



Shannon Hagerman, PhD  
Research Scientist  
Climate Impacts Group | University of Washington

*shan.hagerman@gmail.com*

## Biography

Shannon studies the drivers and dynamics of change in linked social-ecological systems. Her work focuses on adaptation to climate change in natural resource management and biodiversity conservation. An interdisciplinary scholar by training, Shannon's research addresses three main themes:

1. Linkages between the biophysical impacts of climate drivers on ecosystems, and the social and governance context that shapes current and potential options for management.
2. Decision making under uncertainty including the roles of values in shaping perceptions of climate risk and preferences for adaptation actions.
3. The politics of knowledge and scale in shaping policy outcomes.

Shannon applies a systems approach to explore these themes. She aims to provide ecologically robust, behaviorally realistic, and socially just decision insights to address global challenges in local and regional contexts.

Shannon is a research scientist with the Climate Impacts Group (CIG) at the University of Washington, and a regular collaborator with the Institute for Environment and Sustainability at the University of British Columbia. She is currently working with CIG and the United States Forest Service to develop a set of strategies to support the integration of expected climate impacts into management decisions affecting aquatic ecosystems in the Pacific Northwest Region. Other recent projects include quantifying the perceptions of climate risks and policy preferences of conservation experts; the politics of knowledge at major conservation meetings including the Convention on Biological Diversity and the World Conservation Congress; and the implications of climate change for achieving food sovereignty in coastal communities.

## *CV Below*

**Shannon M. Hagerman** (CV as of March 2013)

**Academic Appointments:**

Research Scientist	Climate Impacts Group, University of Washington & United States Forest Service, Seattle WA, USA	2011 - 2013
SSHRC Postdoctoral Fellow	Climate Impacts Group, University of Washington, Seattle WA, USA	2009 - 2011
Doctoral Fellow	Climate Decision Making Centre, Carnegie Mellon University, and University of British Columbia	2004 - 2009
Research Associate	University of British Columbia (Okanagan)	1998 – 2000

**Academic Preparation:**

Ph.D.	University of British Columbia Institute for Resources, Environment and Sustainability: Resource Management and Environmental Studies	Climate Change Adaptation for Conservation & Resource Management	2004-2009
M.Sc.	University of British Columbia Department of Botany	Forest Ecology	1997 <sup>1</sup>
B.Sc.	University of British Columbia Department of Biology	Ecology & Environmental Biology	1995

**Academic Awards:**

- Postdoctoral Fellowship, Social Sciences and Humanities Research Council (2009-2011)
- Dissertations Initiative for the Advancement of Climate-Change Research, DISCCRS V Scholar, National Science Foundation (2010)
- Research Award, Advancing Conservation in a Social Context, MacArthur Foundation (2008)
- Doctoral Fellowship, Climate Decision Making Centre, NSF (2004-2009)
- Li Tze Fong Scholarship, University of British Columbia (2007-2008)
- University Graduate Fellowship, University of British Columbia (2005-2007)
- Graduate Entrance Scholarship, Institute for Resources Environment and Sustainability University of British Columbia (2004)
- Doctoral Tuition Award, University of British Columbia (2005-2007)
- Forest Renewal Graduate Fellowship, Department of Botany, University of British Columbia (1995-1997)
- Vladimir Krajina Award for Excellence in Plant Ecology, Department of Botany, University of British Columbia (1995)

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<sup>1</sup> *Academic Interruptions:* Between 2000 and 2004 I left my Research Associate position but had not yet started my Ph.D. During this time I worked as a Registered Professional Biologist (RPBio), and started my family.

## Grants:

- Peter Wall Solutions Initiative, University of British Columbia (Co-I) (2011 – 2014)
- Research Development Initiative (Co-I) – Environmental Issues, Social Sciences and Humanities Research Council (2009-2011)

## Scholarship: Peer Reviewed Journal Articles

- Hagerman, S. and T. Satterfield. Entangled judgments: Expert preferences for adapting biodiversity conservation to climate change. Accepted, *Journal of Environmental Management*.
- Corson, C., Gruby, R. Witter, R., Hagerman, S., Suarez, D. Greenburg, S, Bourque M, Gray, N. and L. Campbell. Everyone's solution? Defining and re-defining protected areas through the Convention on Biological Diversity. *Conservation and Society* (Accepted pending revisions).
- Hagerman, S.M., Witter, R., Corson, C., Suarez, D., Maclin, T., Bourque, M and L. Campbell. 2012. On the Coattails of climate? Opportunities and threats of a warming Earth for biodiversity conservation. *Global Environmental Change* 22 (3) 724-735.
- Hagerman, S.M. 2011. Climate Change, Protected Areas and the Convention on Biodiversity: Reflections from COP10, Nagoya. *Anthropology News* 52: 30 - 46.
- Hagerman, S.M., Satterfield, T. and H. Dowlatabadi. 2010. Climate impacts, biodiversity conservation and protected values: Understanding promotion, ambivalence and resistance to policy redesign at the WCC. *Special Iss. Conservation & Society* 8 (4) 298 - 311
- Hagerman, S.M.; Dowlatabadi, H. and Satterfield, T.S. 2010. Observations on drivers and dynamics of environmental policy change: insights from 150 years of forest management in BC. *Ecology and Society*. 15 (1): 2 [online] URL: <http://www.ecologyandsociety.org/vol15/iss1/art2/>
- Hagerman, S.M.; Dowlatabadi, H., Satterfield, T.S and McDaniels. 2010. Expert views on biodiversity conservation in an era of climate change. *Global Environmental Change* 20 (192-207).
- Hagerman, S.M.; Dowlatabadi, H., Chan, K.M.A. and Satterfield, T.S. 2010. Integrative propositions for adapting conservation policy to the impacts of climate change. *Global Environmental Change*. DOI: 10.1016/j.gloenvcha.2009.11.002
- Hagerman S.M. and K.M.A. Chan (2009). Climate change and biodiversity conservation: impacts, adaptation strategies and future research directions. F1000 Biology Reports, 1:16 (Invited review)
- Berch, S., Brockley, R., Battigelli, P. and S. Hagerman 2009. Impacts of repeated fertilization on fine roots, mycorrhizas, mesofauna and soil chemistry under young interior spruce in central British Columbia. *Canadian Journal of Forest Research* 39: 889-896.

- Simard, S.W., Radosevich, S.R., Sachs, D.L. and S.M. Hagerman. 2006. Evidence for competition/facilitation trade-offs: effects of Sitka alder density on pine regeneration and soil productivity. *Canadian Journal of Forest Research*: 36: 1286-1298.
- Simard, S.W., Hagerman, S.M., Sachs, D.L., Heineman, J.L., and Mather, W.J. 2005. Conifer growth, *Armillaria ostoyae* root disease and plant diversity in response to broadleaf competition reduction in temperate mixed forests of southern interior British Columbia. *Canadian Journal of Forest Research* 35: 843-859
- Hagerman, S.M. and Durall, D.M. 2004. Ectomycorrhizal colonization of greenhouse-grown Douglas-fir (*Pseudotsuga menziesii*) seedlings by inoculum associated with the roots of refuge plants sampled from a Douglas-fir forest in the southern interior of British Columbia. *Canadian Journal of Botany* 82: 742-751.
- Simard, S.W., Heineman, J.L., Hagerman, S.M., Mather, W.J. and D. L. Sachs. 2004. Manual cutting of Sitka alder-dominated plant communities in interior British Columbia: effects on conifer growth and plant community structure. *Western Journal of Applied Forestry* 19: 277-287.
- Jones, M.D., Hagerman, S.M., Gillespie, M. 2002. Ectomycorrhizal colonization and richness of previously colonized, containerized *Picea engelmannii* does not vary across clearcuts when planted in mechanically site-prepared mounds. *Canadian Journal of Forest Research* 32: 1425-1433.
- Sakakibara, S.M., Jones, M.D., Gillespie, M., Hagerman, S.M., Forrest, M.E., Simard, S.W. and D.M. Durall. 2002. A comparison of ectomycorrhiza identification based on morphotyping and PCR-RFLP analysis. *Mycological Research* 106: 868-878.
- Hagerman, S.M., Sakakibara, S.M. and Durall, D.M. 2001. The potential for woody understory plants to provide refuge for ectomycorrhizal inoculum at an Interior Douglas-fir forest after clear-cut logging. *Canadian Journal of Forest Research* 31: 711-721.
- Hagerman, S.M., Jones, M.D., Bradfield, G.E., Gillespie, M. and Durall, D.M. 1999. Effects of clear-cut logging on the persistence and diversity of ectomycorrhizas at a subalpine forest. *Canadian Journal of Forest Research* 29: 124-134
- Hagerman, S.M., Jones M.D., Sakakibara, S.M. and Bradfield G.E. 1999. Ectomycorrhizal colonization of *Picea engelmannii* x *glauca* seedlings planted across cut-blocks of different sizes. *Canadian Journal of Forest Research* 29: 1856-1870.

### **Scholarship: Journal Articles Under Review and In Preparation**

- Hagerman, S.M. & T. Satterfield. Agreed but not preferred: Expert perspectives on 'taboo' options for biodiversity conservation given climate change.
- Campbell, L., Hagerman S. & N. Gray. 2012. Producing targets for conservation: scale, performance and translation at the 10<sup>th</sup> Conference of the Parties to the Convention on Biological Diversity.
- Hagerman, S.M. What's in a name? Mental models of nature and objective setting in conservation decision-making

## *Scholarship: Unpublished*

- Hagerman, S. 2009. Adapting conservation policy to the impacts of climate change: an integrated examination of ecological and social dimensions of change. Unpublished doctoral dissertation, University of British Columbia, <http://hdl.handle.net/2429/7903>.

## *Scholarship: Selected Conference and Symposium Proceedings (refereed):*

- Campbell, L., Hagerman S., N. Gray, D. Scott 2013. Seeing like a scientist: Global representations of biodiversity conservation. Association of America Geographers Annual Meeting. Los Angeles, CA.
- Campbell, L., Hagerman S. & N. Gray. 2012. Producing targets for conservation: scale, performance and translation at the 10<sup>th</sup> Conference of the Parties to the Convention on Biological Diversity. Association of America Geographers Annual Meeting, New York.
- Hagerman, S.M. Bourque, M, Corson, C, Maclin, T. Suarez, D and R. Witter. 2011. Engagements with climate change at COP-10 to the Convention on Biological Diversity: Reinvention, reconfiguration or reinforcement? Panel on "Collaborative Event Ethnography of the 10<sup>th</sup> Conference of the Parties to the Convention on Biological Diversity". American Anthropological Association meeting, Montreal, Canada.
- Hagerman, S.M. 2011. (March 29 - April 2, 2011). Ethnography in policy-relevant settings: CoP-10, the Convention on Biological Diversity and human dimensions of science-based conservation (as part of panel: Making the Human Dimension Count: Applied Anthropology in Interdisciplinary Climate Change Research Projects). Annual Meeting of The Society for Applied Anthropology, Seattle WA.
- Hagerman, S.M. Satterfield, T.S. and H. Dowlatabadi (March 13-20, 2010). Climate impacts and adaptation for biodiversity policy. Evolving environmental values, scientific uncertainties and policy preferences. Poster, DISCCRS V Symposium. Saguro Lk, AZ.
- Hagerman, S.M., Dowlatabadi H., Satterfield T. and T. McDaniels (February 15-19, 2007). Biodiversity protection, climate change and decision-making. Poster presented at the annual meeting of the American Association for the Advancement of Science (AAAS) San Francisco, CA. Poster Symposium: Decision-Making Under Uncertainty (1st place).
- Hagerman, S.M. Dowlatabadi, H. Satterfield T. and T. McDaniels (March 5-9, 2007). Biodiversity protection, climate change and decision-making. Poster, UBC IMPACT! Climate Change Research Poster Contest - Institute for Resources the Environment and Sustainability and Environment Canada (2nd place).
- Hagerman, S.M., Dowlatabadi, H.D. and T.S. Satterfield. Chasing ecosystems? Anticipating social and biological challenges of protected areas planning given climate change. Society for Applied Anthropology meeting, Vancouver BC (2006).
- Hagerman, S.M., Dowlatabadi, H.D., Satterfield, T.S. and T. McDaniels. Biodiversity conservation and climate change: anticipating social and ecological challenges. International Symposium on Society and Resource Management (ISSRM) meeting, Vancouver BC (2006).

### *Scholarship: Invited Presentations and Seminars (select):*

- Visions of biodiversity and ecosystem management in a warming world. UBC-IRES Seminar, April 5, 2012
- What do experts and practitioners think about climate impacts and conservation policy responses? Insights from a web-based survey. Climate Impacts Group, University of Washington, March 29, 2011.
- Policy adaptation given climate impacts in Washington State: The roles of science, strategy, environmental values, and trust. Annual Conference of the Wildlife Society. Snowbird, Utah. (October 2-6, 2010).
- Taboo trade-offs in biodiversity conservation. Forever or for now? DISCCRS V Symposium, March 13-20, 2010.
- Ecosystems in an era of climate change: managing for resilience or transformability? Resilient Ecosystems Workshop, Pacific Institute for Climate Solutions, Victoria, British Columbia, December 6-8, 2009.
- Understanding adaptation in conservation policy given climate change. Climate Decision Making Centre. Carnegie Mellon University, Pittsburgh PA May 19, 2009.
- Understanding conservation policy adaptation to the impacts of climate change. Climate Impacts Group Seminar, University of Washington, Seattle, WA. February 17, 2009.

### *Teaching and Course Development:*

<i>Teaching</i>	<i>Course</i>	<i>Course Level</i>
Instructor	Qualitative Methods in Interdisciplinary Contexts	Graduate Seminar
Guest Seminars	Social-Ecological Systems	Graduate Seminar
Guest Seminars	Human & Ecological Dimensions of Conservation	Graduate Seminar
Teaching Assistant	Biology (Laboratory)	First Year
Teaching Assistant	Biology (Forest Ecology Lab Module)	First Year
Teaching Assistant	Quantitative Methods in Plant Ecology	Fourth Year
<i>Course Development</i>		
Syllabus	Integrated Perspectives on Environmental Decision-Making (complete)	Graduate Seminar
Syllabus	Climate Change and Ecosystem Management: Leveraging Social-Ecological Considerations to Foster Sustainable Decisions (in development)	Graduate Seminar

### *Interdisciplinary Collaborations and Synergistic Activities:*

- Collaborative Event Ethnography Research Group (“Climate and Conservation” group leader): CoP-10, Convention on Biological Diversity, Nagoya Japan (SSHRC, National Science Foundation)
- Dissertations Initiative for the Advancement of Climate-Change Research, DISCCRS V Scholar (National Science Foundation)
- Climate Decision Making Center at Carnegie Mellon (National Science Foundation)
- Collaborative Event Ethnography, The World Conservation Congress (MacArthur Foundation)
- Climate Impacts Group, University of Washington and the US Forest Service, Pacific Northwest Region.
- Institute for Resources Environment and Sustainability (IRES), University of British Columbia (UBC) (Co-investigator, SSHRC Interdisciplinary Environmental Issues Research Development Grant)

### *Professional Membership and Academic Communities:*

- American Association for the Advancement of Science (AAAS)
- Society for Applied Anthropology (SFAA)
- Ecological Society of America (ESA)

### *Service:*

- Reviewer: Conservation Biology, Climatic Change, Geoforum, Environmental Reviews, Journal of Wildlife Management, Wildlife Monographs, DISCCRS fellowship applicants.
- Contributor to the development of student polices for interdisciplinary scholarship (2009)
- PhD student representative: IRES governance committee (2006 – 2007)
- Student representative: IRES director search committee (2005 – 2006)
- Graduate student mentor: UBC Graduate Student Mentoring Program (2005-2006)