

Netra B. Chhetri

EDUCATION

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|------|---------|---|
| 2007 | Ph. D. | Geography, Penn State University (Demography minor)
Committee: W.E. Easterling, B. Yarnal, J. McCarthy, & D. Abler |
| 2000 | M. Sc. | Geography, Penn State University (Demography minor)
Committee: W.E. Easterling, S. Matthews |
| 1991 | Diploma | Permaculture, University of Tasmania, Australia (Honorary)
Presented by: Bill Mollison |
| 1982 | B. Sc. | Institute of Agriculture and Animal Sciences, Rampur, Nepal. |

UNIVERSITY POSITIONS

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|----------------|---|
| 2015 – present | Associate Professor, School for the Future of Innovation in Society, ASU. |
| 2014 – 2015 | Associate Professor, School of Geographical Sciences and Urban Planning and Consortium for Science, Policy and Outcomes, ASU. |
| 2007 – 2013 | Assistant Professor, School of Geographical Sciences and Urban Planning and Consortium for Science, Policy and Outcomes, ASU. |
| 2005 – 2007 | Post Doctoral Research Associate, Consortium for Science, Policy and Outcomes, ASU. |
| 1997 – 2005 | Research Assistant, Department of Geography and Penn State Institutes of Energy and the Environment, Penn State University. |
| 1995 – 1997 | Project Coordinator, Population and Ecology Research Laboratory, Institute of Agriculture and Animal Sciences, Rampur, Nepal. |

PROFESSIONAL POSITIONS

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|-------------|---|
| 1994 – 1995 | Program Coordinator, Oxfam UK/I, Nepal |
| 1992 – 1994 | Program Director, School of Ecology, Agriculture & Community Works, Nepal |
| 1991 – 1992 | Senior Technical Advisor (Natural Resources), CARE-Nepal |
| 1986 – 1991 | Watershed Agronomist, CARE-Nepal |
| 1982 – 1986 | Assistant Agronomist, Farming Systems Research, Department of Agriculture, Government of Nepal. |

PUBLICATIONS:

Peer review journal articles

1. Chaudhary, P., N. **Chhetri**, B. Dorman, R.B. Rana, M. Shrestha, K. Thapa, K. Lamsal, S. Thapa (2015), Turning conflict into collaboration in managing commons: a case of Rupa Lake Watershed, Nepal. *International Journal of the Commons*, **9**(2): 744-771.
2. Ummenhofer, C.C., H. Xu, T.E. Twine, E. Girvetz, H.R. McCarthy, N. **Chhetri**, and K. A. Nicholas (2015), How climate change affects extremes in maize and wheat yield in two cropping regions. *Journal of Climate*, **28**: 4653-4687. DOI:10.1175/JCLI-D-13-00326.1.
3. Challinor, A J, J. Watson, D. Lobell, M. Howden, D. Smith N. **Chhetri**, (2014), A meta-analysis of crop yield under climate change and adaptation. *Nature Climate Change*, **4**:287-2.
4. Wagner,* M., N. **Chhetri**, M. Sturm* (2014), Adaptive capacity in light of hurricane Sandy: The need for policy engagement. *Applied Geography*, **50**:15-23.
5. **Chhetri**, N., M. Subedi, S. Ghimire (2013), Niche-based responses in addressing the climatic constraints to farm production: Analogues to climate-change adaptation in Nepal, *Climate and Development*, **5**(2):174-181.
6. Amaru*, S. and N. **Chhetri** (2013), Climate adaptation: Institutional response to environmental constraints, and the need for increased flexibility, participation, and integration of approaches, *Applied Geography*. **39**:128-139.
7. **Chhetri**, N., P. Chaudhary, P.R. Tiwari and R. B. Yadaw (2012), Institutional and technological innovation: Understanding agricultural adaptation to climate change in Nepal, *Applied Geography*, **33**:142-150.
8. Rodima-Taylor, D., M. F. Olwig, and N. **Chhetri** (2012), Adaptation as innovation, innovation as adaptation: An institutional approach to climate change, *Applied Geography*, **33**:107-111.
9. **Chhetri**, N. and P. Chaudhary (2011), Green revolution: Pathways to food security in an era of climate variability and change? *Journal of Disaster Research*, **6**(5): 486-497.
10. **Chhetri**, N. (2011), Water demand management: Assessing impacts of climate and other changes on water usage in Central Arizona. *Journal of Water and Climate Change*, **2**(4): 288-312.
11. **Chhetri**, N. (2011), Climate sensitive measure of agricultural intensity: Case of Nepal, *Applied Geography*, **31** (2): 808-819.
12. **Chhetri**, N. and W.E. Easterling (2010), Adapting to climate change: Retrospective analysis of climate technology interaction in rice based farming systems of Nepal. *Annals of the Association of American Geographers* **100** (5): 1156-1176.
13. **Chhetri**, N., W.E. Easterling, A. Terando, and L. Mearns (2010), Modeling path dependence in agricultural adaptation to climate variability and change. *Annals of the Association of American Geographers* **100** (4): 894-907.
14. Nyaupane, G. P., and N. **Chhetri** (2009), Vulnerability of climate changes on nature-based tourism in the Nepalese Himalaya. *Tourism Geographies*, **11**:95-119.
15. **Chhetri**, N. and W.E. Easterling (2008), Climate change and food security in dryland region of the world. *Annals of Arid Zone*, **47**: 1-12.

16. Howden, M., J.F. Soussana, F. N. Tubiello, N. **Chhetri**, M. Dunlop, and H. Meinke (2007), Adapting agriculture to climate change. *Proceedings of the National Academy of Sciences (PNAS)*; **104**:19691-19696.
17. Easterling, W.E., N. **Chhetri**, X. Niu (2003), Improving the realism of modeling agronomic adaptation to climate change: Simulating technological substitution. *Climatic Change*, **60**:149-173.
18. Matthews, S., G.P. Shivakoti, and N. **Chhetri** (2000), Population forces and environmental change: Observation from western Chitwan, Nepal. *Society and Natural Resources*, **13**: 763-775.
19. Shivakoti, G., W.G. Axinn, P. Bhandari, and N. **Chhetri** (1999), The impact of community context on land use in an agricultural setting. *Population and Environment*, **20**:335-347.

Book and Special Issue

1. Human and Social Dimensions of Climate Change (2012), **Chhetri**, N. [Ed.], InTech, ISBN 978-953-51-0854-4.
2. Resilience, Adaptation, and Innovation: Applied Geography of Climate Change (2011), Rodima-Taylor, D., M.F. Olwig, N. **Chhetri** [Eds.] Special Issue of *Applied Geography*.

Book chapters

1. **Chhetri**, N and N. Chhetri (2015), Alternative Imaginations: Examining Complementarities across Knowledge Systems, E. S. Huaman & B. Sriraman [Eds.], Indigenous Innovation, by: Sense Publishers, 11-23 pp: ISBN: 978-94-6300-225-7.
2. Fang*, C. M. and N. **Chhetri** (2013), What have we learned about climate variability and human health? *Climate Vulnerability: Understanding and Addressing Threats to Essential Resources*, Pielke, R.A. Sr. [Ed.], Elsevier Inc., Academic Press, 79–86 pp., ISBN: 9780123847034.
3. Chaudhary, P., K. Thapa, K. Lamsal, P. R. Tiwari and N. **Chhetri** (2012), Community-based climate change adaptation for building local resilience, *Human and Social Dimensions of Climate Change*, **Chhetri**, N. [Ed.], InTech, ISBN 978-953-51-0854-4.
4. **Chhetri**, N. (2012), Adapting agriculture to climate variability and change: Capacity building through technological innovation, *Climate Variability - Some Aspects, Challenges and Prospects*, Abdel Hannachi [Ed.], ISBN: 978-953-307-699-7.
5. **Chhetri**, N.B. and N. Chhetri (2010), Sustainability science: transition towards production of knowledge systems for sustainable development. *Encyclopedia Geographic*, SAGE publication.
6. Richter, K. and N. **Chhetri** (1997), Issues and strategies for understanding population and ecology interlinkages in western Chitwan. In *Participation, People, and Sustainable Development: Understanding the Dynamics of Natural Resource Systems*. IAAS/Winrock/Indiana University/FAO/FARM, Shivakoti et al. [Eds.].
7. **Chhetri**, N. (1995), Khoriya cultivation: A perspective. In *Chepangs, Resources and Development*. Bhattraai et al. [Eds.], CAED and SNV-Nepal.

White papers and reports

1. Atkinson, R., N. **Chhetri**, J. Freed, I. Galiana, C. Green, S. Hayward, J. Jenkins, E. Malone, T. Nordhaus, R. Pielke Jr., G. Prins, S. Rayner, D. Sarewitz, and M. Shellenberger (2011), *Climate Pragmatism: Innovation, Resilience and No Regret*, The Hartwell Paper, Breakthrough Institute, pp 30.
2. Rosalind, B. **Chhetri**, N., and Holway, J. (2008), Water resource allocation: Case studies. Report prepared for Arizona Water Institute, *A White paper that reviews issues related to water transfer from agriculture to urban usage*.
3. **Chhetri**, N. (2008), Analysis of multiple stressors on central Arizona water resources. Interim Report of the International Institute for Applied System Analysis (IIASA) IR-08-029, October.
4. **Chhetri**, N. (2008), Understanding the process of agricultural adaptation to climate change: Analysis of climate-induced innovation in rice based cropping system of Nepal. Interim Report of the International Institute for Applied Systems Analysis (IIASA) IR-08-028, October.
5. **Chhetri**, N. (2006), Decision making under uncertainty: Ranking the multiple stressors on Central Arizona water resources, *White paper outlining the potential of water demand management to adapt to changing context*.

Op-ed and magazine articles

1. **Chhetri**, N. and G. Grossman (2012), Policy makers versus people, a novel idea: Asking citizens what do they think about climate change, *Cairo Review*, **5**:118-125.
2. **Chhetri**, N. (2008), Climate change and what it means for us. *Newsletter of the Association of Nepalese in Americas – ANA*, **1**:33-34.
3. **Chhetri**, N. (2007), Is Dust Bowl a possibility? Perspective, *Arizona Republic* (04/22/2007).
4. **Chhetri**, N. (1992), Conservation farming: Policy for sustaining food productivity in Nepal. *Permaculture Magazine*, Spring 17-21.

Manuscript in review

1. Julie Sze, Tracy Perkins, Julie Anand, and Netra Chhetri (in review), Stories from the Field: Public Engagement through the Environmental Humanities and Allied Disciplines, *Resilience* (xx,x:xx-xx).
2. Kalidas Subedi, Netra B. Chhetri, and Tika B. Karki, (Book Chapter under final review), Land Use Practices, Cropping Systems and Climate Change Vulnerability to Mountain Agro-Ecosystems of Nepal, Nova Publisher.

RESEARCH GRANTS

Current

1. **Co-Principal Investigator** - Category 3: Sustainable large-scale deployment of perennial biomass energy crops, NSF (% REC=20%, \$1,484,952) (9/15/2012-8/31/2017).

Completed

1. **Principal Investigator** - Adaptive pathways to climate change (APaCC): Livestock and livelihood systems in Gandaki River Basin, COEUS#12092246 (%REC =100%, \$448,525) (7/15/2012-10/31/2015).
2. **Senior Investigator** - Implementing Climate Pragmatism, Nathan Cummings Foundation (%REC = 0%, \$320,000) (7/1/2012-6/30/2013).
3. **Senior Investigator:** Partnership for education on climate change, engineered systems and society, NSF#1043289 (% REC =10%, \$217,936) (9/5/2010-8/31/2013).
4. **Principal Investigator:** Livestock, livelihoods and climate change interaction: Collaborative research in the mountains of Nepal, COEUS#024658 (% REC =100%, \$79,347) (6/1/2011-10/30/2012).
5. **Project Manager:** World Wide Views on biodiversity: Citizen deliberation in Arizona, multiple units at ASU (% REC = 0%, \$14,200) (1/1/2012-12/31/2012). Note that at the global level the project was coordinated by Danish Board of Technology – DBT the Danish Parliament's Office of Technology Assessment
6. **Principal Investigator:** World Wide Views on global warming: Process and impact, NSF# 0925043, (%REC =100%, \$49,444) (9/1/2009- 8/31/2011).
7. **Investigator:** Science policy assessment and research on climate, NSF# 0345604 (% REC=0%, \$751,393) (10/1/2004-9/30/2010).
8. **Project Co-Manager:** World Wide Views on global warming: Citizen deliberation in Arizona, multiple units at ASU (% REC = 0%, \$16,300). Note that at the global level the project was coordinated by DBT.
9. **Project Co-Manager:** Alternative ideas of sustainability and human flourishing, Institute for Humanities Research at ASU (% REC = 0%, \$1,000) (3/1/2009-2/28/2010).
10. **Principal Investigator:** Sensitivity analysis of water resources to multiple stressors in Lower Colorado River Basin of the United States, Decision Center for Desert City (%REC = 0%, \$19,689) (505/1/ 2006 –12/31/ 2006).
11. **Investigator:** Change is hard: The challenge of path dependence, School of Human Evolution and Social Change. Transdisciplinary Research Program (% REC = 0%, \$474,350) (7/1/2009-6/31/ 2012).

AWARDS/RECOGNITIONS

- 2015 Nominee, **Andrew Carnegie Fellow Program 2015** - one of two faculty nominated by the president of Arizona State University.
- 2014 Member of university wide **Leadership Academy**, 2014-2015 program.
- 2011 Early Career Scientist Assembly Fellow on regional climate issues in developing countries, *National Center for Atmospheric Research*.

- 2010 Reinhard Mohn Prize (*Shortlisted*) and received **Jim Creighton Award** from the International Association for Public Participation (IAP2) in recognition of sustained leadership, innovative approaches civic engagement and international reach of the World Wide Views on Global Warming (DBT coordinated the event).
- 2010 Dissertation Initiative for the Advancement of Climate Change Research Scholar (DISCCRS) Award. Participation at the symposia is limited to 30-34 early career scholars identified from a pool of >200 applicants by an interdisciplinary committee of research scientists based on review of submitted applications. The DISCCRS is funded by NSF (# SES- 0931402 to the University of Oregon and SES- 0932916 to Whitman College) and NASA, Earth Science Program (#: NNX10AJ53G to Whitman College). It is also sponsored by: AAG, AER, AGU, AMS, AMS, ASLO, ESA, ESS-ISA, TOS, and USSEE.
- 2008 Visiting Research Fellow, Natural Resources Institute (NRI), University of Greenwich, Chatham, Kent, UK.
- 2007 Peccei and Mikhalevich Award (*Finalist*), International Institute for Applied Systems Analysis. Given annually to the outstanding paper by participants in IIASA's Young Scientists Summer Program, this award provides financial support for winners to return to IIASA for an additional three month of research. My paper made the final top three from out of 50. The paper was later submitted for publication in the Annals.
- 2006 Young Scientist Summer Program Fellow (YSSP), International Institute for Applied Systems Analysis (funded by the U.S. National Academies). YSSP offers research opportunities to competitively selected scholars whose interests correspond with IIASA's ongoing research on issues of global environmental, economic and social change. From June through August I worked under the guidance of IIASA's Research Scholars (Harrij van Velthuisen and Gunther Fisher) on the theme of Land Use Change and Agriculture (LUC). While in IIASA I wrote two research papers and published in their interim report of 2008.
- 2005 Earth and Mineral Sciences (EMS) Centennial Research Award, Penn State University. I was the recipient of the 2005 EMS Award, given to graduate students in recognition of their outstanding research.
- 2005 E. Willard Miller Award in Geography, Penn State University. This award recognizes the academic excellence of graduate students majoring in geography. My paper won in the "Research Category" at the Ph. D. level.

SERVICES AND OUTREACH

Schools and units within ASU

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|----------------|---|
| 2016 – Present | President's Award for Innovation (Committee) |
| 2015 – 2018 | Mentor, 2015 Pueblo Master's and Doctoral Cohort Project, ASU |
| 2015 – present | Steering Committee, Food System Transformation Initiative, GIOS |

2011 – present	Senior Sustainability Scientist, Global Institute of Sustainability.
2008 – present	Affiliate Faculty, Human and Social Dimensions of Science and Technology, School of Life Sciences.
2007 – present	Affiliate Faculty, Environmental and Social Sciences, School of Human Evolution and Social Change.
2006 – present	Honors Disciplinary Faculty, Barrett The Honors College.
2013 – 2014	Emerge – Organizer and Brain Trust
2013 – 2015	Mellon Steering Committee, Institute for Humanities Research.
2012 – 2015	Graduate Research Admission Committee, SGSUP
2011 – 2015	President’s Sustainability Award Committee.
2011 – 2015	Faculty Advisor, Arizona Student Environmental Coalition.
2011 – 2013	Faculty Advisor, IndiGenius Development Group for Energy Efficiency.
2010 – 2013	ASU/NASA Space Grant Faculty Mentor, School of Earth and Space Exploration.
2012	Drafted (with Dr. Nalini Chhetri) the curriculum for Professional Master Degree (<i>sustainability track</i>), at the request of the Dean of the SOS as part of a school-wide framework for a revised curriculum.
2011 – 2012	Member (working group), Cultural Perspectives on Sustainability Cluster, SOS
2009 – 2010	Mentor, Obama Scholars Program.
2007 – 2012	Scholarship and Award Committee, SGSUP
2008 – 2010	Chair of Outreach and Outcomes Committee, CSPO
2007 – 2008	Strategic Planning Drafting Committee, CSPO

National and International Scientific Institutions

2016 – 2017	Steering Committee member, “Solar Radiation Management” – a project to investigate governance pathways for Geoengineering, School of Internal Service, American University, Washington, DC.
2015	Panel Member – National Science Foundation
2013	Reviewer - Dissertations Initiative for the Advancement of Climate Change Research (review of applicants applied to participate in annual symposium)
2012	Capacity Building Assessment Panel - National Aeronautic and Space Administration, Applied Sciences.
2012	Steering Committee - Climate Adaptation Futures: Second International Climate Change Adaptation Conference.
2012	Sociology & Geographic Sciences Panel - National Science Foundation, Graduate Research Fellowship Program.
2012	Reviewer - Dissertations Initiative for the Advancement of Climate Change Research (review of applicants applied to participate in annual symposium).

- 2010 - 2014 **Contributing Author:** Porter, J. R., L. Xie, A. Challinor, K. Cochrane, M. Howden, M. M. Iqbal, D. Lobell, M. Isabel Travasso, (2014) “Food Security and Food Production Systems” In *Climate Change 2014: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, C. Field et al. [Eds.], (contributed to compilation and analysis of meta-dataset of crop yield response to climate change)
- 2010 - 2014 **Contributing Author:** Dasgupta, S., Morton J., Dodman, D., Karapinar, B., Meza, F., Rivera-Ferre, M., Toure, A. and Vincent K (2014) “Rural Areas” In *Climate Change 2014: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, C. Field et al. [Eds.]. (contributed to assessment and synthesis of case studies on local response to climatic constraints)
- 2003 - 2007 **Contributing Author:** Easterling, W.E., P.K. Aggarwal, P. Batima, K.M. Brander, L. Erda, S.M. Howden, A. Kirilenko, J. Morton, J-F. Soussana, J. Schmidhuber and F.N. Tubiello (2007) Food, Fibre and Forest Products. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry et al. [Eds.], Cambridge University Press, Cambridge, UK, 273-313 (contributed to compilation and analysis of meta-dataset of crop yield response to climate change).
- 1993-1998 **Consultant** - Ecological Solutions Limited, Australia.
- 1996 **Founder** - Nepal Participatory Action Network, Nepal.
- 1992 **Founder** - School of Ecology, Agriculture, and Community Works, Nepal.

Review of Journal Articles, Book Chapters and Proposals

Journal articles:

Climate and Development (2015), Climatic Change (2015), Global Environmental Change (2015), Applied Geography (2014), World Development (2014); Climatic Change (2013); Environmental Conservation (2013(2); Net Journal of Agricultural Science (2013); Climate and Development (2012); Journal of Applied Geography (2009, 2010, 2011(2), 2012, 2013); Climatic Change (2010, 2011); Global Environmental Change (2011, 2012); Journal of American Water Resource Association (2011); Agriculture, Ecosystems and Environment (2010, 2011); Journal of Environmental Management (2011, 2012, 2013); Journal of Geographical System (2012); Climate Policy (2010); Journal of Rangeland, (2010); Environmental Hazards, (2009).

Proposals/Applications

National Science Foundation (Panel-2015), DISCCRS VII Symposium Application Review (2013); DISCCRS VII Symposium Application Review

(2012); Social Sciences and Humanities Research Council of Canada (2012); National Science Foundation, CAREER (2010); National Science Foundation, Geography and Spatial Science (2010, 2011(2), 2012, 2013); Environmental Protection Agency, Science to Achieve Results (2011); National Aeronautics and Space Administration, Earth Science Investments (2011); National Oceanic and Atmospheric Administration, Climate Adaptation (2011).

Outreach to community of practice

- 2012 Phoenix Chautari, *The role of Nepali diaspora in an evolving geo-political, economic and environmental context of the 21st Century* – Luncheon dialogue with Nepali diplomats: Nepal’s ambassador to USA and Nepal’s ambassador to the United Nations (≅ 50 local Nepali and friends participated).
- 2012 Verde ASU Lecture Series, *Why American disagree about climate change: Understanding science and opportunities* (≅ 100 Verde residents participated the discussion).
- 2011 Spirit of Senses - *Local impacts of climate change and possible adaptation pathways* (≅ 30 local residents participated).
- 2008 Phoenix Chautari, *Climate change and local water resources* (≅ 20 local Nepali and friends participated)
- 2008 USDA Arid-Land Agricultural Research Center (ALARC), Maricopa, Arizona - *Adapting agriculture to climate change* (≅ 40 ALARC staff employees participated the talk)
- 2008 Café Scientific - Uncertain climate of the future: Impacts and adaptation (20 local residents participated the discussion)
- 2008 Appointed Executive member, Association of Nepalese in America (ANA), a North American Nepalese organization.
- 2006 Elected President of Nepalese and Friends Association, (NAFA) Inc, Nepalese organization in the South-west focusing on celebrating cultural heritage of Nepalese people.

ORGANIZATION OF WORKSHOPS/SEMINARS/ DELIBERATIONS

- 2015 **World Wide Views on Climate and Energy:** Coordinated and organized citizen deliberation on June 6, 2015, whereby 85 citizens from Phoenix Metro and its surrounding rural areas (along with more than 10,000 other citizens from 76 countries) attended day-long meetings to learn about biodiversity issues, and express their views (<http://climateandenergy.wvviews.org/features/>). This largest ever global citizen consultation on climate and energy participating citizens voted on a set of predefined questions and the answers were presented at COP21 in Paris. At the global level the event was coordinated by DBT.
- 2014 **Write-shop workshop:** Organized a three days writeshop workshop to university faculty and NGOs professional (7 participants)
- 2014 **Livestock, Livelihoods and Climate Change:** Organized capacity building training to community of practitioners and vulnerable communities across the Gandaki River Basin (Chitwan, Nawalparasi and Lamjung district) of Nepal (five two days training where over 100 participants participated)

- 2013 **Livestock, Livelihoods and Climate Change:** Organized capacity building training to community of practitioners and vulnerable communities across the Gandaki River Basin (Kaski district) of Nepal (two days training where over 50 participants participated)
- 2012 **World Wide Views on Biodiversity:** Coordinated and organized citizen deliberation on September 15th 2012, whereby 78 citizens from Phoenix Metro and its surrounding rural areas (along with more than 3,000 other citizens from 25 countries) attended day-long meetings to learn about biodiversity issues, and express their views (<http://biodiversity.wwviews.org/>). They all voted on a set of predefined questions and the answers were presented at COP11 in India the following month. I also helped coordinate the event in three other sites (Boston, DC, and Colorado) in the U.S. At the global level the event was coordinated by DBT.
- 2012 **Annual Conference of Association of American Geographers** - organized paper session “*Adaptation as Innovation, Innovation as Adaptation: An Institutional Approach to Climate Change I and II*” with Daivi Rodima-Taylor, Boston University, February 2012, New York.
- 2011 **Association for Nepal and Himalayan Studies (ANHS) Himalayan Studies Conference** - organized a paper session on the “*Social Dimensions of Agriculture and Climate Change in the Himalaya*” with Milan Shrestha, Arizona State University, October 2011, Macalester College, St. Paul, Minnesota.
- 2011 **Initiative on Climate Adaptation Research and Understanding through the Social Sciences (ICARUS) Conference (2nd)** – organized a paper session on “*Climate and Societal Vulnerability: Multiple Stressors Analysis*” May 2011, University of Michigan, Ann Arbor, Michigan.
- 2010 **International Conference: Climate, Sustainability and Development in Semi-arid Regions (ICID+18)** – organized a paper session on “*Climate and Sustainable Development*” August 2010, Fortelaza, Brazil.
- 2010 **Ecological Society of America’s Annual Meeting (95th)** – organized a workshop on “*Citizen Participation in Complex Social and Environmental Governance*” with N. Chhetri, August 2010, Pittsburgh, PA.
- 2010 **Alternative Imagination Seminar** – organized a half day seminar on “*Consciousness, science and reincarnation*” with N. Chhetri, M. Lim and F. Mahootian, April 2010, Arizona State University, Tempe, Arizona.
- 2009 **World Wide Views on Global Warming (WWViews)** – Co-organized (with N. Chhetri and S. Gallais) citizen deliberation on September 26th 2009, whereby 88 citizens from Phoenix Metro areas (along with more than 4,000 other citizens from 38 countries) attended day-long meetings to learn about issues surrounding climate change and express their views (<http://www.wwviews.org/node/259>). They all voted on a set of predefined questions and the answers were presented at COP15 in Copenhagen in December 2009. At the global level the event was coordinated by DBT.
- 2009 **Alternative Imagination Seminar:** organized a half day seminar on “*Translating Discourse to Design: Connecting the Dots Between Life and Learning, Leadership and Livelihoods*”, with N. Chhetri, M. Lim and F. Mahootian, December 2009, Arizona State University, Tempe, Arizona.

- 2009 **Alternative Imagination Seminar** - organized a half day seminar on “*Rethinking Knowledge Systems: Gandhian Perspectives on Sustainability*” with N. Chhetri, M. Lim and F. Mahootian, December 2009, Arizona State University, Tempe.
- 2009 **Alternative Imagination Seminar** – organized a half day seminar on “*Women Reproductive Health and Alternative Medicine*” with N. Chhetri, M. Lim and F. Mahootian, March 2009, Arizona State University, Tempe.
- 2008 **Alternative Imagination Seminar** – organized a half day seminar on “*Rethinking Knowledge Systems: Native American Perspectives*” with N. Chhetri, M. Lim and F. Mahootian, October 2008, Arizona State University, Tempe.
- 2006 **Multiple Stressors on Central Arizona Water Resources** Workshop – organized two and a half day workshop to discuss the policy implications of understanding multiple stressors on water resources of Arizona, with D. Sarewitz, L. Hidinger and M. Neff, October 2006, Arizona State University, Tempe, Arizona.
- 2006 **Science, Policy, and Social Inequities** – organized a workshop to discuss how science add burden to poor and marginalized population of society, with D. Sarewitz, J. Wetmore, and D. Guston, L. Hidinger, May 2006, Saguharo Lake, , Arizona.

TEACHING

GPH 314: Global Change: I have taught this course every year since the Spring of 2007, secured science and society credit for it, completed several honors contracts through it, and built it up from 60 to the current 200 (Fall) and 150 (Spring) student enrollment.

GPH 591: Human and Social Dimensions of Climate Change: I created this new course to introduce graduate students to the human and social dimensions of climate change, a much neglected area of inquiry in climate change dilemma. I have been offering this course every fall since 2009. It is listed as core course for the PSM in Science & Technology Policy and is cross-listed with Human and Social Dimensions of Science & Technology, Environmental Social Sciences and the School of Sustainability. This class consistently attracts graduate students from several majors including Engineering, Design and Business Schools.

HSD 598: Cultural Perspectives on Sustainability: I co-created this course with Nalini Chhetri (School of Sustainability); Merlyna Lim (School of Social Transformation, Justice and Social Inquiry), and Farzad Mahootian (currently at New York University formerly with ASU’s School of Letters and Sciences) to introduce graduate students to the perspectives on sustainability generally not covered in other courses. I have been offering the course every spring since 2010 (except spring 2013). This course is cross-listed in School of Sustainability, Human and Social Dimensions of Science & Technology, and School of Geographical Sciences and Urban Planning.

IND 598: Applied Global Innovation and Social Entrepreneurship. This was a collaborative course designed with Mark Henderson and Bradley Rogers of the

College of Technology and Innovation, John Takamura of College of Design, Dan O'Neill in Skysong, Nalini Chhetri in CSPO, and Marcia Nation of the Global Institute of Sustainability to provide students to an integrated approach in understanding technology, development and business model in designing for the developing world. I was part of this effort for one semester in Fall of 2009. The course continues to be taught in College of Technology and Innovation and School of Design.

STUDENT MENTORING

Active:

Asif Ishtiaque	Ph. D., Chair	School of Geographical Sciences & Urban Planning
Jagadish Parajuli	Ph. D., Chair	School of Sustainability
Anita H. Ferguson	Ph. D., Committee	School of Human Evolution and Social Change

Completed:

Katie Thompson	M.S., Committee	School of Sustainability
Sotiria Anagnostau	Ph. D., Chair	Gender inequality and decision-making: A Case study of national adaptation programs of action.
Emily Cooney	Ph. D., Committee	Global and local influences on the rhetoric of self-sufficiency in Java, Indonesia
Jeffrey Jennings	PSM Co-chair	An in-depth analysis of the groundwater contamination surrounding the Phoenix-Goodyear airport superfund site
Kevin Todd	PSM Chair	Comparative analysis of vulnerability: City and Rural Area of Alaska
Tayler Jenkins	B. Sc.-Honors Chair	Is community-based biodiversity and resource management an effective tool for fostering an environmental ethic in Nepali farmers?
Bjoern Hagen	Ph. D., Committee, 2013	Understanding public risk perceptions for global climate change: Fostering behavioral change for adaptation and mitigation policies.

Brian Dorman	B. Sc.-Honors 3 rd Reader, 2013	The Center cannot hold: Towards a network theory of international relations and the future of global governance
Rud Moe	B. Sc.-Honors Chair, 2013	Comparative policy analysis: Water Management in Mesa, Arizona, USA and Hermosillo, Sonora, Mexico
Sabrina Delgado Arias	PSM, 2012 Chair	Indigenous knowledge and information communication technologies: Democratization of agricultural extension in south America.
Jessica Dawn Passerelli	PSM, 2012 Committee	Organizational culture and its effects on decision-making: A comparative study of culture and sustainable initiatives at the Salt River Project and the Arizona Public Service.
Katherine Dreeland	B. Sc., 2012 Chair	Water, peace building, and ecotourism: A case of Friends of the Earth Middle East's Eco-parks in Jordan, Israel and Palestine.
Stephanie Amaru	BS, 2012 Chair	Climate adaptation in rural communities: A study of institutional intervention, use of science and technology, democratic government, and future goals.
Will Greene	BS, 2012 Chair	Reflection: Arizona Student Environmental Coalition.
Louis Durand	MA, 2011 Co-chair	The Agua Caliente Solar Project: Integrated.
Farhan Ahmed	MA, 2011 Co-chair	Application of CERES Principles in the oil production and chemical industries
Cecilia Gonzalez Paredes	MS, 2011 Committee	Conservation of crop wild relative species in Bolivia: An outline to identify positive and negative factors to support a conservation program.
Jason Oleary	PSM, 2011 Committee	What has Arizona done for renewable energy?
Alicia Rodgers	PSM, 2010 Chair	Path Dependencies in Carbon Accounting and Carbon-Labeling

Joseph Tuccillo	BS, 2011 Chair	Path dependence as “place dependence”: Water allocation, settlement patterns, and urban trajectories in the Salt River Valley.
Lilah Zautner	MA, 2011 Committee	A comparative assessment of community water system vulnerability to water scarcity in Buckeye and Cave Creek, Arizona.
Christina Fang	BS, 2010 Chair	What have we learned about climate variability and human health?
Jaron E. Reed	BS, 2010 2 nd reader	A geospatial analysis of fast-food outlets and demographic variables in Phoenix, Arizona: The political economy of meat consumption.
Megan O’Shea	MS, 2009 Committee	Hydropolitics: Examining the role of science in Arizona’s Groundwater Management Act of 1980.
Brian E. Cohn	B. Sc., 2010 3 rd reader	Physical constraints of various energy generation methods.

PRESENTATIONS: PROFESSIONAL MEETINGS

- 2015 Global Network of Mountain Observatories (GNOMO) – Soupled socio-ecological systems: Case study of Hindu Kush Himalaya region, Rocky Mountain Biological laboratory (RMBL), Colorado.
- 2015 Ecological Society of America – Geographic and regional consideration of future direction of usable rangeland science, Baltimore, Maryland, August 2015
- 2014 Association of Nepal and Himalaya Studies - What explains the recent surge of apple orchards in Nepal’s Mustang district?, March 2014.
- 2014 Society for Range Management - Value of Fodder Trees in Crop-Livestock Systems: A Gap Analysis in Nepal’s Gandaki River Basin, February 2014
- 2013 *Annual Meeting of the Association of American Geographers* – “When faced with the challenge of knowing: Making sense of place based approach to livelihoods and adaptation” Los Angeles, California, April 2013.
- 2012 *Association for Nepal and Himalayan Studies Conference* – “Impacts of climate change: Livestock keepers' perception from the Mountain region of Nepal” Western Michigan University, Michigan, September 2012.
- 2012 *Climate Adaptation Future* - “Innovation as adaptation: Technological and institutional approach to climate change” 2nd International Climate Adaptation Conference, University of Arizona, Tucson, AZ, May 2012.
- 2012 *Annual Meeting of the Association of American Geographers* – “Institutional and technological innovation: Understanding adaptation to climate change” New York City, New York, February 2012.

- 2011 *Association for Nepal and Himalayan Studies (ANHS) Conference* – “Climate-induced innovation: understanding agricultural adaptation to climate change” St Paul, Minnesota, October 2011.
- 2011 *Annual Meeting of the Association of American Geographers* – “Climate-induced innovation in agriculture: An emerging human-environment relationship in the context of climate change and adaptation” Seattle, April 2011.
- 2010 *Annual Meeting of the Association of American Geographers* – “Linking Citizens to Global Climate Policy: Outcomes of Public Deliberation” Washington DC, April 2010.
- 2010 *ICARUS Workshop on Climate Variability and Adaptation: Theory and Cases* – “Induced innovation: a conceptual approach in understanding agricultural adaptation to climate change” University of Illinois, Urbana/Champaign, February, 2010.
- 2009 *Annual Meeting of the Association of American Geographers* - “Sensitivity analysis of water resources to climate & other stressors in Central Arizona” Las Vegas, Nevada, March 2009.
- 2008 *Annual Meeting of the Association of American Geographers* – “Soft-path solutions under uncertainty: multiple stressor analysis of water resources in the Lower Colorado River Basin” Boston, Massachusetts, April 2008.
- 2007 *Climate Information: Responding to User Needs* – “Multiple stressors on Central Arizona water resources” University of Maryland, College Park, MD, October 2007.
- 2007 *Connecting Science, Society and Development* – “Multiple stresses of water resources in Phoenix, Arizona” Institute of Development Studies at the University of Sussex, Brighton, UK, September 2007.
- 2007 *Sustainable Water, Unlimited Growth, and Quality of Life: Can we have it all? University of Arizona* – “Multiple stresses of water resources in Phoenix” Tucson, Arizona, August 2007.
- 2007 *Annual Meeting of the Association of American Geographers* – “Stressor analysis of water resources in Central Arizona” San Francisco, California.
- 2006 *Annual Meeting of the Association of American Geographers* – “Understanding the process of agricultural adaptation to climate change: analysis of climate-induced innovation in rice based cropping system of Nepal” Chicago, Illinois, April 2006.
- 2006 *International Institute for Applied System Analysis* – “Decision making under uncertainty: ranking the multiple stressors on Central Arizona water resources” Laxenburg, Austria, August 2006.
- 2006 *International Institute for Applied Systems Analysis* – “Understanding the process of agricultural adaptation to climate change: analysis of climate-induced innovation in rice based cropping system of Nepal” Laxenburg, Austria, August 2006.

OTHER INVITED PRESENTATIONS

- 2015 *Guest Speakr* – Barrier and limitation in climate adaptation, Institute of Engineering, Tribhuval University, Pulchok, Nepal, July 12, 2015.
- 2015 *Guest Speaker* – What we talk about when we talk about adaptation? Climate Change Workshop for World Bank and IFC, May 15-17, 2015.
- 2013: *Guest Spreker* - Innovation as adaptation: An institutional and technological approach to climate chang adaptation in Nepal, Tribhuval University, Kritipur, Nepal, December 20, 2013.
- 2013 *Climate Pragmatism Workshop* - Innovation as Adaptation: A institutional and technological approach to adapting agriculture to climate change, Washington D.C., December 8-9, 2013.
- 2013 *Colorado State University International Coloquium on Global One Health* – “Adaptive pathways to climate change:Case of Gandaki River Basin of Nepal” Fort Collins, Colorado, October 1-3, 2013.
- 2013 *Livestock and Climate Change: Collaborative Research Support Project* – “Impact of climate change on livestock systems of Nepal, USAID-Kathmandu, Nepal, July 15, 2013.
- 2012 *Knowledge Forum on Innovation* – “Conservation farming: A clumsy solution to wicked problem of climate change” USAID/Livestock CRSP, Kathmandu, Nepal, October 2012.
- 2012 *Colorado State University* – “Adaptive pathways to climate change” Fort Collins, Colorado, July 2012.
- 2012 *Faculty Cross Talk* – “Can we produce enough food while undergoing climate change?” Arizona State University, March 2012.
- 2012 *Guest Speaker* – “Clumsy solutions to a wicked problem of climate change: Case of Nepal” New Mexico State University (student forum), New Mexico, March 2012.
- 2012 *Himalaya System Analysis* – “Coupled human environment systems in the Himalayas” Washington D.C, April 2012.
- 2011 *Livestock and Climate Change: Collaborative Research Support Project* - “Livestock, livelihoods and climate change in the Mountains of Nepal” USAID-Kathmandu, Nepal, July 2011.
- 2011 *World Bank Speaker Series* – “Clumsy solutions to a wicked problem of climate change: food security and smallholder farmers” World Bank, Kathmandu, Nepal, July 2011.
- 2011 *Adapting Livestock Systems to Climate Change: A Stakeholder Consultation* – “Impacts of climate change in livestock dependent livelihoods in the Mountains of Nepal” CSU/USAID, Kathmandu, Nepal, July 2011.
- 2011 *The Center for the Study of Institutional Diversity* – “Innovation as adaptation: An institutional approach to climate change” School of Human Evolution and Social Change, Arizona State University, December, 2011.
- 2011 *National Center for Atmospheric Reseaerch* “Innovation, coalition and network: Case for climate adaptation” Early Career Scientist Assembly, Boulder, Colorado, October 2011.

- 2011 *2nd Writeshop Workshop of the ICARUS* – “Climate innovation in agriculture: a conceptual approach in understanding agricultural adaptation to climate change” Ann Arbor, Michigan, May 2011.
- 2011 *U.S. National Climate Assessment* – “Research and institutional capacity for adapting to climate change in the Colorado River Basin” Boulder, Colorado, May 2011.
- 2011 *Rivers of Hope: Himalayan/Tibetan Plateau Watersheds* – “Wellbeing of the people of Himalaya: Perceptions and reality” Global Systems Initiatives, Washington DC, April 2011.
- 2010 *2nd International Conference: Climate, Sustainability and Development in semi-arid regions* – “Clumsy solutions to a wicked problem of climate change: smallholder agriculturists approach to increase systems resiliency” Fortaleza, Ceara, Brazil, August 2011.
- 2010 *Understanding the Findings of the IPCC Fourth Assessment Report, Climate Change 2007: Integrating Climate Change Adaptation and Mitigation in Development Planning - “Science policy dialogue on climate change”* WMO-IPCC-EC-UNEP Project, Kathmandu, Nepal, August 2011.
- 2010 *WWViews Research Workshop* – “Testimonies of Policy Impacts: COP15 Experience” Copenhagen, Denmark, June 1010.
- 2010 *Collaborative & Participatory Research Workshop* – “Citizens Engagement in Environmental Governance: Outcomes of Public Deliberation in Arizona” Austin, Texas, May 2010.
- 2010 *CSPO Brownbag* – “After Copenhagen: What is Next?” Arizona State University (with Rick Worthington, Pomona College), Tempe, March 2010.
- 2009 *COP15 UN Conference on Climate Change* – “WWViews on global warming: Results of the citizen consultation” Copenhagen, Denmark, December 2009.
- 2009 *Asia Pacific Disaster Preparedness Center* – “Climate variability and water: Risk for agriculture and energy” Maui, Hawaii, October 2009.
- 2009 *University of Norrkoping* – “Linking science to social benefits: Why, how and when” Norrkoping, Sweden, September 2009.
- 2008 *University of California* – “Conservation farming: an approach for agricultural adaptation to climate change” Davis, October 2008.
- 2008 *Policy Forum on International Development in the Face of Climate Change: Beyond Mainstreaming?* – “Conservation farming: Resilience based approach to climate adaptation in the foothills of Himalayas” University of Greenwich, London, UK, June 2008.
- 2008 *Natural Resource Institute’s Speaker Series*– “Climate induced innovation in agricultural technologies” University of Greenwich, Kent, U.K., June 2008.
- 2008 *Practical Action* – “Role of technological innovation in adapting agriculture to climate change: challenges and potentials” Rugby, U.K. June 2008.

- 2008 *The Center for the Study of Institutional Diversity* – “Public institution and agricultural adaptation” School of Human Evolution and Social Change, Arizona State University, February 2008.
- 2007 *Science Policy Assessment and Research on Climate* – “Water Stressors in Central Arizona” Arizona State University, Tempe, Arizona, November 2007.

AFFILIATIONS TO PROFESSIONAL SOCIETIES

2000 – present	Association of American Geographers, Specialty Groups: Human Dimensions of Global Change, Asian Geography, and Water Resources.
2011 – present	The Association for Nepal and Himalayan Studies.
2010 – 2012	Ecological Society of America.
1997 – 2000	Population Association of America.
2003 – 2005	Agricultural and Applied Economics Association.

MEDIA COVERAGE

- 2014 Featured in The Christian Science Monitor (energy/environment) – climate change to leave no one on planet untouched:
<http://www.csmonitor.com/Environment/2014/0331/Climate-change-to-leave-no-one-on-planet-untouched-IPCC-chief-video>
- 2014 Feature in ASU News (Science and Technology) – climate change reduce crop yield sooner than expected: <https://asunews.asu.edu/20140318-crop-yield-study>
- 2012 Featured in Science-Policy Bulletin of CGIAR (World Bank) - How constraint breeds creativity: farmer-led alliances for rice. [http://ccafs.cgiar.org/blog/how-constraint-breeds-creativity-farmer-led-alliances-rice?utm_source=AgClim+Letters+and+Announcements&utm_campaign=eed7d3adf7-AgClim Letters October 2012&utm_medium=email](http://ccafs.cgiar.org/blog/how-constraint-breeds-creativity-farmer-led-alliances-rice?utm_source=AgClim+Letters+and+Announcements&utm_campaign=eed7d3adf7-AgClim+Letters+October+2012&utm_medium=email)
- 2012 Featured in Kantipur News of Nepal on its featured article on food security “*US varsities join hands for food-secure Nepal*” <http://www.ekantipur.com/2012/03/10/national/us-varsities-join-hands-for-food-secure-nepal/350303.html>
- 2011 Featured in “Livestock, livelihoods and climate change interaction project launched,” *Local Initiatives for Biodiversity Research and Development*, http://libird.org/index.php?option=com_content&task=view&id=422&Itemid=2
- 2009 Interview featured in “World Watch Institute: Vision for Sustainable World,” *U.S. Public Still Unconvinced on Climate Change*, <http://www.worldwatch.org/node/6300>
- 2009 Interview “ASU takes part in World Wide Views on Global Warming Prior to UN Climate Conference in Copenhagen,” *ASU President Office Podcast*, <http://president.asu.edu/sites/default/files/ASUPresidentsOfficePodcast170.mp3>
- 2009 PBS Television Panel “Citizen participation in Global Climate Change Governance,” *PBS Channel 8 Horizon*, <http://www.azpbs.org/horizon/detailvid.php?id=2143>

- 2009 Interview “Global voices discuss climate change, *The State Press*,
<http://www.statepress.com/archive/node/7848>
- 2007 Interview “Skeptics raise doubts on global warming,” Arizona Republic,
<http://www.azcentral.com/arizonarepublic/news/articles/1111climate-debate1111.html>
- 2007 Interview “Southwest could become Dust Bowl: Study warns, *Arizona Republic - Viewpoint*,
<http://www.azcentral.com/arizonarepublic/news/articles/0406climate-report0406.html>