

# Shree Ram Sharma Dungal

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PhD Student

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## RESEARCH INTERESTS

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- ❖ Forest disturbance, climate change, elevated CO<sub>2</sub>, and air pollution effects on net primary productivity at broad temporal and spatial scales.
- ❖ Characterizing the effects of climate and human activities on water resources in Asia by using ecosystem models.
- ❖ Developing ecosystem models to account for the effects of livestock on carbon balance by explicitly accounting for herbivore population dynamics in the global land model.
- ❖ Ecosystem modeling, large scale model simulation for historical and future projection to quantify the relative contribution of multiple environmental factors on carbon uptake and sequestration across multiple scales.

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## EDUCATION

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2013 – Present : Ph.D. Candidate (Current GPA 3.82)

SFWS, Auburn University

2009 – 2011 : M.S.

Environmental Sciences, Lehigh University

2004 – 2008 : B.S.

Forest Science, Tribhuvan University

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## PROFESSIONAL PREPARATIONS

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Spring 2013 – Present : Graduate Research Assistant, Auburn University

Fall 2015 : Graduate Teaching Assistant (FOR5470: GIS Application in Natural Resources), Auburn University

Summer 2011 : Research Assistant, Northern Arizona University

2010 – 2011 : Teaching Assistant, Lehigh University  
2007 – 2008 : Research Assistant, Forester's Initiation for Biodiversity Conservation  
2006 – 2007 : Research Assistant, Museum & Documentation, Tribhuvan University  
2003 – 2004 : Community Forest Facilitator, Environment for Life (NGO)

## **AWARDS & HONORS**

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2016 : Harry Murphy Award (\$1000), School of Forestry & Wildlife Sciences, Auburn University, Auburn, AL.  
2016 : Outstanding International Graduate Student Award, School of Forestry & Wildlife Sciences, Auburn University, Auburn, AL.  
2015 : National Center for Atmospheric Research, Corporate Technical Training Center - \$1200 for attending NCL workshop in Colorado, Boulder. Feb 9-12, 2016  
2015 : Graduate Travel Fellowship - \$125 for attending conference organized by Ecological Society of America, Baltimore, MD.  
2014 : Essay Competition (3<sup>rd</sup>) - \$200 Blood Donors of America, New York  
2012 – 2013 : Graduate Fellowship Office of the Dean, Auburn University  
2010 : Graduate Travel Fellowship - \$500 for attending conference organized by AGU  
2010 : Best Student Award Forester's Association of Nepal  
2009 – 2010 : Graduate Fellowship College of Arts and Sciences, Lehigh University  
2009 : Nepal Vidya Bhusan Office of the Dean, Tribhuvan University  
2009 : Free Student Union Award Institute of Forestry, Tribhuvan University

## **TRAININGS & WORKSHOPS**

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- ❖ Computer training on application developer, C++ programming, Fortran
- ❖ NCAR Command Language, Feb 9-12, 2016, Boulder, Colorado
- ❖ ArcGIS, ARC Macro Language
- ❖ LI-COR Training (7 days)

- ❖ Climate and Ecology of the Mongol Empire (CEME) Writing Workshop, Institute of Advanced Study, Princeton, NJ, Oct 3rd-7th, 2014
- ❖ 47th Annual Air Pollution Workshop and Symposium, Auburn University, Auburn, AL 36849, May 17-21, 2015
- ❖ Climate and Ecology of the Mongol Empire (CEME) Workshop, Harvard Forest, Petersham, MA, Feb 5-7, 2016

### **INVITED TALKS**

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- Dangal, S.R.S. *Current Status of Forestry Education in Nepal*. Fall 2014 – International Forestry Course (FORY 6000/5000), School of Forestry and Wildlife Sciences, Auburn, AL
- Dangal, S.R.S. *Current Status of Forestry Education in Nepal*. Fall 2015 – International Forestry Course (FORY 6000/5000), School of Forestry and Wildlife Sciences, Auburn, AL

### **PRESENTATIONS AND PUBLISHED ABSTRACT (First Author )**

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- Dangal, S.R.S., H. Tian, S. Pan, B. Zhang, and J. Yang. *Impacts of climate and land use change on ecosystem hydrology and net primary productivity: Linking water availability to food security in Asia*. American Geophysical Union 14-18 December, 2015. San Francisco, CA (Poster).
- Dangal, S.R.S., H. Tian, C. Lu, S. Pan, N. Pederson, and A.E. Hessel. *Synergistic effects of climate change and grazing on net primary production in Mongolia: Integrating livestock population dynamics into an ecosystem model*. August 9-14, 2015. Ecological Society of America. Baltimore, Maryland (Poster).
- Dangal, S.R.S. *Effects of climate change and grazing on aboveground net primary productivity in Mongolia*. This is Research-Graduate Student Symposium. Auburn University, Auburn, AL (Talk)
- Dangal, S.R.S, S. Pan, H. Tian, Q. Yang, C. Lu, J. Yang. *Global Evapotranspiration Induced by Climate Changes in the 21st Century*. International Symposium Evapotranspiration: Challenges in Measurement and Modeling from Leaf to the Landscape Scale and Beyond, Raleigh, NC. 2014 (Talk).
- Dangal, S.R.S, H. Tian, C. Lu, and J. Yang. *Effects of Plant-Herbivore Interaction on Net Primary Production and Soil Organic Carbon in Africa: Modeling Approach and Preliminary Results*. Mini-Symposium on Carbon Cycle and Climate Change & Partnership Meeting, Division of Global Initiatives, Tuskegee University. 2013 (Poster).

Dangal, S.R., and B.S. Felzer. *Effects of Natural and Anthropogenic Disturbance on Long Term Carbon Storage and Productivity in the US Eastern Temperate Forests*. AGU Fall Meeting 2010 (Poster)

Dangal, S.R., and B.S. Felzer. *Carbon Allocation in the US Eastern Temperate Forests under Elevated Carbon dioxide and Warming Climate*. Graduate Student Symposium, Lehigh University, Spring 2010. (Poster)

Dangal, S.R. and B.S. Felzer. *Modeling the Effects of Natural and Anthropogenic Disturbance on Carbon and Nitrogen Dynamics of the US Eastern Temperate Forests*. Graduate Student Symposium. Lehigh University, Spring 2011. (Poster).

## **PRESENTATIONS AND ABSTRACTS (Coauthors)**

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Yang, J., H. Tian, S.R.S. Dangal, B. Zhang, S. Pan, Y. Liu and Y. Wang. *Drought and Wildfire Impacts on Carbon and Water Cycles in Terrestrial Ecosystems*. American Geophysical Union 14-18 December, 2015. (Talk)

Pan, S., H. Tian, S.R.S. Dangal, J. Yang, B. Tao. *Increased terrestrial net primary production in Africa in response to climate and other environmental changes*. Ecological Society of America. 9-14 August, 2015. (Poster)

Lu, C., H. Tian, S.R.S. Dangal, S. Pan, N. Pederson, A. Hessel. *Severe Droughts in Mongolian Plateau during recent decade: Frequency, duration and impacts on terrestrial ecosystems*. Ecological Society of America 9-14 August, 2015. (Talk)

Tian, H., C. Lu, W. Ren, J. Yang, S.R.S. Dangal, K. Banger, B. Zhang, Q. Yang, S. Pan, B. Tao. *The Dynamic Land Ecosystem Model (DLEM): Coupling of biophysical, biogeochemical, hydrological, vegetation dynamical and land use processes for multi-scale ecological forecasting*. Ecological Society of America 9-14 August, 2015. (Talk)

Tian, H., K. Banger, B. Tao, S. Pan, S.R.S. Dangal, W. Ren, and J. Yang. *Large-scale land transformations and their impacts on terrestrial primary production and soil carbon storage in India/South Asia: 1880-2010*. NASA LCLUC Program. 2015 (Poster)

Kamaljit, B., H. Tian, W. Ren, T. Bo, C. Lu, S. Pan, J. Yang, and S.R.S. Dangal. *Impact of Multifactor Global Change on Crop Productivity and Soil Organic Carbon Storage in India during 1880-2010*. Water, Food, Energy & Innovation for a Sustainable World Conference, Tampa, Florida. 2013 (Talk).

Pan, S., H. Tian, J. Yang, B. Tao, W. Ren, C. Lu, S.R.S Dangal, B. Zhang, Q. Yang, K. Banger. *Africa's Terrestrial Net Primary Productivity and Water Use Efficiency in the 20th and 21st centuries*. Mini-Symposium on Carbon Cycle and Climate Change & Partnership Meeting, Division of Global Initiatives, Tuskegee University. 2013 (Poster).

Chaoqun Lu, H. Tian, G. Chen, W. Ren, J. Yang, B. Tao, B. Zhang, K. Banger, S. Pan, S.R.S Dangal. *Net greenhouse gas balance in Africa and its global implications*. Mini-Symposium on Carbon Cycle and Climate Change & Partnership Meeting, Division of Global Initiatives, Tuskegee University. 2013 (Poster).

Chapagain, B., D. Carter, S. R.S. Dangal. *Life cycle impact of Loblolly pine (Pinus taeda) management on carbon sequestration in Southeastern United States*. International Society of Forest Resource Economics Conference. March 11-12, 2013. (Poster)

## PUBLICATIONS

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**Dangal, S.R.S.**, Hanqin Tian, Chaoqun Lu, Shufen Pan, Neil Pederson, Amy Hessl: *Synergistic effects of climate change and grazing on net primary production of Mongolian grasslands*. Accepted in Ecosphere, Ecological Society of America.

Shufen Pan, **Shree R.S. Dangal**, Bo Tao, Jia Yang, Hanqin Tian: *Recent patterns of terrestrial net primary production in Africa influenced by multiple environmental changes*. Ecosystem Health and Sustainability 1: art18. DOI: 10.1890/EHS14-0027.1

Kamaljit Banger, Hanqin Tian, Bo Tao, Wei Ren, Shufen Pan, **Shree R. S. Dangal**, Jia Yang: *Terrestrial net primary productivity in India during 1901-2010: Contributions from multiple environmental changes*. Climatic Change. DOI: 10.1007/s10584-015-1448-5

Shufen Pan, Hanqin Tian, **Shree R. S. Dangal**, Zhiyun Ouyang, Chaoqun Lu, Jia Yang, Bo Tao, Wei Ren, Kamaljit Banger, Qichun Yang, Bowen Zhang: *Impacts of climate variability and extremes on global net primary production in the first decade of the 21st century*. Journal of Geographical Sciences 09/2015; 25(9). DOI:10.1007/s11442-015-1217-4

Shufen Pan, Hanqin Tian, Chaoqun Lu, **Shree R.S. Dangal**, Mingliang Liu: *Net primary production of major plant functional types in China: Vegetation classification and ecosystem simulation*. Acta Ecologica Sinica 04/2015; 35(2). DOI:10.1016/j.chnaes.2015.03.001

Shufen Pan, Hanqin Tian, **Shree R.S. Dangal**, Qichun Yang, Jia Yang, Chaoqun Lu, Bo Tao, Wei Ren, Zhiyun Ouyang: *Responses of global terrestrial evapotranspiration to climate change and increasing atmospheric CO<sub>2</sub> in the 21st century*. 12/2014; 3(1). DOI:10.1002/2014EF000263

Shufen Pan, Hanqin Tian, **Shree R S Dangal**, Chi Zhang, Jia Yang, Bo Tao, Zhiyun Ouyang, Xiaoke Wang, Chaoqun Lu, Wei Ren, Kamaljit Banger, Qichun Yang, Bowen Zhang, Xia Li: *Complex Spatiotemporal Responses of Global Terrestrial Primary Production to Climate Change and Increasing Atmospheric CO<sub>2</sub> in the 21 Century*. PLoS ONE 11/2014; 9(11):e112810. DOI:10.1371/journal.pone.0112810

Shufen Pan, Hanqin Tian, **Shree R. S. Dangal**, Zhiyun Ouyang, Bo Tao, Wei Ren, Chaoqun Lu, Steven Running: *Modeling and Monitoring Terrestrial Primary Production in a Changing Global Environment: Toward a Multiscale Synthesis of Observation and Simulation*. Advances in Meteorology 01/2014; 2014:1-17. DOI:10.1155/2014/965936

**Dangal, SRS**, Benjamin S. Felzer, Matthew D. Hurteau: *Effects of Agriculture and Timber Harvest on Carbon Sequestration in the Eastern US Forests*. Journal of Geophysical Research: Biogeosciences 01/2014; 119(1). DOI:10.1002/2013JG002409

Benjamin S. Felzer, Timothy W. Cronin, Jerry M. Melillo, David W. Kicklighter, C. Adam Schlosser, **Shree R. S. Dangal**: *Nitrogen effect on carbon-water coupling in forests, grasslands, and shrublands in the arid western United States*. 09/2011; 116(G3). DOI:10.1029/2010JG001621

## PROFESSIONAL MEMBERSHIPS

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“American Geophysical Union”, Washington DC, United States

“Sigma Xi” (The Scientific Research Society), NC, United States

“Nepal Forester’s Association”, Kathmandu, Nepal.

“Nepal Ranger’s Association”, Babarmahal, Kathmandu, Nepal.

“Forester’s Initiation for Bio-diversity Conservation”, Makwanpur, Nepal

“Group Initiation for Forest Technology”, Makwanpur, Nepal.

Life Member, Blood Donors of America, Washington DC, United States

## PAPER REVIEWS:

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Ecological Society of America

PLOSONE

Forests

Ecosystem Health and Sustainability

Agricultural and Forest Meteorology

Atmospheric Environment

American Geophysical Union – JGR-Biogeosciences

Researcher ID: <http://www.researcherid.com/rid/N-3393-2015>

Google Scholar: <https://scholar.google.com/citations?user=I7dp9f8AAAAJ&hl=en>