

## NETRA B. CHHETRI

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### EDUCATION

2007	Ph. D.	Geography, Penn State University (Demography minor).
2000	M. Sc.	Geography, Penn State University (Demography minor).
1991	Diploma	Permaculture, University of Tasmania, Australia (Honorary).
1982	B. Sc.	Institute of Agriculture and Animal Sciences, Rampur, Nepal.

### ACADEMIC POSITIONS

2021- Present	<i>Professor</i> , School for the Future of Innovation in Society, Arizona State University.
2020 – 2021	<i>Associate Professor</i> , School for the Future of Innovation in Society, Arizona State University.
2015 – 2019	<i>Associate Professor</i> , School of Geographical Sciences and Urban Planning and School for the Future of Innovation in Society, Arizona State University.
2014 – 2015	<i>Associate Professor</i> , School of Geographical Sciences and Urban Planning and Consortium for Science, Policy and Outcomes, Arizona State University.
2007 – 2013	<i>Assistant Professor</i> , School of Geographical Sciences and Urban Planning and Consortium for Science, Policy and Outcomes, Arizona State University.
2007 – present	<i>Faculty Affiliate</i> , Environment and Social Sciences, School of Human Evolution and Social Change; Barrett, The Honors College; Arizona State University.
2005 – 2007	<i>Post-Doctoral Research Associate</i> , Consortium for Science, Policy and Outcomes, Arizona State University.
1997 – 2005	<i>Research/Teaching Assistant</i> , Department of Geography and Penn State Institutes of Energy and the Environment, Penn State University.
1995 – 1997	<i>Project Coordinator</i> , Population and Ecology Research Laboratory, Institute of Agriculture and Animal Sciences, Nepal.

### PROFESSIONAL POSITIONS

1994 – 1995	Program Coordinator, Oxfam UK/I, Nepal.
1992 – 1994	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, Government of Nepal.

## PROFESSIONAL DEVELOPMENT

IPM Asia regional workshop on integrated pest management (IPM), CARE International, Kandy, Sri Lanka: November 11-22, 1992.

Ecological Ag. Ecological agriculture in developing countries, Agriculture, Man and Ecology – ETC Foundation, The Netherland, Pondicherry, India: April 18-May 7, 1988.

Ecological Ag. Ecologically oriented agriculture course, United Mission/Nepal, Winrock International and SNV-Nepal with technical support from Agriculture, Man and Ecology – ETC Foundation, The Netherland, Kathmandu, Nepal: August 23-September 09, 1987.

Permaculture Permaculture consultant's design course, Permaculture Institute-Nepal: July 7-21, 1986.

## PUBLICATIONS (\* = Student author)

### Notes:

1. Author order is generally in descending order of contributions from most to least, with first author having primary writing responsibility. For multi-authored pieces, my specific contributions are noted in parenthesis.
2. Student authors under the direction NC are annotated: single asterisks for graduate students; double asterisks for undergraduate students, triple asterisks for an author who is farmer/community members.
3. SFIS encourage co-authors, especially cross-disciplinary and between social and technical fields.
4. #C = number of citations; total citations 6,970 (4,903 since 2015; h-index = 19 (16 since 2015); i10-index = 26 (23 since 2015) (source: Google Scholar, as of December 10, 2020).

## Peer reviewed journal articles

1. Ghimire\*, R. N. **Chhetri**, N. Anbar\*\*, 2021. The impact of public deliberation on climate change opinions among U.S. citizens. *Front. Polit. Sci.* <https://doi.org/10.3389/fpos.2021.606829>
2. Byers, A. C., T. Gustafsson, M. Shrestha, **N. Chhetri**, 2020. A sustainable solid waste management plan for Sagarmatha (Mt. Everest) National Park and Buffer Zone, Nepal. *Mountain Research and Development*, **40**(3), A1-A9. <https://doi.org/10.1659/MRD-JOURNAL-D-20-00018.1>
3. **Chhetri**, N. R. Ghimire\*, M. Wagner\* and M. Wang\*, 2020: Global citizen deliberation: case of World-Wide Views on Climate and Energy. *Energy Policy*, **147**, <https://doi.org/10.1016/j.enpol.2020.111892>.
4. Ishtiaque\*, A., R. Stock, S. Vij, H. Eakin and **N. Chhetri**, 2020: Beyond the barriers: An overview of mechanisms driving barriers to adaptation in Bangladesh, *Env. Pol. Gov.*, **31**, <https://doi.org/10.1002/eet.1925>.

5. **Chhetri, N.** 2020: Leveraging current knowledge and exploring future potential of biochar: A review. *International Journal of Environmental Sciences & Natural Resources*, **24(1)**, 556127.
6. Parajuli\*, J., H. Eakin and **N. Chhetri**, 2020: Small irrigation users' perceptions of environmental change, impacts, and response in Nepal. *Climate and Development*, DOI: [10.1080/17565529.2020.1836468](https://doi.org/10.1080/17565529.2020.1836468)
7. Thompson\*, I., M. Shrestha, **N. Chhetri** and D.B. Agusdinat, 2020: An institutional analysis of glacial floods and disaster risk management in the Nepal Himalaya. *International Journal of Disaster Risk reduction*, **47**, 101567.
8. Tamang, B.B., M.K. Shah, B. Dhakal, P. Chaudhary and **N. Chhetri**, 2020: Participatory ranking of fodders in the western hills of Nepal. *Journal of Agriculture and Natural Resources*, **3(1)**, 20-28.
9. Shivakoti, G. P., M.A. Janssen and **N. Chhetri**, 2019: Agricultural and natural resources adaptations to climate change: governance challenges in Asia. *International Journal of the Commons*, **13(2)**, 827-832.
10. Shah, M.K., B.B Tamang, B. Dhakal, P. Chaudhary, S. Shrestha and **N. Chhetri**, 2019: Nutritive values of fodders at different seasons and altitudes in Gandaki River Basin of Nepal. *Journal of Agriculture and Natural Resources*, **2(1)**: 110-127.
11. Jinnah, S. S. Nicholson, D. R. Morrow, Z. Dove, P. Wapner, W. Valdivia, L. P. Thiele, C. McKinnon, A. Light, M. Lahsen, P. Kashwan, A. Gupta, A. Gillespie, R. Falk, K. Conca, D. Chong, and **N. Chhetri**, 2019: Governing Climate Engineering: A Proposal for Immediate Governance of Solar Radiation Management. *Sustainability*, **11(14)**, 3954.
12. **Chhetri, N.**, M. Stuhlmacher\*, and A. Ishtiaque\*, 2019: Nested Pathways to Adaptation. *Environ. Res. Commun.* **1**, 015001.
13. Ishtiaque\*, A., H. Eakin, **N. Chhetri**, A. Dewan, and M. Kamruzzaman, 2019: Examination of coastal vulnerability framings at multiple levels of governance using spatial MCDA approach. *Ocean and Coastal Management*, **171**, 66-79.
14. Sze, J., T. Perkins, J. Anand, and **N. Chhetri**, 2018: Stories from the Field: Public Engagement through the Environmental Humanities and Allied Disciplines. *Resilience: A Journal of Environmental Humanities*, **5(2)**, 49-73.
15. Ishtiaque\* A., M. Shrestha and **N. Chhetri**, 2017: Rapid Urban Growth in the Kathmandu Valley, Nepal: Monitoring Land Use Land Cover Dynamics of a Himalayan City with Landsat Imageries. *Environments*, **4**, 72.
16. Ishtiaque\*, A and **N. Chhetri**, 2016: Competing policies to protect mangrove forest: A case from Bangladesh. *Environmental Development*, **19**, 75-83.
17. Chaudhary, P., **N. Chhetri**, B. Dorman\*\*, R.B. Rana, M. Shrestha, K. Thapa, K. Lamsal, and 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.
18. 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.
19. Challinor, A J, J. Watson, D. Lobell, M. Howden, D. Smith and **N. Chhetri**, 2014: A meta-analysis of crop yield under climate change and adaptation. *Nature Climate Change*, **4**, 287-292.

20. Wagner\*, M., **N. Chhetri**, M. Sturm\*, 2014: Adaptive capacity in light of hurricane Sandy: The need for policy engagement. *Applied Geography*, **50**, 15-23.
21. **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.
22. 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.
23. **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.
24. 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.
25. **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.
26. **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.
27. **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.
28. **Chhetri, N.**, 2011: Climate sensitive measure of agricultural intensity: Case of Nepal. *Applied Geography*, **31(2)**, 808-819.
29. **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.
30. **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.
31. Nyaupane, G. P., and **N. Chhetri**, 2009: Vulnerability of climate change on nature-based tourism in the Nepalese Himalaya. *Tourism Geographies*, **11**, 95-119.
32. **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.
33. 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.
34. 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.
35. 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.
36. 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.

### Special Issue and Edited Book

1. Geographies of Imagination and Environmental Governance: N. Chhetri, R. Ghimire, David Eisenhauer [Eds.], *The Professional Geographer* [Special Issue]
2. Agricultural and Natural Resources Adaptation to Climate Change, 2019: G. Shivakpti, M. Janssen, **N. Chhetri** [Eds.], *The International Journal of the Commons* [Special Issue].
3. Human and Social Dimensions of Climate Change, 2012: **N. Chhetri** [Ed.], InTech, ISBN 978-953-51-0854-4 [Edited book].
4. Resilience, Adaptation, and Innovation: Applied Geography of Climate Change (2011), Rodima-Taylor, D., M.F. Olwig, **N. Chhetri** [Eds.] *Applied Geography* [Special Issue].

### Peer reviewed book chapters

1. Parajuli\*, J. and **N. Chhetri**, (2021): Diagnosing multiple disturbances to irrigation system in Nepal. In *Natural Resources Governance: From Collective Action to Resilience Thinking*, G.P. Shivakoti, R.P. Shrestha, and I. Makoto, [Eds.], Elsevier Inc.
2. Thapa, G, F. Khan, G. Gioli, D. Nathan, P. Dasgupta, **N. Chhetri**, S. Kumar Mohanty, N. Saxena, E. Aurino and L. M. Scott, 2019: "Understanding and Tackling Poverty and Vulnerability in Mountain Livelihoods in the Hindu Kush Himalaya" P. Wester et al. [Eds.], *The Hindu Kush Himalaya Assessment - Mountain, Climate Change, Sustainability and People*, Springer Nature Switzerland AG, Cham: ISBN 978-3-319-92287-4.
3. Henderson, M., **N. Chhetri** and F. Johnson, 2019: "Lessons in Biochar: Advancing Research Through Service Learning Courses in Nepal" IEEE Global Humanitarian Technology Conference (GHTC) Proceeding, pp. 1-7.
4. Subedi, K., **N. Chhetri** and T.B. Karki, 2016: Land use practices, cropping systems and climate change vulnerability of mountain agro-ecosystems of Nepal. In Ma, Bao-Lou [Eds.], *Crop rotations: Farming practices, monitoring and environmental benefits*: ISBN-9781634844969.
5. **Chhetri, N.** and N. Chhetri, 2015. Alternative Imaginations: Examining Complementarities across Knowledge Systems, E. S. Huaman & B. Sriraman [Eds.], *Indigenous Innovation*, by: Sense Publishers, pp 11-23, ISBN: 978-94-6300-225-7.
6. 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.], (**Contributing Author**: contributed to compilation and analysis of meta-dataset of crop yield response to climate change)
7. Dasgupta, P., 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.]. (**Contributing Author**: contributed to assessment and synthesis of case studies on local response to climatic constraints)
8. 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.
  9. 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. C=9 (NC commented on the manuscript)
  10. **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.
  11. **Chhetri, N.** and N. Chhetri, 2010: Sustainability science: transition towards production of knowledge systems for sustainable development. *Encyclopedia Geographic*, SAGE publication.
  12. 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 (**Contributing Author**: contributed to compilation and analysis of meta-dataset of crop yield response to climate change).
  13. **Chhetri, N.** and S. Shrestha, 2004: The Prospects of Agricultural Adaptation to Climate Change: Climate-Technology Interaction in Rice -Wheat Cropping System in Nepal. *American Agricultural Economics Association*, DOI: 10.22004/ag.econ.20144.
  14. 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.].
  15. **Chhetri, N.**, 1995 : Khoriya cultivation: A perspective. In *Chepangs, Resources and Development*. Bhattarai et al. [Eds.], CAED and SNV-Nepal.

## Policy papers

1. **Chhetri, N.**, D. Chong, K. Conca, R. Falk, A. Gillespie, A. Gupta, S. Jinnah, P. Kashwan, M. Lahsen, A. Light, C. McKinnon, L. P. Thiele, W. Valdivia, P. Wapner, D. Morrow, C. Turkaly and S. Nicholson, 2018: *Governing Solar Radiation Management. Washington, DC: Forum for Climate Engineering Assessment*, American University. C=23
2. **Chhetri, N.** J. Lloyd, T. Nordhaus, R. Pielke Jr., J. Roy, D. Sarewitz, M. Shellenberger, P. Teague, and A. Treambath, 2016: *Adaptation for high-energy planet*, Consortium for Science, Policy and Outcomes and Breakthrough Institute, pp 40.
3. 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. *C=13*
4. **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.
  5. **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.

### White papers

1. **Chhetri**, N., A.S. Byers, M. Shrestha, T. Gufstafsson, Tuladhar, B., Thompson, I., and Ghimire, S., 2019: Sustainable solid waste management in the Sagarmatha (Mt. Everest) National Park and buffer zone: Collaborative Planning and Governance Workshop, Final Report.
2. Byers, A.C., **N. Chhetri**, M. Shrestha, and T. Gufstafsson, 2019: Sustainable solid waste management in the Sagarmatha (Mt. Everest) National Park, Nepal: Management Plan. Final Report NGS-55262C-19. Washington: National Geographic Society.
3. Donatti, C.I., A. Andrade, L. Burke, **N. Chhetri** N., J. Cook, G. Fedele, C. Friedrich A. Goldstein, C.A. Harvey, D. Hole, T. Leiter, S. Mack, S. Menazza, D. Ndiaye, S. Panfil, F. Ries, A.R., Rizvi and H. Schurman, 2016: Measuring the adaptation outcomes of ecosystem-based adaptation, Conservation International pp 4.
4. Rosalind, B., **N. Chhetri**, 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*.
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. Harnessing the sun to power water. <https://www.nepalitimes.com/latest/harnessing-the-sun-to-pump-water/>
2. If “the economy” is collapsing, how do people survive? *Written by the Human Economies Working Group at the ASU Global Futures Laboratory:* <https://medium.com/@asuglobalfuture/if-the-economy-is-collapsing-how-do-people-survive-3d80550f3d80>.
3. **Chhetri**, N. and J. Lloyd (2016), A Welcome Lesson From an Invasive Species, Future Tense, *Slate Magazine*, May 6, 2016. ([http://www.slate.com/articles/technology/future\\_tense/2016/05/what\\_an\\_invasive\\_species\\_in\\_nepal\\_tells\\_us\\_about\\_our\\_climate\\_future.html](http://www.slate.com/articles/technology/future_tense/2016/05/what_an_invasive_species_in_nepal_tells_us_about_our_climate_future.html))
4. **Chhetri**, N. and J. Lloyd (2016), A Killer Weed Finds New Life as Fertilizer, Filter, and Fuel, Zocalo Public Squat (May 17, 2016). <http://www.zocalopublicsquare.org/2016/05/17/a-killer-weed-finds-new-life-as-fertilizer-filter-and-fuel/ideas/nexus/>

5. **Chhetri, N.** (2008), Climate change and what it means for us. *Newsletter of the Association of Nepalese in Americas – ANA*, 1:33-34.
6. **Chhetri, N.** (2007), Is Dust Bowl a possibility? Perspective, *Arizona Republic* (04/22/2007).
7. **Chhetri, N.** (1992), Conservation farming: Policy for sustaining food productivity in Nepal. *Permaculture Magazine*, Spring 17-21.

#### SPONSORED GRANTS: *Current*

1. **PhD in Innovation in Global Development** (University of Guyana Program): Conservation International Foundation Inc. **Grant Number: CI-110699**, (% REC = 45%, \$1,916,885; 7/2020-6/2024) – *Note: This collaborative project brings 13 University of Guyana’s faculty to SFIS’s IGD PhD, 5 GDI Certificate, and 4 MS GTD program. As a PI, I am responsible to executing this ambitious project.*
2. **Co-PI - Improving Social and Economic Impact of Energy Infrastructure Investments in Sierra Leone through Enhancement of Social Value Creation, Capacity-Building, and Decision Support** (PI- Miller, OPM/DFID) (% REC=10%, \$483,170; 5/2018-06/2021). **Role:** *Collaborative training and research partnership with local partners Centre for Economic Research and Capacity Building (CERCB) a local think tank in Sierra Leone to identifying opportunities to advance the societal value of energy innovation for rural off-grid communities.*

#### SPONSORED GRANTS: *Completed*

1. **Project Manager** – Innovation in Green Growth: Solar Powered Irrigation in Nepal, ASU internal grant, *Rob and Melani Walton Sustainability Solutions Initiatives* (% REC=0%, \$ 20,000), (2018 and 2019).
2. **Sr. Researcher**, on Clark Miller, PI, et al. “Implementing Off-Grid Renewable Energy to Create Social Value and Community, Development,” Global Consortium for Sustainability Outcomes, \$50,000. 2018-19. **Role:** *Collaborative training and research partnership with local partners in Nepal, the Philippines, Uganda, and Bolivia.*
3. **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).
4. **Collaborator** - Sustainable solution for invasive species in rural Nepal, PLuS Alliance Seed Grants, R2 2016 (% REC = 0%, \$ 42,312) (12/30/2017). **Role:** *Collaborative training and research partnership with local partners in Nepal.*
5. **Principal Investigator** - Biochar and Solar Powered Lift Irrigation Project, service-learning course on grassroots innovation to ASU students, Nepal, TRIF (% REC=100, \$ 15,000) (6/30/2017).
6. **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).
7. **Project Manager:** World Wide Views on Climate and Energy: Citizen deliberation in Arizona, multiple units at ASU (% REC = 0%, \$14,000) (1/1/2012-12/31/2012) –

- implemented by WWViews Alliance the project was coordinated by the Danish Board of Technology in collaboration with Mission Publiques and the French National Commission for Public Debate.
8. **Senior Investigator** - Implementing Climate Pragmatism, Nathan Cummings Foundation (%REC = 0%, \$320,000) (7/1/2012-6/30/2013).
  9. **Senior Investigator:** Partnership for education on climate change, engineered systems and society, NSF#1043289 (% REC =10%, \$217,936) (9/5/2010-8/31/2013).
  10. **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).
  11. **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.
  12. **Principal Investigator:** World Wide Views on global warming: Process and impact, NSF# 0925043, (%REC =100%, \$49,444) (9/1/2009- 8/31/2011).
  13. **Investigator:** Science policy assessment and research on climate, NSF# 0345604 (% REC=0%, \$751,393) (10/1/2004-9/30/2010).
  14. **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.
  15. **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).
  16. **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).
  17. **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 AND RECOGNITIONS

- 2016 Solutions Advancement Grants for Entrepreneurship (SAGE), “Climate-smart agriculture and biochar,” (US\$ 2,810), The Food Systems Transformation Initiative of the Global Institute of Sustainability.
- 2016 Youth Agribusiness, Leadership and Entrepreneurship Summit on Innovation, Dakar, Senegal, “Innovation theory in production and value addition,” (US\$ 2,900).
- 2016 Andrew Carnegie Fellow Program, “Climate resilience through innovation: Crop-livestock systems in the Hindu Kush Himalayas,” nominated by ASU President, 2016 (US\$ 200,000, finalist).

- 2014 Member of university wide Leadership Academy (GIOS and OKED) – 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 three from out of 50. The paper was later published 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: SCHOOLS AND UNITS WITHIN ASU

2020 -	Search committee, <b>JEDI</b> , Science, Technology, Innovation and Racial Justice hiring initiative at Assistant/Associate/Full Professor level.
2015 – 2019	Steering Committee, Food System Transformation Initiative, GIOS
2015 – 2019	President’s Award for Innovation (Committee)
2015 – 2018	Mentor, 2015 Pueblo Master’s and Doctoral Cohort Project, ASU
2013 – 2014	Emerge – Organizer and Brain Trust
2013 – 2015	Mellon Steering Committee, Institute for Humanities Research.
2012 – 2015	Graduate Research Admission Committee, SGSUP
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 – 2015	President’s Sustainability Award Committee.
2011 – 2015	Faculty Advisor, Arizona Student Environmental Coalition.
2015	Chair, Open Rank Faculty Position (JOB#11506) in Innovation and Global Development, School for the Future of Innovation in Society
2011 – 2013	Faculty Advisor, IndiGenius Development Group for Energy Efficiency.
2011 – 2012	Member (working group), Cultural Perspectives on Sustainability Cluster, SOS
2010 – 2013	ASU/NASA Space Grant Faculty Mentor, School of Earth and Space Exploration.
2009 – 2010	Mentor, Obama Scholars Program.
2007 – present	Affiliate Faculty, Environmental and Social Sciences, School of Human Evolution and Social Change.
2007 – 2012	Scholarship and Award Committee, SGSUP
2008 – 2010	Chair of Outreach and Outcomes Committee, CSPO
2007 – 2008	Strategic Planning Drafting Committee, CSPO
2006 – present	Honors Disciplinary Faculty, Barrett The Honors College.

## SERVICES: NATIONAL AND INTERNATIONAL INSTITUTIONS

2020	<b>Advisory Panel</b> (served twice), National Science Foundation
2020-	<b>Associate Editor</b> – Politics of Technology ( <i>Frontiers of Political Science</i> ), Switzerland.
2019-	<b>Editorial Board</b> – <i>The Professional Geographer</i> of the American Association of Geographers, US.

- 2016-2019 **Lead Author** - *Understanding and Tackling Poverty and Vulnerability in Mountain Livelihoods in the Hindu Kush Himalaya*, The Hindu Kush Himalaya Assessment - Mountain, Climate Change, Sustainability and People.
- 2016-2019 **Member** – Academic Working Group, Governance of Climate Engineering Technologies, School of Internal Service, American University, Washington, DC.
- 2015-2019 **Proposal Review (served)**– National Science Foundation  
2013 **Proposal Review (served)** - Dissertations Initiative for the Advancement of Climate Change Research (review of applicants applied to participate in annual symposium)
- 2012 **Capacity Building Assessment Panel** - National Aeronautics and Space Administration, Applied Sciences.
- 2012 **Steering Committee** - Climate Adaptation Futures: Second International Climate Change Adaptation Conference.
- 2012 **Proposal Review (served)** - National Science Foundation.
- 2012 **Proposal Review (served)**- Dissertations Initiative for the Advancement of Climate Change Research (review of applicants applied to participate in annual symposium).
- 2010 - 2014 **Contributing Author**- Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, - Chapter 7 “*Food Security and Food Production Systems*” and Chapter 9 “*Rural Areas.*”
- 2003 - 2007 **Contributing Author**- Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Chapter 5 “*Food, Fibre and Forest Products.*”
- 1993-1998 **Consultant** - Ecological Solutions Limited, Australia.
- 1996 **Founder** - Nepal Participatory Action Network, Nepal.
- 1992 **Founder** - School of Ecology, Agriculture, and Community Works, Nepal.

## SERVICES: REVIEW OF JOURNAL ARTICLES

Climate Policy (2020), WIREs Climate Change (2020), Issues in Science and Technology (*Forum*, 2020), One Earth (2020), The Professional Geographer (2019), Environments (2018, 2019); Journal of Applied Geography (2009, 2010, 2011(2), 2012, 2013, 2014, 2015, 2017, 2018), Climatic Change (2010; 2011, 2012; 2013, 2015, 2016, 2018), Global Environmental Change (2013; 2015, 2016), Climate and Development (2012; 2015, 2018, 2019), World Development (2014); Environmental Conservation (2013(2); Journal of Agricultural Science (2013); 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).

## SERVICES: REVIWE OF PROPOSALS

National Science Foundation (2017, #2), National Science Foundation (2016, #2), National Science Foundation (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

- 2015 **World Wide Views on Climate and Energy:** Coordinated and organized citizen deliberation on June 5<sup>th</sup> 2015, whereby 98 citizens from Phoenix Metro and its surrounding rural areas (along with more than 10,000 other citizens from 76 countries) attended day-long meetings and deliberated their views about climate change and energy transition (<http://climateandenergy.wwviews.org/features/>). The results from this largest ever citizen consultation was communicated in support of universal climate change agreement at the 21st session of the **Conference of the Parties** to the UNFCCC in Paris, in December 2015.
- 2012 **World Wide Views on Biodiversity:** Coordinated and organized citizen deliberation on September 15<sup>th</sup> 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 **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).
- 2009 **World Wide Views on Global Warming (WWViews)** – Co-organized (with N. Chhetri and S. Gallais) citizen deliberation on September 26<sup>th</sup> 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.wvviews.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.

- 2008 **Phoenix Chautari**, *Climate change and local water resources* ( $\cong$  20 local Nepali and friends participated).
- 2008 **USDA Arid-Land Agricultural Research Center (ALARC)**, Maricopa, Arizona -*Adapting agriculture to climate change* ( $\cong$  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/SEMINAR/PANNELS

- 2021 Emerging Trends in Nepal's Higher Education: Overcoming Challenges and Generating Opportunities, Session Organized by the Nepali Academics in the America (Moderator, February 21, 2021 – Virtual Panel)
- 2020 Critical Geographies of Imagination and Environmental Governance, AAG Annual Meeting (Discussant, April 8, 2019 – Virtual Panel).
- 2019 Workshop on Revitalizing Rural Economy through Green Development, Nawalparasi, Nepal, December 18, 2019.
- 2019 Sustainable Solid Waste Management in Sagarmatha National Park and Buffer Zone, Nepal. Collaborative Planning and Governance Workshop (Part II), Kathmandu, July 20, 2019. (organized in collaboration with the University of Colorado, Sagarmatha Pollution Control Committee, Sagarmatha Next, and Blue Waste to Value – funded by National Geographic Society).
- 2019 Sustainable Solid Waste Management in Sagarmatha National Park and Buffer Zone, Nepal. Collaborative Planning and Governance Workshop (Part I), Namche Bazar, July 10, 2019. (organized in collaboration with the University of Colorado, Sagarmatha Pollution Control Committee, Sagarmatha Next, and Blue Waste to Value – funded by National Geographic Society).
- 2018 Workshop on Innovation in Solar Powered Innovation: Participatory Workshop, Nawalparasi, Nepal, March 05, 2018.
- 2017 Grassroots Innovation in Solar Powered Irrigation: Workshop with the members of Community, Nawalparasi, May 18, 2017.
- 2016 Workshop on Biochar: Solutions to critical global challenges, Youth Agribusiness, Leadership and Entrepreneurship Summit on Innovation, Dakar, Senegal, March 29-31, 2016.

- 2016 Workshop on Innovation for the present with eye on future, Youth Agribusiness, Leadership and Entrepreneurship Summit on Innovation, Dakar, Senegal, March 29-31, 2016.
- 2014 Livestock, Livelihoods and Climate Change: 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: 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 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 (2<sup>nd</sup>) – 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 (95<sup>th</sup>) – 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 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.

## TEACHING

- IGD 602: Re-Thinking Global Development:** This core course for doctoral students in the IGD program traces and analyzes the origins of *international* or *global development* as theory, concept, policy, and practice. Students will study the key theories that have been influential in development conceptualization and policy, within the context of the history in which they arose, evaluate the results, and consider future trends and scenarios along with the critical views of existing mainstream policy and practices.
- IGD 604: Leadership on Reimagining Global Development for 21<sup>st</sup> Century:** This student-centered colloquium for doctoral students in the Innovation in Global Development program provides critical opportunities for leadership, organization, planning and implementation of events related to global development studies. It encourages doctoral students to propose and plan their own events, focused on issues and topics of importance to them, and utilizing the resources on the ASU campus and Phoenix area. The goal is to engage with a variety of experts with "real world" experience (for instance, from business, industry, legal, political (any and all levels), non-profit, lobbying and education) to give students an idea of who is framing development policy and innovation conversations, and how they are doing it, as well as career paths that may not be familiar to them.
- GTD 511: Global Development Policy and Practices:** Designed to create an intellectual space to discuss the practices of global development, this course use evidence (or case studies) more effectively to enhance student's creativity and skill needed in managing and negotiating critical 21<sup>st</sup> century development challenges. In order to understand the **relationship** between the **practice of development**, and actual **outcomes**, the class approaches development policy (models, strategies, and project design) and practices through the discussion of case studies – both successful and not so successful.
- HSD 598: Knowledge Co-production through Engagement:** Co-Designed (with Nalini Chhetri) as special topic for Pueblo cohort from ASU's School of Social Transformation, this course sheds light on and sets in perspective the larger question of both knowledge and modes of acquiring knowledge. Over the course Fall 2017, through discussions and deliberations, this class created an opportunity for Pueblo doctoral candidates to engage in and understand the complementarities between various knowledge systems.
- 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 140 student enrollment. Drawing from both natural and social sciences and using a combination of lecture and in-class discussion this course unravels what is known about global change and simultaneously addresses a number of important but difficult questions. What are the implications of global change for human wellbeing? What are the causes (drivers) and consequences (outcomes) of global change in local places? What insights and innovations in Earth science are most important to create pathways to sustainable development? What are the implications of global change including climate change for food, water, and human health? How does global change affect distinct group in society such as indigenous people, subsistence farmers, and marginalized people? With strong global focus this course **contributes to build a knowledge base needed to address the challenges that lie ahead.**

**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, 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.

**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

*Note:* Asterisk indicate current students

### PhD (#13)

Rajiv Ghimire\* (Co-Chair, SFIS/HSD); Jagadish Parajuli\* (Co-Chair, SOS); Esteve Giraud\* (Committee, SOS); Katherine Ball\* (Co-Chair HSD); Muhammad Imram\*

(External Examiner, AIT, Bangkok Thailand); Melissa Wagner (SGSUP, Committee); Nawhath Thanvisitthpon (External Examiner, AIT, Bangkok Thailand); Anita H. Ferguson (SHESC, Committee); Asif Ishtiaque (Co-Chair, SGSUP); Yaseen Muhmmmed (External Examiner, AIT, Bangkok, Thailand); Yograg Gautam (External Examiner, University of Bergen, Norway); Sotiria Anagnostau, Chair, SHESC); Emily Cooney (Committee, SILC)

### **MS (#17)**

Pilar Saldajeno (Co-Chair, SOS and Leuphana University, Germany); Julio Zarate Vasquez (Chair, SFIS); Ian Thompson (Committee, SOS); Lena van der Kamp (Chair SOS and Leuphana University, Germany); Akira “Christian” Kitazume (Chair SOS and Leuphana University, Germany); Miximilian Muhr (Co-Chair SOS and Leuphana University, Germany); Lisa Marie Schlesinger (Co-Chair SOS and Leuphana University, Germany); Jeffrey Jennings (Co-Chair, PSM); Sabrina Delgado Arias (Chair, PSM); Jessica Dawn Passerelli (Committee, PSM); Louis Durand (Co-Chair, SOS); Farhan Ahmed (Co-Chair, SOS); Jason O’leary (Committee, PSM); Cecilia Gonzalez Paredes (Committee, SOS); Alicia Rodgers (Chair, PSM); Lilah Zautner (Committee, SOS); Megan O’Shea (Committee, SESE).

### **Undergraduate (Hoors Thesis, #16)**

Kendall Marcella Rees (Committee, Engineering); Jarod Chernak (Chair, SOS); Megan Dieu (Chair, Engineering); Joelle Cayer (Chair, Engineering); Timothy Barron (Chair, Engineering); Dallin Cluff (Engineering); Tayler Jenkins (Chair, SOS); Emily Murphy (Chair, SOLS); Rud Moe (Chair, SOS); Katherine Dreeland (Chair, SOLS); Stephanie Amaru (Chair, SOLS); Will Greene (Chair, SOS); Joseph Tuccillo (Chair, SGSUP); Christina Fang (Chair, SOLS); Jaron E. Reed (2<sup>nd</sup> reader, Global Studies); Brian E. Cohn (3<sup>rd</sup> reader, Physics)

## **PRESENTATION: PROFESSIONAL MEETINGS**

- 2017 Conservation farming: A clumsy solutions to climate adaptation in the Himalayas – Himalayan Studies Conference V, The Association for Nepal and Himalayan Studies, University of Colorado, Boulder 1-4 September 2017.
- 2016 Innovative Green Development Model in Less Developed Regions in China and its Global Implications – Cases of agricultural transformation from chemical and industrial agriculture to ecological agriculture and environmental protection, Guomailing village, Shishou City, Hubei, China, August 2016.
- 2016 Initiative on Climate Adaptation Research and Understanding through the Social Sciences (ICARUS) 5<sup>th</sup> Global Conference - Social institutions: A critical component of innovation-led adaptation, Indian School of Business, Hyderabad, June 2016.
- 2016 Inaugural Retreat of Ostrom Center for the Advanced Study in Natural-resource-governance (OCeAN) and book workshop, Asian Institute of Technology, Bangkok and Chang Mai University, Chang Mai, Thailand, June 2016.

- 2016 Writeshop workshop - Pathways of change and response: Case studies of autonomous, incremental and transformative adaptation. University of Michigan, Ann Arbor, February 2016.
- 2015 Global Network of Mountain Observatories (GNOMO) – Coupled 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
- 2015 World Bank Group - What do we talk about when we talk about climate adaptation? Arizona State University, May 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” 2<sup>nd</sup> 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.

## INVITED TALK/PRESENTATIONS

- 2021: *Speaker* - Pacific Environmental Security Forum “Nature-Based Solutions for Climate Action” February 22, 2021.
- 2020: *Panel Speaker* - International Symposium 2020 “Reimagining Mountains in the Context of Pandemic” Central Department of Environmental Science-Tribhuvan University, December 11, 2020.
- 2020: *Panel Speaker* - *IEP/ICP Expert Roundtable* on “Development in the Face of Increasing Ecological Threats”, Institute for Economics & Peace and the Institute for Climate and Peace, October 22 and November 16, 2020.
- 2020; *Speaker* – Policy Dialogue, Nepal Planning Commission and Nepal Policy Institute, May 20, 2020.
- 2020: *Panel Speaker* – Securing food amidst COVID-19 Pandemic, Webinar organized by Mid-Western University, Nepal, May 18, 2020.
- 2018: *Panel Speaker* - Prospect of power trade in India, Bhutan, Bangladesh and Nepal: opportunities and impediments, Keynote Address and Panel discussion, 4<sup>th</sup> International Conference on Renewable energy Technology for Rural and Urban Development (RETRUD-18), 29-31 October 2018 Kathmandu, Nepal.
- 2016: *Guest Speaker* - What do we talk about when we talk about climate adaptation? Kathmandu Forest Collage, Koteshwor, Kathmandu Nepal, July 2016.
- 2016: *Guest Speaker* – Innovatino as Adaptation: Case studies of autonomous, incremental and transformative adaptation, Kathmandu Nepal, July 2016.

- 2013: *Guest Spreker* - Innovation as adaptation: An institutional and technological approach to climate change 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 Colloquium 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 Research* “Innovation, coalition and network: Case for climate adaptation” Early Career Scientist Assembly, Boulder, Colorado, October 2011.
- 2011 *2<sup>nd</sup> 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 *2<sup>nd</sup> 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 2010.
- 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.

## AFFILIATION TO PROFESSIONAL SOCIETIES

2016-	<b>Faculty Associate</b> - Ostrom Center for the Advanced Study in Natural-resource- governance (OCeAN) and book workshop, Asian Institute of Technology, Bangkok, Thailand
2007 – 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

- 2017 Interview – Radio Kantipur, Nepal (education segment) - Link: [https://www.youtube.com/watch?v=Ri60D\\_buhKg](https://www.youtube.com/watch?v=Ri60D_buhKg)
- 2017 Feature in ASU News (Science and Technology) – ASU students work with Himalayan farmers on irrigation solutions: <https://science.asu.edu/asu-students-work-himalayan-farmers-irrigation-solutions>
- 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](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>