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MEDIA RELEASE

SFU students receive new climate change fellowships

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[Tweet](#) [Facebook](#) [Pinterest](#) [Email](#) [Print](#)**Contact:**Dionne Bunsha, North Vancouver resident, 778.869.5157, dbunsha@sfu.caSabine Jessen, North Vancouver resident, 604.970.2159, sjessen@sfu.caMary Ann Middleton, Surrey resident, 778.782.5429, maberg@sfu.caCarol Thorbes, PAMR, 778.782.3035, cthорbes@sfu.caJessica Worsley, PICS, 250.217.9057, jworsley@uvic.caPhotos available for download: <http://at.sfu.ca/HQFhtr>

The latest Simon Fraser University recipients of graduate research fellowships from the [Pacific Institute for Climate Solutions \(PICS\)](#) are dedicated to shoring up the resilience and adaptability of our environment.

SFU doctoral candidates Dionne Bunsha, Sabine Jessen and Mary Ann Middleton are among 11 new recipients of PICS' 2011-12 climate change research fellowships.

PICS awards the funding, from \$12,000 to \$50,000 annually, to graduate students and postdoctoral fellows at SFU, and the universities of British Columbia, Northern B.C. and Victoria.

The four B.C. research-intensive universities comprise PICS, a provincial government-created consortium that is building capacity in priority areas of climate change research.

Collectively, Bunsha (REM-School of Resource and Environmental Management), Jessen (geography and REM) and Middleton (earth sciences) are receiving \$54,000 to advance research that helps B.C. better monitor, mitigate and adapt to climate change.

Bunsha, an award-winning writer, photographer and researcher, is developing a monitoring and adaptation plan to help communities better mitigate climate change's impact on natural resources such as plants and trees. Her research is in partnership with the Central Coast First Nations, an alliance of Aboriginal groups on B.C.'s north and central coast and in Haida Gwaii.

Jessen, a veteran advisor to many organizations on resource, coastal zone and environmental management, is helping B.C. and federal marine conservation agencies develop a joint marine protected area (MPA) network. Jessen is examining government options for maximizing marine ecosystems' adaptability and resilience to climate change under an MPA network.

Middlerton, a 2006 SFU bachelor of science graduate, is using her knowledge of hydrochemistry in groundwater-fed streams to develop criteria for assessing how climate change is affecting fish and aquatic habitats in sensitive streams.

PICS has also renewed the [graduate research fellowships](#) of three 2010 SFU doctoral recipients: Steven Conrad (REM), Cedar Morton (REM) and Vinu Rajus (Interactive Arts and Technology). Their renewed awards are collectively worth \$54,000.

Backgrounder: Detailed profiles of new SFU fellowship recipients

Dionne Bunsha, PhD Candidate, School of Resource and Environmental Management

Project Title: Community-based environmental monitoring networks: grassroots climate change detectives

Research Supervisor: Ken Lertzman, School of Resource and Environmental Management

Research Statement:

In partnership with the Central Coast First Nations, Dionne will develop a plan for an on-the-ground system of monitoring and adaptation for climate change with the aim of making communities more resilient to its impacts. Monitoring indicators of climate change, such as ocean acidity levels, can help communities gain a local and regional perspective of the patterns and magnitude of changes underway, and help them decide how best to respond. For example, responses could include protecting plant or tree species that were earlier considered abundant.

Profile: Dionne Bunsha is an award-winning writer, photographer and researcher. As a senior assistant editor for *Frontline* magazine in Mumbai, India, from 2001-2008, she wrote extensively on human rights, social justice, development, poverty and environmental issues. Her critically acclaimed book, *Scarred: Experiments with Violence in Gujarat*, was published by Penguin India in 2006. Dionne was a Knight International Journalism Fellow at Stanford University in 2008-09. Her work has been recognized with many awards including the International Federation of Journalists Tolerance Prize for South Asia 2005. She started her career as a reporter for India's largest newspaper, *The Times of India*, Mumbai in 1995. She worked on her master's degree in development studies at the London School of Economics in 1999-2000, and was awarded the LSE-Department for International Development Shared Scholarship.

Sabine Jessen, PhD Candidate, department of geography/School of Resource and Environmental Management

Project Title: Planning for marine ecosystem resilience under climate change in B.C.

Research Supervisor: Alison Gill, Department of Geography/School of Resource and Environmental Management

Research Statement:

Marine ecosystems are facing increasing challenges as a result of climate change. In B.C., federal and provincial marine conservation agencies are currently developing a joint Marine Protected Area (MPA) network. Jessen's project will examine governance options for maximizing marine ecosystems' ability to adapt and be resilient to climate change under an MPA network. In particular, researchers and policy makers need to incorporate climate change risk and uncertainties into the network's design and management, and include local knowledge and potential strategies for adaptation. The research will incorporate knowledge from a wide range of sources including First Nations, natural and social sciences, MPA network design theory and existing adaptive governance examples.

Profile: Sabine Jessen has worked in the conservation sector in B.C. and nationally for over 20 years with the Canadian Parks and Wilderness Society, with a particular focus on advancing marine conservation. Jessen has extensive experience in the fields of resource, coastal zone and environmental management, and has served as an advisor to a variety of organizations. They include the North American Commission for Environmental Cooperation and the Economic Council of Canada. Jessen served on the Minister's Advisory Council on Oceans from 2000 to 2005, advising the federal Minister of Fisheries and Oceans on issues related to the management of Canada's oceans. She currently serves on the boards of West Coast Aquatic, the Coastal Zone Canada Association, and the Ocean Management Research Network. Jessen has a master's degree and undergraduate degrees in geography from the University of Waterloo, with a focus on coastal zone and resource management.

Mary Ann Middleton, PhD Candidate, department of earth sciences

Project Title: Evaluating the impacts of climate change and water use on groundwater sensitive streams

Research Supervisor: Diana Allen, department of earth sciences

Research Statement:

Groundwater in many streams in B.C. sustains late-summer stream flow. During a summer low-flow period, streams may be particularly sensitive to changes in groundwater input resulting from pumping, land-use change or climate change. This project will use a combination of field and modeling techniques to characterize stream sensitivity to changes in the groundwater system during these low-flow periods. The results will be used to develop criteria for assessing sensitive

streams for protection of fish and aquatic habitats.

Profile: Mary Ann Middleton, an SFU doctoral candidate, is working with earth sciences professor Diana Allen. She completed her bachelor of science (Hons.) in 2006 at SFU, with a major in earth science and double minors in biology and geography. Middleton completed her undergraduate research project with Allen, examining variations in stream discharge and hydrochemistry in groundwater-fed streams. She is studying groundwater-surface water interactions and their implications for fish and aquatic habitats.

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