remote sensing perspective. International Conference on Remote Sensing natural hazards and Environmental Change, Singapore, 28-29 July, 2011.
231. *Setegn, S., **Melesse, A.M.**, 2011. Application of a Semi-Distributed Model and Its Prediction Uncertainty for Simulation of Streamflow in the Rio Grande De Manati River Basin, Puerto Rico, Florida Section American Society of Agricultural and Biological Engineers 2011 Annual Conference, 15-18 June 2011, Naples, FL, USA.
232. *Setegn, S., **Melesse, A.M.**, 2011. Hydrologic Impacts of Land use/Land cover Changes in the Rio Cobre Watershed, Jamaica, Florida Section American Society of Agricultural and Biological Engineers 2011 Annual Conference, 15-18 June 2011, Naples, FL, USA.
233. *Setegn, S., **Melesse, A.M.**, 2011. Climate Change Impact on Water Resources Variability in the Yuna Basin, Dominican Republic, Florida Section American Society of Agricultural and Biological Engineers 2011 Annual Conference, 15-18 June 2011, Naples, FL, USA.
234. *Setegn, S G., **Melesse. A.M.** 2011. *Climate change and its impact on the hydrological processes in the Caribbean islands of Puerto Rico, Jamaica and Dominican Republic*. CIMR an international symposium on: Climate Information for Managing Risks - Local or Regional Adaptation and Mitigation Strategies, May 24-27, 2011, Orlando, Florida, USA.
235. ** Dessu , S.B., **Melesse, A.M.**, Bhat, M., McClain, M. 2010 *Application of Method of Variation to Predict Human Induced Modifications of Water Resource systems*, AGU Fall Meeting, San Francisco, CA, Dec. 13-17, 2010.
236. *Setegn, S., **Melesse. A.M.**, 2010 *Climate Change Trend in the Tropical and Caribbean Regions and its Hydrological Impacts*, AGU Fall Meeting, San Francisco, CA, Dec. 13-17, 2010.
237. **Chebud Y and **Melesse A.**, 2010. *Application of Remote Sensing and Neural Network Approaches For Prediction of Chlorophyll-a over The Shallow Water Bodies of South Florida*, Presented at the WaterSCAPES, NASA Project, Meeting, FIU, USA.
238. *Setegn, S., **Melesse. A.M.**, McClain, X. Wang, 2010. *Tropical Hydrology under a changing Land Use Dynamics: Development of sustainable watershed conservation scenarios in the Reo Cobre Watershed, Jamaica*, 2010 AWRA Summer Specialty Conference, Tropical Hydrology & Sustainable Water Resources in a Changing Climate, Rio Grande, Puerto Rico, August 30 - September 1, 2010.

239. *Setegn, S., Melesse, A.M., M. McClain, X. Wang, 2010. *Hydrological response of watershed systems to combined land use and climate changes in the in Rio Haina Basin, Dominica Republic*, 2010 AWRA Summer Specialty Conference, Tropical Hydrology & Sustainable Water Resources in a Changing Climate, Rio Grande, Puerto Rico, August 30 - September 1, 2010.
240. *Setegn, S., Melesse, A.M., 2010. *Impact of climate changes on the water resources variability in Rio Grande De Manati and Plata River Basins, Puerto Rico, USA*, 2010 AWRA Summer Specialty Conference, Tropical Hydrology & Sustainable Water Resources in a Changing Climate, Rio Grande, Puerto Rico, August 30 - September 1, 2010.
241. Melesse, A., Miralles, F. 2010 *Impact of Tropical Storms on the Vegetation Biomass of Everglades and Chl-a Concentration in Coastal Waters of Everglades: Application of MODIS and SeaWiFS Sensors*, AGU Meeting of the Americas 08–13 August 2010, Foz do Iguassu, Brazil.
242. **Maalim, Fukhrudin K., Melesse, A. M., Belmont, P. 2010. *Modeling Upland Erosion Potential in the Le Sueur Watershed: A GIS Mediated Application of the WEPP Model*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
243. Melesse, A., Miralles, F. 2010 *Fractional vegetation and impervious surface dynamics in the wetland-urban-agriculture interfaced systems of south Florida: A remote sensing perspective*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
244. Melesse, A., Miralles, F. Thomas, A. 2010 *SeaWIFS-based chlorophyll-a concentration in coastal waters of Everglades*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
245. ***Thomas, A., Melesse, A. M., M., Setegn, S., Nunez, F, Chalas, J, Castillo, A.G 2010. *The effect of reservoir on spatial variation of water quality parameters in Yuna River watershed, Dominican Republic*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
246. **Mekonnen, M, Melesse, A.M., 2010. *Spatial Runoff and Mapping of Potential Water Harvesting Areas: A GIS and Remote Sensing Perspective*, 2010 Water Resources Conference in Ethiopia, Jan. 12-16, 2010, Addis Ababa, Ethiopia.
247. Melesse, A., McClain, M. Miralles, F. Wang, X 2010. *Surface energy fluxes: Reflection of vegetation dynamics and land management*, 2010 Water Resources Conference in Ethiopia, Jan. 12-16, 2010, Addis Ababa, Ethiopia.

248. **Defersha, M., Melesse. A.M., McClain, M., 2010 *GIS based application of Erosion-3D model for identification of potential sediment source areas and derivation of site related measures to minimize erosion*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
249. **Defersha, M., Quraishi, S., Melesse. A.M., McClain, M., 2010 *Interrill erosion, runoff and sediment size distribution as affected by slope steepness and antecedent moisture content*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
250. **Defersha, M., Quraishi, S., Melesse. A.M., McClain, M., 2010 *Evaluation of interrill erosion models and slope steepness factors using laboratory rainfall simulator data*, 2010 Water Resources Conference in Ethiopia, Jan. 12-16, 2010, Addis Ababa, Ethiopia.
251. ***Thomas, A., Melesse, A. M., Setegn, S., Nunez, F., Chalas, J, Castillo, A.G 2010 *The effect of land use/ management on spatial variation of water quality parameters in Yuna and Haina River watersheds*, Dominican Republic, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
252. **Mango, L., Melesse. A.M., McClain, M., Gann, D. 2010. *Modeling the Effect of Land Use/ Land Cover Change and rainfall on the Hydrology of the Upper Mara River Basin*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL
253. **Dessu, S., Melesse. A.M., McClain, M., 2010. Modeling the Influence of Vegetation Dynamics on the hydrology of Mara River Basin using Semi-distributed Hydrologic Models, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL
254. *Setegn, S., Melesse. A.M., Wang, X., Vicioso, F., Nunez, F.,2010. *Calibration and Validation of ArcSWAT model for prediction of hydrological water balance of Rio Haina Basin, Dominica Republic*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL
255. **Diamond, G, Melesse. A.M. 2010. *Water resources assessment and GIS-based Stormwater Runoff estimates for Artificial Recharge of Freshwater Aquifers in New Providence, Bahamas*, AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL.
256. *Setegn, S., Chebud, Y.,Melesse. A.M., 2010. *Analysis of Spatial*

Distribution of Climate Data Impact on Prediction of the Hydrology of Beles Basin, Ethiopia: Application of Remote Sensing, GIS and Hydrological Model., AWRA Spring Specialty Conference: GIS & Water Resources VI, March 29-31, 2010, Orlando, FL

257. Melesse. A., Setegn, S., M. McClain, X. Wang, 2009 *Sensitivity Analysis and Validation of SWAT Model for Prediction of Stream Flow and Sediment Yield in the Rio De La Plata Basin, Puerto Rico*, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract **H41A-0876**
258. *Setegn, S., Melesse, A.M., M. McClain, X. Wang, 2009. *SWAT model application to quantify water resources availability in Caribbean islands and its prediction uncertainty analysis: A case study in the Rio Grande De Manati River Basin, Puerto Rico*, Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract **H41F-0953**
259. **Azmera. L, Miralles. F., Garcia. R., Belmont, P., Melesse. A.M. 2009 *Modeling of Ravine sediment loading and budget in the lower Le Sueur River, Minnesota River Basin*, AGU Fall Meeting, San Francisco, CA, Dec. 14-18, 2009.
260. Melesse, A.M., M. McClain, X. Wang, 2009. *Energy fluxes as function of topography, land management and landscape features under different latitudes*, International Conference on Land Surface Radiation and Energy Budgets: Observations, Modeling and Analysis, Beijing, China, March 18-20, 2009.
261. Melesse, A.M., Miralles, F., X. Wang, 2009 *Energy flux and surface parameters in an urban-agriculture-wetland interfaced area: The case of South Florida*, International Conference on Land Surface Radiation and Energy Budgets: Observations, Modeling and Analysis Beijing, China, March 18-20, 2009.
262. **Mango, L., Melesse, A.M., McClain. M., Onsted, J., Gann, D. 2009. *Modeling the Effect of Land-Use Change and Soil and Water Management Practices on the Water and Sediment Flux in the Mara River Basin*, AWRA Spring Specialty Conference: Managing Water Resources & Development in a Changing Climate, Anchorage, AK, May 4-6, 2009
263. *Setegn, S.G., Melesse, A.M., Dargahi, B., Srinivasan, R. 2009 *Water Resources Variability as a Result of Changing Climate: A Case Study in the Lake Tana Basin, Blue Nile Ethiopia*, AWRA Spring Specialty Conference: Managing Water Resources & Development in a Changing Climate, Anchorage, AK, May 4-6, 2009
264. *Setegn, S.G., Melesse, A.M., Dargahi, B., Srinivasan, R. 2009 *Effect of*

downscaling Methods on the Assessment of the Impact of Climate Change in watershed Scale Management Models , AWRA Spring Specialty Conference: Managing Water Resources & Development in a Changing Climate, Anchorage, AK, May 4-6, 2009.

265. *Setegn, S.G., **Melesse, A.M.**, Dargahi, B, Srinivasan, R., Abbaspour, K. 2009. *Changing Climate Effect on Water Resources Variability in the Lake Tana Basin, Ethiopia*. First Annual Nile Basin Research Conference organized by the Applied Training Project (ATP) of the Nile Basin Initiative (NBI) and the Nile Basin Research Programme (NBRP), University of Bergen Norway, 8-11 June 2009, Dar es Salaam, Tanzania.
266. ** Chebud., Y; **Melesse, A.M.** Lessons from Four Decades of Water Resources Development in the Blue Nile Basin. Presented at the Agroecology Symposium at Florida International University, Miami, February 2009.
267. **Treslich, P, Leding, P, Sullivan, E, Marcus, W, **Melesse, A.M.** *Soil quality analysis of the Everglades Restoration Area* Eos Trans.AGU, 89(23), Jt. Assem. Suppl., Abstract H33A-06, Ft. Lauderdale, May 2008
268. **Chebud, Y., **Melesse, A.M.**, *Spatial water balance of Lake Tana, Ethiopia*, Eos Trans. AGU, 89(23), Jt. Assem. Suppl., Abstract H43C-03, Ft. Lauderdale, May 2008.
269. **Tunkuda, N., **Melesse, A.M.**, *Delineation of flood-prone areas of the Rio Minho Watershed, Jamaica using topographic index and watershed physical parameters*, Eos Trans. AGU, 89(23), Jt. Assem. Suppl., Abstract H43A-06, Ft. Lauderdale, May 2008.
270. **Biswas, H., **Melesse, A.M.**, McClain, M. Sukop, M. *Groundwater flow modeling using PMWIN model in the Wakal River basin, Rajasthan, India*, Eos Trans. AGU, 89(23), Jt. Assem. Suppl., Abstract H41B-04, Ft. Lauderdale, May 2008.
271. McClain, M., Joseph Ayieko, **Melesse, A.M.**, Praxedis Ndomba, Jay O'keeffe, Leah Onyango, Rashid Tamatamah and D.Victor Wasonga 2008. *Securing Water for the Environment in the Mara River of Lake Victoria Catchment, Kenya and Tanzania*. Proc. of the Nile Hydrology and Ecology under Extreme Conditions Workshop, June 16-19, 2008, Addis Ababa, Ethiopia, pp 7-9.
272. Belmont, P., E Viparelli, G Parker, W Lauer, C Jennings, K Gran, P Wilcock, **Melesse, A.M** 2008. *Parameterization of a complex landscape for a sediment routing model of the Le Sueur River, southern Minnesota*, AGU Fall Meeting, 15-19 December, 2008, INVITED.

273. ***Thomas, A., C Jennings, F Khalif, L Azmera, **Melesse, A.M.**, P Belmont, 2008. *Sediment Dynamics in the Agricultural Le Sueur River Watershed, Southern Minnesota: Tile Drain Influence on Sediment Transport*, AGU Fall Meeting, 15-19 December, 2008
274. ** Maalim, F K **Melesse, A.M.**, A R Thomas, P Belmont, **L Azmera, C E Jennings
Delineating the Erosion-Potential of Agricultural Lands within the Le Sueur Watershed using Remotely Sensed Data and GIS, AGU Fall Meeting, 15-19 December, 2008
275. ** Azmera, L.A., F R Miralles-Wilhelm, **Melesse, A.M.**, P Belmont, C E Jennings, A Thomas, F Khalif, *Estimation of Ravine Sediment production using MIKE 11 model, in the lower Le Sueur Watershed, Minnesota*, AGU Fall Meeting, 15-19 December, 2008.
276. Melesse, A.M. and Wang, 2007. *Landsat-Based Impervious Surface Mapping and Storm Runoff Response*, Joint AGU Meeting, May 21-25, 2007, Acapulco, Mexico.
277. Melesse, A.M., McClain, Ahmed, Wang, Nangia and Lim. 2007. *Suspended Sediment Load Prediction Using Artificial Neural Networks Approach*
Joint AGU Meeting, May 21-25, 2007, Acapulco, Mexico.
278. **Biswas, H., **Melesse, A.M.**, and McClain, M. 2007. *Remote sensing and-GIS based approach for delineation of groundwater prospect zones in a semi-arid area in Rajasthan, India*, Annual AWRA meeting, Albuquerque, NM, November 2007.
279. Melesse et al. 2006. *Analysis of Energy Fluxes and Land Surface Parameters in Grassland Ecosystem: Remote Sensing Perspective*. Presented at the Joint Annual Conference of the Florida State Horticultural Society and the Soil and Crop Science Society of Florida. June 4-6, 2006, Tampa, Florida.
280. Jayachandran, K., M. Bhat, G. Bobeche*, C. Clark-Cuadrado*, and **A. Melesse**. "Agroecology Program at Florida International University." Paper presented at the ASA-CSSA-SSSA International Annual Meetings, Indianapolis, November 12-16, 2006.
281. Melesse, A.M. *Multi-temporal scale flood prediction using Artificial Neural Network: A case study for Devils Lake and Red River of the North Basins*, ASAE Annual International Meeting, July 17-20, 2005, Tampa, Florida.

282. Melesse, A., V. Nangia, Baumgartner, D. 2004. *Grid-based Surface Water Balance mapping using Remote Sensing and GIS*, AWRA Annual Conference, 1-4 Nov, 2004, Orlando FL.
283. Melesse, A.M., J. Oberg, Nangia, V., Baumgartner, D. 2004. *Wetland Evapotranspiration and Vegetation Dynamics at the Glacial Ridge Ecological Restoration Site*, AWRA Annual Conference, 1-4 Nov, 2004, Orlando FL.
284. Melesse, A. M., McClain, M. *Hydrological Modeling and Model Selection*. Caribbean Coastal Scenarios Workshop, Sep.30-Oct. 1, 2004, Santa Domingo, Dominican Republic.
285. Melesse, A.M., J. D. Jordan, 2003. *Thermal maps and vegetation indices to enhance land cover and surface microclimate mapping*. Geophysical Research Abstracts, Vol. 5, 04511
EGS-AGU-EUG Joint Assembly, 06-11 April 2003, Nice, France.
286. Melesse, A.M., W. D. Graham, J. D. Jordan, 2003. *Spatially distributed travel time approach for runoff hydrograph prediction*. Geophysical Research Abstracts, Vol. 5, 04571, EGS-AGU-EUG Joint Assembly, 06-11 April 2003, Nice, France.
287. Melesse, A. M., Nangia, V., 2003. *Surface energy flux estimation using remotely-sensed data for agricultural fields*. ASAE/CSAE North-Central Intersectional Conference, 3-4 Oct, 2003, Fargo, ND.
288. Melesse, A. M., Nangia, V., 2003. *Spatial Water Balance and Hydrologic Analysis of Devils Lake*. ASAE/CSAE North-Central Intersectional Conference, 3-4 Oct, 2003, Fargo, ND.
289. Melesse, A. M., Nangia, V., 2003. *Study on latent heat flux from crop fields*. AWRA Annual Conference, 3-6 Nov, 2003, San Diego, CA.
290. Seielstad, G.A, O. Beerli, P. Carter, B. Dahlen, R. Hanley, A. Johnson, G. Johnson, S. Laguette, Melesse, A.M., D. Olsen, R. Phillips, R. Schultz, S. Seelan, W. Semke, C. Won, X. Zhang. 2003. *Applications for Crop and Range Management with New Sensors*. 30th International Symposium of Environment, Honolulu, Hawaii.
291. Melesse, A. M., 2003. *Analysis of land surface parameters and flood data of the Red River of the North Basin*. EOS Transactions, 84(46), H41B-05 AGU Meeting, San Francisco, CA.
292. Melesse, A. M., W. D. Graham, J. D. Jordan 2002. *A GIS-DEM based spatially distributed storm runoff response study using remotely-sensed data*. ASAE Paper # 02-2005, International ASAE Meeting, Chicago, IL,

July 2002.

293. Melesse, A. M, W. D. Graham. 2002. *Stream flow prediction using spatially distributed travel time method utilizing remote sensing and GIS*. EOS Transactions, 83(47), H51B-0782, AGU Meeting, San Francisco, CA.
294. Tien, Kai-Jen, Melesse, A.M., J. D. Jordan, C.H. Tan. 2002. *Agricultural Land use/Land cover Classification Using Landsat 7 ETM+ Imagery in Taiwan*. EOS Transactions, 83(19), B22B-02. AGU Meeting, San Francisco, CA.

Technical Reports and Manual

295. Melesse, A., Setegn, S., McClain, M, Vicioso, F., Veloz, F., Fu, J, Webber, D., Ortiz, J, Nunez, F. “Caribbean Coastal Scenarios Project”, Final Report submitted to IAI under the agreement CRN II-061, Department of Earth and Environment, Florida International University, May 30, 2012, pp 75.
296. 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.
297. 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.
298. Melesse, A., Setegn, S., McClain, M, Vicioso, F., Veloz, F., Fu, J, Webber, D., Ortiz, J, Nunez, F. “Caribbean Coastal Scenarios Project”, Fifth year Interim Progress Report submitted to IAI under the agreement CRN II-061, Department of Earth and Environment, Florida International University, February 2011, pp 41.
299. 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.
300. Karen Gran, Patrick Belmont, Stephanie Day, Carrie Jennings, Andrea Johnson, Wes Lauer, Gary Parker, Enrica Viparelli, Peter Wilcock, Fukhrudin Khalif, Luam Azmera, Assefa Melesse, 2010. Watershed Watershed-scale sediment

budget in the scale sediment budget in the Le Sueur River, Minnesota, for turbidity management and future rehabilitation efforts, Final Report Submitted to Minnesota Pollution Control Agency

301. Bhat, M. G., K. Jayachandran, **Melesse, A.M.**, J. Onsted, and S. Koptur. "Curriculum Enrichment, Instrumentation, Experiential Learning in Agroecology: Annual Progress Report for Period ending July 2010." Submitted to the Department of Agriculture under the Cooperative Agreement 2008-38422-19209, Department of Earth and Environment, Florida International University, Miami, July 2010.
302. Melesse, A., Setegn, S., McClain, M, Vicioso, F., Veloz, F., Fu, J, Webber, D., Ortiz, J, Nunez, F. "Caribbean Coastal Scenarios Project", Fourth year annual Progress Report submitted to IAI under the agreement CRN II-061, Department of Earth and Environment, Florida International University, July 2010.
303. Melesse, A., McClain, M, Vicioso, F., Veloz, F., Fu, J, Webber, D., Ortiz, J, Nunez, F. "Caribbean Coastal Scenarios Project", Third year annual Progress Report submitted to IAI under the agreement CRN II-061, Department of Earth and Environment, Florida International University, June 2009.
304. McClain, M., Vicioso, F., Veloz, F., Fu, J, **Melesse, A.M.**, Webber, D., Ortiz, J, Nunez, F. "Caribbean Coastal Scenarios Project", Second year annual Progress Report submitted to IAI under the agreement CRN II-061, Department of Environmental Studies, Florida International University, June 2008.
305. Bhat, M. G., K. Jayachandran, **Melesse, A.M.** and S. Koptur. "Curriculum Development, Curricular Development and Capacity Building in Agroecology Sciences." Annual Progress Report Submitted to the US Department of Agriculture under the Cooperative Agreement 2005-38422-15940, Department of Environmental Studies, Florida International University, Miami, October 2006.
306. Bhat, M. G., K. Jayachandran, **Melesse, A.M.** and S. Koptur. "Curriculum Development, Curricular Development and Capacity Building in Agroecology Sciences." Annual Progress Report Submitted to the US Department of Agriculture under the Cooperative Agreement 2005-38422-15940, Department of Environmental Studies, Florida International University, Miami, January 2008.
307. Bhat, M. G., K. Jayachandran, **Melesse, A.M.** and S. Koptur. "Curriculum Development, Curricular Development and Capacity Building in Agroecology Sciences." Final Technical Report Submitted to the US Department of Agriculture under the Cooperative Agreement 2005-38422-15940, Department of Environmental Studies, Florida International University, Miami, October 2008.

308. Bhat, M. G., M. Alen, K. Jayachandran, **Melesse, A.M.**, and A. Ravinet. "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.
309. Bhat, M. G., K. Jayachandran, **Melesse, A.M.**, J. Onsted, and S. Koptur. "Curriculum Enrichment, Instrumentation, Experiential Learning in 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.
310. 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.
311. 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.

Technical Trainings/workshops offered

1. Advanced GIS: Application to water resources Engineering, Addis Ababa Institute of Technology, Addis Ababa University, May 7-18, 2012.
2. Climate Change and Water Resources, Bahir Dar University, March 14-17, 2012.
3. Remote Sensing in Hydrology, Bahir Dar University, March 19-23, 2012.
4. Impacts of human and climate change induced drivers on the ecohydrology of the Mara River basin, Egerton University, Kenya, Feb. 16-23, 2012.
5. 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.
6. Advanced GIS, Bureau of Water Resources, ANRS, SWHISA, 2010, Bahir Dar, Ethiopia.
7. GIS in Water Resources, Bureau of Water Resources, ANRS, SWHISA, 2010, Bahir Dar, Ethiopia.
8. Image Analysis, Bureau of Water Resources, ANRS, SWHISA, 2010, Bahir Dar, Ethiopia.

9. Principles of GIS, Bureau of Water Resources, ANRS, SWHISA, 2009, Bahir Dar, Ethiopia
10. SWAT application in the Caribbean Islands. May 26-27, 2009, Santa Domingo, Dominican Republic.
11. SWAT application in the Caribbean Islands. May 29-30, 2009, Kingston Jamaica.
12. SWAT: Theory and application, May 17-18, 2008, Quito, Ecuador.
13. SWAT application to watershed modeling in the Mara River basin, June 26-27, 2006, Kissimu, Kenya.

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.
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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.
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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.