

Fourth International Conference On

CLIMATE CHANGE

12-13 JULY 2012

The University of Washington, Seattle, Washington, USA

www.Climate-Conference.com

INTERNATIONAL CONFERENCE ON CLIMATE CHANGE: IMPACTS AND RESPONSES

UNIVERSITY OF WASHINGTON
SEATTLE, USA

12 – 13, JULY, 2012

<http://on-climate.com>



C O M M O N
G R O U N D



COLLEGE OF THE ENVIRONMENT

UNIVERSITY *of* WASHINGTON

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CLIMATE CHANGE CONFERENCE

Dear Delegate,

Welcome to the Fourth International Conference on Climate Change: Impacts and Responses. This conference and its associated journal have been created to promote dialogue across diverse fields and multiple perspectives, on the question of climate change. It examines evidence of climate change, consider its impacts, and addresses current and potential responses. Thank you for joining this important dialogue and sharing your enthusiasm, insight and concern.

By way of background, the Inaugural Climate Change Conference was held in Pune, India at Bharati Vidyapeeth University. The 2010 conference was held at the University of Queensland in Brisbane, Australia and the 2011 conference was held in Rio de Janeiro, Brazil. We meet annually in different locations around the world and publish papers from the conference in the new International Journal of Climate Change: Impacts and Responses (www.Climate-Journal.com).

In addition to organizing the Climate Change Conference, Common Ground publishes papers from the conference at www.Climate-Journal.com, and we do encourage all conference participants to submit a paper based on their conference presentation for peer review and possible publication in the journal. We also publish books at <http://onclimate.com> in both print and electronic formats. We would like to invite conference participants to develop publishing proposals for original works, or for edited collections of papers drawn from the journal which address an identified theme. Finally, please join our online conversation by subscribing to our monthly email newsletter, and subscribe to our Facebook, RSS, or Twitter feeds at <http://onclimate.com>.

Common Ground also organizes conferences and publishes journals in other areas of critical intellectual human concern, including diversity, museums, technology, learning and the arts, to name several (see <http://commongroundpublishing.com>). Our aim is to create new forms of knowledge community, where people meet in person and also remain connected virtually, making the most of the potentials for access using digital media. We are also committed to creating a more accessible, open and reliable peer review process.

Thank you to everyone who has prepared for this conference including our co-organizers and supporters, The University of Washington College of the Environment and the Climate Impacts Group. A personal thank and acknowledgement goes to the Co-Director of the Climate Impacts Group and Center for Science in the Earth System, Amy Snover. I'd also like to thank my Common Ground colleagues who have put such a significant amount of work into this conference: Jamie Burns, Homer Stavely, and Izabel Szary.

We wish the best for this conference and hope it will provide you every opportunity for dialogue with colleagues from around the corner and around the world. We hope you will be able to join us at next year's Climate Change Conference in Mauritius.

Yours Sincerely,



Bill Cope
Director, Common Ground Publishing
Research Professor, Dept. of Educational Policy Studies,
University of Illinois, Urbana-Champaign, USA



Common Ground Publishing
University of Illinois Research Park
2001 South First Street, Suite 202
Champaign, IL 61820 USA

Phone: +1-217-328-0405
Fax: +1-217-328-0435
info@commongroundpublishing.com
commongroundpublishing.com

ABOUT THE CLIMATE IMPACTS GROUP

The Climate Impacts Group (CIG) is an internationally recognized interdisciplinary research and stakeholder engagement team operating since 1995 at the University of Washington. CIG's unique focus is on the *intersection of climate science and decision making* in pursuit of climate resilience for people and nature. CIG develops and delivers scientific information that is not only *useful to* but *used by* the decision making community by fully integrating research with stakeholder engagement. Our approach comprises: (1) improving scientific understanding of regional climate and climate impacts via interdisciplinary research and collaborations; (2) supporting the development of community understanding of climate impacts, risks and responses by engaging with natural resource managers, planners, policymakers, NGOs, the media, etc.; (3) identifying climate-related information needs and areas of concern for resource managers, planners and policy makers; (4) developing, delivering and supporting the application of targeted information and tools for specific decision contexts; and (5) developing, testing and delivering guidance for climate-smart planning and management. We have partnered with various federal, tribal, state, local, and non-profit organizations at spatial scales ranging from local communities to the entire western U.S. region, with an historic focus on the U.S. Pacific Northwest.

ABOUT THE UNIVERSITY OF WASHINGTON COLLEGE OF THE ENVIRONMENT

In our local communities and around the globe, we are increasingly aware of the fundamental, inextricable links between our own health and well-being, and a healthy environment. New knowledge is vital to inform decision-making that fosters sustainable interactions between the two, allowing ecosystems to thrive while continuing to deliver the goods and services that humans want and need.

Inclusion of all voices from the greatest diversity of disciplines, cultures, and approaches to problem-solving is necessary to better understand these linkages, and safeguard these ecosystems and resources that flow from them.

The University of Washington is committed to playing a major role in advancing our understanding of the environment and our interactions with it, and in developing innovative approaches to address environmental problems. To achieve that goal, the UW created the College of the Environment.

The College of the Environment is an unparalleled hub of environmental scholarship, innovation, and education. Its unique strength is the combination of outstanding faculty studying the Earth's atmosphere, land, and water systems with those studying human dimensions of the environment, the application of engineering and technological solutions to environmental problems, and the impact of policy on environmental change. No other university has brought together this breadth and depth of expertise.

ABOUT COMMON GROUND

MISSION: Common Ground Publishing aims to enable all people to participate in creating collaborative knowledge and to share that knowledge with the greater world. Through our academic conferences, peer-reviewed journals and books, and innovative software, we build transformative knowledge communities and provide platforms for meaningful interactions across diverse media.

PHILOSOPHY: Common Ground is committed to building dynamic knowledge communities that meet regularly in face-to-face interaction, connect in a virtual community of web spaces, blogs and newsfeeds, and publish in fully refereed academic journals. In this way, we are bringing to the fore our commitment to explore new ways of making and disseminating academic knowledge. We believe that the Internet promises a revolution in the means of production and distribution of knowledge, a promise, as of yet, only partially realized. This is why we are working to expand social and technical frontiers in the production of text, so that academic publishing gains the immediacy, speed and accessibility of the web whilst nevertheless maintaining—and we would hope enhancing—the intellectual standards of legacy peer refereed journals. To support these kinds of emerging knowledge communities, Common Ground continues to have an ambitious research and development agenda, creating cutting edge 'social web' technologies and exploring new relationships of knowledge validation.

CONNECTING THE GLOBAL WITH THE LOCAL: Common Ground conferences connect with different host universities and local communities each year, seeking fresh perspectives on questions of global concern. In recent years, we have worked with a wide range of educational institutions including (to list just a few): Beijing Normal University; The Australian National University; The University of London; The Institute for Pedagogical Sciences, Cuba; University of California, Los Angeles; The University of Cambridge, UK; The University of Carthage, Tunisia; Columbia University, New York; Singapore Management University; McGill University, Montreal; The University of Edinburgh, Scotland; and New York University in New York City. At conference sites, we bring the global to the local—academics, researchers and practitioners from around the world gather to discuss conference topics. At the same time, we also bring the local to the global, as local academics and community leaders speak from the perspective of local knowledge and experience. For links to each our twenty-four knowledge communities, visit www.commongroundpublishing.com.

CLIMATE CHANGE CONFERENCE KNOWLEDGE COMMUNITY

At a time when knowledge communities are being redefined and disciplinary boundaries challenged, Common Ground aims to develop innovative spaces for knowledge creation and sharing. Through our conferences, journals and online presence we attempt to mix traditional face-to-face interaction with new 'social web' technologies. This is a part of our attempt to develop new modes of deliberation and new media for the dissemination of ideas. Common Ground is founded upon and driven by an ambitious research and knowledge design agenda, aiming to contest and disrupt closed and top-down systems of knowledge formation. We seek to merge physical and online communities in a way that brings out the strengths in both worlds. Common Ground and our partners endeavour to engage in the tensions and possibilities of this transformative moment. We provide three core ways in which we aim to foster this community:

Present: You have already made the first step and are in attendance. We hope this conference provides a valuable source of feedback for your current work and the possible seeds for future individual and collaborative projects. We hope your session is the start of a conversation that continues on past the last day of the conference.

Publish: We also encourage you to publish your paper in *The International Journal of Climate Change: Impacts and Responses*. In this way, you may share the finished outcome of your presentation with other participants and members of the Climate Change Conference. You also have access to the complete works of *The International Journal of Climate Change: Impacts and Responses* in which the published work of participants from the conference who submitted papers may be found.

Engage with the Community Online: Each conference presenter is provided a personal CGPublisher website with public and private spaces where you are able to post your photo, biography, and CV; make links to other sites of personal interest; and create a space where collaborators may be invited to access and comment on your works-in-progress. In addition, you can contribute to the online community via our blog, email newsletter and social networking sites.

- The *Blog* and links to other social networking sites can be found at <http://on-climate.com/ideas/>.
- *Email Newsletters:* Please send suggested links for news items with a subject line 'Email Newsletter Suggestion' to support@on-climate.com. The email newsletter will be sent to all conference participants.
- *Facebook:* Find us on Facebook at: <http://www.facebook.com/OnClimate.CG>
- *Twitter:* You can now follow the Technology Conference Community on Twitter: @onclimate
- *YouTube Channel:* View online presentations at <http://on-climate.com/conference-2012/online-presentations/>
Create your own YouTube presentation with a link to your session description on the conference website, and (if your paper is accepted to the journal), a link to the abstract of your paper on the journal website. See instructions at <http://on-climate.com/conference-2012/online-presentations/>.

ABOUT THE CONFERENCE

SCOPE AND CONCERNS

The International Conference on Climate Change: Impacts and Responses and its associated Journal, Book Imprint and News Weblog publication venues set out to define an emerging idea and field of practice. Climate Change is a new educational paradigm made possible in part by the affordances of digital media.

The Evidence

Climate is one of the pivotal and dynamic forces in the natural history of the earth. Paleoclimatology provides us a long view of the ebb and flow of climate change, and a framework within which to interpret its ecosystemic consequences. In some times and places climate change explains processes of biodiversification, in other times and places a reduction in biodiversity. In this long view, the history of life on earth is integrally related to climatological history.

For the first time in natural history, the conscious actions of one creature—homo sapiens—have come to influence the course of earth's natural history, not just in local ecosystems, but on a planetary scale. This has been the case since humans began a process of populating the whole earth about one hundred thousand years ago. Ecosystems were revolutionised by the sustained yield harvesting technologies of hunters and gathers, then the farming and animal husbandry technologies of self-sufficient peasantries, and most recently and most intensively by the global division of labour of the industrial revolution, market-directed agriculture, the widespread clearing and harvesting of forests and the use of fossil fuels.

It is now widely accepted that the most recent phase of human society has had an impact on the earth's climate. Greenhouse gases are heating up the earth. Ice that was permanent until recently, is rapidly melting. Sea levels are rising. Extreme weather events are occurring with greater frequency. Different regions are affected by these changes in different ways. However, a wide range of climatic changes can be attributed to patterns of human activity.

Some of the changes we are experiencing today may be part of the course of natural history. Other changes, it seems certain, are the byproduct of human history. Key questions include: how do we measure and explain these changes? What are their immediate and likely future impacts? And what is to be done? These are questions of growing concern and practical urgency.

Ecosystemic Impacts

There is today the potential for disastrous impacts on ecosystems, communities, species and genetic diversity that could well lead to mass extinctions in a relatively brief period. For instance, the special effects of glacial melt on mountain and riverine biodiversity and that of sea level rise on coastal and mangrove systems form a key concern for the future of biodiversity. The effect of climate change on coral reefs is already a major concern. Increased rainfall variability (in especially monsoon regions) could dry up or expand wetlands temporarily which in both scenarios would be disastrous.

The most affected ecosystems will undoubtedly be situated in mountains, forests (especially evergreen types) grasslands, deserts and wetlands. Glacial, riverine and coastal ecosystems will also be altered. Knowledge currently available through Dynamic Global Vegetation models simulating possible changes, clearly demonstrate that there will be further species loss. Many genetically species ill-adapted to environmental disturbances may vanish without a trace before scientists can catch the decline.

The specific regional impacts on biomes and the vulnerabilities of different ecosystems across the globe need to be assessed. There are parallels between some areas, while there are subtle and complex dissimilarities between the changes that are occurring in different parts of the world. These include floods, drought, forest fires, hurricanes and other sporadic events that could devastate endemic species and threaten microhabitats.

Some ecosystems could be highly vulnerable and will not be able to respond even to short term impacts such as natural disasters. In the presence of climate change these short term events could be even more cataclysmic. The possible impacts of invasive alien species that will spread due to climatic change are very little understood and could be devastating.

The possibility of 'ecological surprises' in sensitive areas also needs to be addressed. 'Extreme events' could be especially damaging. There is thus a great need for scientists and practitioners to be brought on a common platform that will at least reduce the ill effects on species ecosystems and protected areas.

The Conference, Journal, Book Imprint and News Blog will share international research based on local experiences, so that mitigation and adaptation to climate change can be understood by scientists, policymakers and practitioners concerned with the management of different ecosystems.

Human Impacts

Humans are agents in climate change due to their production of greenhouse gases and their patterns of land use.

Humans will also be affected by climate change in many ways: including shifting shorelines, declining agricultural productivity, crisis of food supply, availability of water, the health of populations and extreme weather events. For instance, environment related diseases could spread rapidly in epidemic proportions with changes in water availability and quality.

These impacts will be felt differentially in developed and developing worlds. Marginalized populations of people may not only have their lives and livelihoods affected, but also be affected by declines in species abundance and diversity of ecosystems at a landscape level and upon which they are dependant. In heterogeneous landscapes with a mix of wilderness islands within a changing agricultural environment, urbanization and industrial spread could well increase pressures on protected area networks as the effects of climatic changes increase. Agricultural communities, especially traditional farmers and pastoralists, may be forced to shift into what is now within the protected area networks in developing countries.

Framing Responses

This peculiar creature in natural history, homo sapiens, is increasingly being recognised to an agent of climate change, though the precise mix of natural and human causes has yet to be determined. With conscious agency comes responsibility for the future course of natural history.

On the experience of the past hundred thousand years, humans are clearly capable of adaptive responses, nurturing nature through a period of transition, creating corridors to assist species adaptation and inventing new agricultures which alleviate and mitigate the effects of climate, for instance. Humans are also capable of precautionary action, reducing greenhouse gases for instance as part of a broader strategy of sustainable development.

The key, however, will be the extent to which our species can take a proactive role, be that technological (carbon sequestration and other technologies) or acts of social and political will that produce changed patterns of land and energy use. Like no other creature in natural history, and like no other time in this creature's human history, this is moment when the future of the planet is in our hands. The consciousness which made us a unique species perhaps a hundred thousand years ago, for the first time today puts us in a position of unprecedented responsibility for the course of natural history. Climate change is a key intellectual and practical challenge for today's science, economics, politics, sociology and ethics.

THEMES

THEME 1: THE EVIDENCE

- Paleoclimatology: the earth's climate in a long view.
- Climate change today: examining the data.
- Ice cap reduction and glacial melt.
- Sea level change.
- Floods, drought, forest fires, hurricanes and other sporadic events.
- Albedo or measuring the earth's reflectiveness.
- Meteorology and climate informatics.
- Equilibria and disequilibria; change processes and countervailing tendencies.
- Climate measurement processes, methodologies and technologies.
- Reading complex, dynamic and unstable systems.
- Developing local and global climate models.
- Change scenarios: slow, rapid, abrupt or episodic.

THEME 2: ASSESSING IMPACTS IN DIVERGENT ECOSYSTEMS

- Ocean currents and El Niño.
- Riverine ecosystem impacts.
- Mountain ecosystem impacts.
- Coastal ecosystem impacts.
- Marine ecosystem impacts.
- Forest and grassland ecosystem impacts.
- Impacts on wilderness and protected areas.
- Impacts on specific biomes.
- Impacts on biodiversity, potential extinctions.
- Hardiness zone migration.
- Regional variations: temperature and rainfall.

THEME 3: HUMAN IMPACTS AND IMPACTS ON HUMANS

- Anthropogenic factors in climate change: determining the relative contribution of natural and human causes.
- Impacts of carbon dioxide and other greenhouse gases.
- Land use patterns, agriculture and livestock husbandry and deforestation as factors in climate change.
- Impacts on humans: agriculture, fish stocks, food supply, health.
- Human settlements and sea level rise.
- Impacts on humans: water supply, desertification.
- Impacts on humans of intense weather events, natural disasters and ecological surprises.
- Impacts of climate change in the developing world.

THEME 4: FRAMING RESPONSES

- Environmental policies in response to climate change.
- Controversy and denial: politics, the media and scientists with dissenting views.
- The international politics of climate change.
- Education and awareness for management of global climate change.
- Protected areas and preservation of biodiversity: 'corridoring' and other strategies.
- Strategies for sustainability.
- Human adaptive strategies.
- Technologies of mitigation: carbon dioxide sequestration, solar shades and other processes.
- Alternative and renewable energy sources: technologies, policies and strategies.
- Carbon taxes and offsets.
- Climate ethics and the precautionary principle.
- Eco-development, eco-efficiency.
- Emission standards.
- Kyoto and beyond.
- The economics of climate change and its mitigation.

SESSION DESCRIPTIONS

SESSION GUIDELINES

CHAIRING OF PARALLEL SESSIONS

Common Ground usually provides graduate students to chair all of the parallel sessions. If you wish, you are welcome to chair your own session, or provide your own chair or facilitator for your session. The chair's role is to introduce the presenter and keep the presentation within the time limit.

PROGRAM CHANGES

Please see the notice board near the conference registration desk for any changes to the printed program (e.g., session additions, deletions, time changes, etc.). If a presenter has not arrived at a session within 5 minutes of the scheduled start time, we recommend that participants join another session. Please inform the registration desk of 'no-shows' whenever possible.

SESSION TYPES

PLENARY

Plenary sessions, by some of the world's leading thinkers, are 30 - 45 minutes in length. As a general rule, there are no questions or discussion during these sessions. Instead, plenary speakers answer questions and participate in discussions during their Garden Sessions (see below).

GARDEN SESSIONS

Garden Sessions are unstructured sessions that allow delegates a chance to meet plenary speakers and talk with them informally about the issues arising from their presentation.

PAPER PRESENTATIONS IN THEMED SESSIONS

Paper presentations are grouped by general themes or topics into Themed Sessions. Each presenter in the session makes a formal fifteen-minute presentation of their work; Q&A and group discussion follow after all have presented. Each presenter's formal, written paper will be available to participants if accepted to the journal.

POSTER SESSIONS

Poster sessions present preliminary results of works in progress or for projects that lend themselves to visual displays and representations. These sessions allow for engagement in informal discussions about the work with other delegates throughout the session.

WORKSHOP

Sixty-minute workshop sessions involve extensive interaction between presenters and participants around an idea or hands-on experience of a practice. These sessions may also take the form of a crafted panel, staged conversation, dialogue or debate – all involving substantial interaction with the audience. A single article (jointly authored, if appropriate) may be submitted to the journal based on a workshop session.

COLLOQUIUM

Ninety-minute colloquium sessions consist of five or more short presentations with audience interaction. A single article or multiple articles may be submitted to the journal based on the content of a colloquium session.

VIRTUAL PRESENTATION

Virtual presentations are papers submitted without the participant attending the conference in person, but are eligible to be refereed and published (if accepted) in the journal. A virtual presentation allows participants to join the conference community in the following ways:

- The conference proposal will be listed in the Session Descriptions of the conference.
- Acceptance of a conference proposal for a virtual participant is based on the same criteria as that for an attending participant.
- The full paper may be submitted to the journal.
- The journal paper submission will be refereed against the same criteria as attending participants. If accepted, the paper will be published in the same volume as conference participants from the same year.
- Online access to all papers published in the journal from the time of registration until one year after the conference end date.

TALKING CIRCLES

Talking circles are meetings of minds, often around points of difference or difficulty. They are common in indigenous cultures. The inherent tension of these meetings is balanced by protocols of listening and respect for varied viewpoints. From this, rather than criticism and confrontation, productive possibilities may emerge.

The Purpose of Talking Circles in this Conference

The purpose of the Talking Circles is to give shape to a conference that is wide-ranging in its scope and broad-minded in its interests. They also give people an opportunity to interact around the key ideas of the conference away from the formalities of the plenary, paper, roundtable, workshop and colloquium sessions. They are places for the cross-fertilization of ideas, where cycles of conversation are begun, and relationships and networks formed. Talking Circles are not designed to force consensus or even to strive towards commonality. Their intention is, in the first instance, to find a common ground of shared meanings and experiences in which differences are recognized and respected. Their outcome is not closure in the form of answers, but an openness that points in the direction of pertinent questions.

How Do They Work?

Talking Circles meet on the first day of the conference in a 40-minute session. They are grouped around each of the conference themes and focus on the specific areas of interest represented by each theme.

Begin by pulling chairs around in a circle to encourage face-to-face interaction. Identify a member of the group who is willing to volunteer as a Facilitator and Recorder (or the Graduate Scholar in the room may serve as Recorder). Allow members of the group to briefly introduce themselves. At this point, the discussion may evolve in any way that members of the group agree is appropriate. It may be informal and discursive, or structured and task-oriented. The process is one of creating a kind of collective intelligence around the theme with conversation that is open to possibilities and new lines of inquiry or action.

Some Starting Questions to Assist Discussion

Who are we? What are our interests? What is our common ground?

What is the territory, or scope, or landscape of this thematic area?

What are the burning issues, the key questions for this theme?

What are the forces or drivers that will affect us as professionals, thinkers, citizens, and aware and concerned people whose focus is this particular theme?

What are the future directions (in research, in theory-building, in practice) for this thematic area?

CONFERENCE PROGRAM



DAILY SCHEDULE

THURSDAY 12 JULY

- 08:00 Conference Registration Desk Open
- 09:00 - 09:15 Conference Opening – *Homer Stavely, Common Ground Publishing, USA*
- 09:15 - 09:45 Conference Opening – *Dean Lisa Graumlich, University of Washington College of the Environment, USA; Dean Howard Frumkin, University of Washington School of Public Health, USA;*
- 09:45 - 10:20 Plenary Session – *Amy Snover, University of Washington, USA; 'Mind the Gap: Successfully Bridging Research and Practice'*
- 10:20 - 10:55 Plenary Session – *KC Golden, Climate Solutions, Seattle, USA, 'Climate Solutions and Sustainable Prosperity: From an ecosystem of denial to a culture of responsibility'*
- 10:55 - 11:25 Break and Garden Sessions (see page 6 for description)
- 11:30 - 12:10 Talking Circles
- 12:10 - 12:50 Lunch
- 12:50 - 14:30 Parallel Sessions 1
- Room 115: Poster Session on Communication (Runs 12:50 – 13:50)
 - Room 116: Tools & Strategies for Evaluation & Management
 - Room 117: Impacts on Human Health and Health Care
 - Room 118: Climate Informatics
 - Room 119: Mitigation Strategies
 - Room 127: Water Resource Management
 - Room 138: Colloquium on Climate Change and Associated Impacts on Morbidity & Mortality
- 14:30 - 14:45 Break
- 14:45 - 15:30 Parallel Sessions 2
- Room 116: Impacts on Local Climate
 - Room 117: Carbon Pricing
 - Room 118: Energy Use & Greenhouse Gas Emissions
 - Room 119: International Law & Politics
 - Room 127: Risk Management
 - Room 138: Publishing Information Session (Runs 14:45 – 15:15)
- 15:30 - 15:40 Break
- 15:40 - 16:45 Parallel Sessions 3
- Room 115: Poster Session on Linking Monitoring & Indicators to Decision Making (Runs 15:40 – 16:40)
 - Room 116: Workshop on Using Indicators to Assess the Vulnerability and Resiliency of Alaskan Fishing Communities to Climate Change
 - Room 117: Agricultural Impacts & Adaptation
 - Room 118: Workshop on Climate Change and Canadian Agriculture
 - Room 119: Attitudes & Perceptions About Climate Change in Higher Education
 - Room 127: Long Term Perspectives
 - Room 138: Issues for Coastal Communities: 1
- 18:00 - 19:30 Welcome Reception at the Watertown Hotel & Journal Award Winner Ceremony – *Tina Sikka, "Geoengineering in a World Risk Society,"*



DAILY SCHEDULE

FRIDAY 13 JULY

- 09:00 Conference Registration Desk Open
- 09:30 - 10:05 Plenary Session – Ed Knight, *Swinomish Indian Tribal Community of LaConner, WA, USA*; 'Local Responses to Climate Change: Swinomish Indian Tribal Community'
- 10:05 - 10:40 Plenary Session – Jeremy Littell, *University of Washington, USA*; 'Need, Strategies and Results of a Landscape-scale Examination of Climate Impacts in the Western US'
- 10:45 - 11:15 Break and Garden Sessions
- 11:20 - 12:25 Parallel Sessions 4
- Room 116: Workshop: Communicating Climate Change to Natural Resources, Agriculture Audiences & Stakeholders
 - Room 118: Societal Implications of Climate Change
 - Room 119: Impacts on Developing World and Vulnerable Populations
 - Room 127: Local Approaches & Movements
 - Room 138: Featured Session: Publishing Information Session (Runs 11:20 – 11:50) & Friends of the Cedar Watershed Presentation (Runs 11:50 – 12:20)
- 12:25 - 13:05 Lunch
- 13:05 - 14:45 Parallel Sessions 5
- Room 115: Poster Session on Energy: Adapting to & Driving Change (Runs 13:05 – 14:05)
 - Room 116: Climate Change in Society: Ethics & Influence
 - Room 117: Strategies for Sustainability
 - Room 118: Issues for Coastal Communities: 2
 - Room 119: Terrestrial Ecosystems
 - Room 127: Education & Climate Change
 - Room 138: Colloquium on Indicators for Measuring Progress in Adaptation in Agriculture
- 14:45 - 15:00 Break
- 15:00 - 16:25 Parallel Sessions 6
- Room 115: Poster Session on Adapting to Change (Runs 15:00 – 16:00)
 - Room 116: Attitudes and Perceptions About Climate Change
 - Room 117: Analyzing Climate Change Policy & Programs
 - Room 118: Eco-Development
 - Room 119: Assessing Climate Change: Water Systems
 - Room 127: Changing Weather Patterns
 - Room 138: International Law & Politics
- 16:30 - 17:00 Conference Closing – *Graduate Scholar Awards Ceremony and Future Directions*



CONFERENCE HIGHLIGHTS

FEATURED SESSIONS

Publishing Your Paper or Book with Common Ground
Thursday, 12 July: 15:45 – 16:15, Room 138
Friday, 13 July: 11:20 – 11:50, Room 138

Jamie Burns, Managing Editor, Common Ground Publishing

Description: In this session the Managing Editor of *The International Journal of Climate Change: Impacts and Responses* and the *On Climate Book Series* will present an overview of Common Ground's publishing practices and philosophy. She will also offer tips for turning conference papers into journal articles, present an overview of journal publishing procedures, introduce the *On Climate Books Series*, and provide information on Common Ground's book proposal submission process. Please feel free to bring questions—the second half of the session will be devoted to Q&A.

Friends of the Cedar Watershed
Friday, 13 July: 11:50 – 12:20, Room 138

Youth Are Watching What We Do

Cassandra Houghton, *Class of 2013, Tahoma School District*, **Clara Tibbetts**, *Class of 2012, Tahoma School District*, **Lucy Tibbetts**, *Class of 2015, Tahoma School District*, **Ben Pedigo**, *Class of 2014, Shoreline School District*, **Savannah Cowin**, *Class of 2015, Northshore School District*, **Peter Donaldson**, *Watershed Report, Executive Producer and Leadership Coach, Friends of the Cedar River Watershed*

Description: As members of the next generation we recognize that climate change will be the primary narrative shaping ecological, social and economic systems in our lifetime. To understand the issues and promote policy solutions at a local scale we work with mentors to research and produce an annually updated series of short videos that track positive change within the geography of our watershed footprint, home to 1.9 million people, including the University of Washington. In this lively and cinemagraphic 30-minute session we will feature selected videos from last year's report, describe our communication strategy, and share our current analysis of next year's policy trends.

EVENTS AND ACTIVITIES

SERVICE PROJECT

Service Project with Friends of the Cedar River Watershed, Wednesday, Wednesday, July 11 9:00 - 13:00

Participants will assist in restoring forested wetlands and re-vegetated shoreline at Madrona Park, an urban park on the shores of Lake Washington within the City of Seattle. Madrona Park contains recreational areas, urban forests, beaches, and a restored shoreline and small creek mouth tributary to Lake Washington. This urban refuge provides valuable rearing habitat for Juvenile Chinook salmon and other fish that congregate near small creek mouths along the lake's shoreline. The targeted areas for our project include the 1.5 acre forested wetlands, a spring-fed creek, and Lake Washington's shoreline. Restoration tasks include removing invasive species and weeding and mulching existing restoration plantings. Project tasks are organized for the adventurous and all skills levels. Following the service project, participants will enjoy lunch in the Madrona Park picnic area, on the shores of Lake Washington, looking out at Mount Rainier if the Seattle weather cooperates.

Project partners include: Seattle Parks and Recreation, Friends of Madrona Woods

RECEPTION & JOURNAL AWARD WINNER CEREMONY

Watertown Hotel, Thursday, 12 July 2012, 18:00 - 19:30

Common Ground Publishing and the Climate Change Conference will be hosting a Reception after the last session at the Watertown Hotel. Please join your colleagues for drinks, light hors d'oeuvres, and a chance to connect and converse. In addition, we will be honoring the 2011 Journal Award Winner for Best Paper, Tina Sikka, for her paper: "Geoengineering in a World Risk Society," published in Volume 3, Issue 1 of *The International Journal of Climate Change: Impacts and Responses*.



CONFERENCE PLENARY SPEAKERS

KC Golden

KC oversees the Policy Leadership Program, pioneering leading-edge state and local climate policies while helping to deliver strong regional support for responsible national and international climate policy. He has over 20 years' experience in Northwest energy and climate issues in the public and nonprofit sectors. He has served in the public sector as a special assistant to the Mayor of Seattle for clean energy and climate protection initiatives and as an Assistant Director in Washington's Department of Community, Trade, and Economic Development, where he directed the state's Energy Policy Office. From 1989 to 1995, he was Executive Director of the Northwest Energy Coalition, a regional alliance working for a clean, affordable energy future.

He is an active leader in the national climate movement, serving on the boards of 350.org and the US Climate Action Network. He has also been active in the utility industry, helping Seattle City Light become the first major carbon-free electric utility in the late 1990s, and as a Governor's representative to the Executive Board of Energy Northwest, a regional public power consortium. He was one of Seattle Magazine's "Power 25" most influential people, and it's #1 "Eco-Hero."

He earned his Bachelors Degree at the University of California, Berkeley, and was a Kennedy Fellow at Harvard's Kennedy School of Government, where he received a Master's in Public Policy.

Ed Knight

Ed Knight, AICP, is the Senior Planner for the Swinomish Indian Tribal Community in LaConner, WA. He holds a degree in Social Assessment & Policy from Western Washington University, and has over 30 years in the public sector, including 10 years with the Swinomish Tribe and another 5 years with the Southern Ute Tribe in Colorado. In his work for the Swinomish Tribe, he oversees long-range planning, transportation planning, building permitting, and forest management, and he is the project manager for the Swinomish Climate Change Initiative, a landmark 2-year project to study local climate change impacts and adaptation strategies.

Jeremy Littell

Jeremy Littell is a Research Scientist in the University of Washington's Climate Impacts Group and is Affiliate Assistant Professor at the School of Marine and Environmental Affairs at the University of Washington. He studies the impacts of climate change and variability on forest and mountain ecosystems. He also collaborates with resource managers on adaptation to the impacts of climate change.

Amy Snover

Amy Snover aims to improve society's resilience to natural and human-caused fluctuations in climate by bridging the gap between science and decision making. Her work focuses on cross-sectoral, integrated assessment of climate impacts at the regional scale, assessing climate-related vulnerabilities, and planning for climate change. As Co-Director of the Climate Impacts Group at the University of Washington, an interdisciplinary research and outreach team dedicated to catalyzing and supporting the development of climate resilience, she frequently advises on strategies for adapting planning and decision making processes in light of a changing climate and collaborates with legal, economics and communications scholars to apply climate impacts science to economic assessments, legal analyses, and research on overcoming communication challenges. She has a PhD in Analytical/Environmental Chemistry from the University of Washington.

PROGRAM

THURSDAY, 12 JULY	
08:00 - 09:00	REGISTRATION DESK OPEN
09:00 - 09:15	CONFERENCE OPENING: Homer Stavely, <i>Common Ground Publishing, USA</i>
09:15 - 09:45	CONFERENCE OPENING: Dean Lisa Graumlich, <i>University of Washington College of the Environment, USA</i> ; Dean Howard Frumkin, <i>University of Washington School of Public Health, USA</i>
09:45 - 10:20	PLENARY SESSION: Amy Snover, <i>University of Washington, USA, 'Mind the Gap: Successfully Bridging Research and Practice'</i>
10:20 - 10:55	PLENARY SESSION: KC Golden, <i>Climate Solutions, Seattle, USA, Climate Solutions and Sustainable Prosperity: From an ecosystem of denial to a culture of responsibility'</i>
10:55 - 11:25	BREAK AND GARDEN SESSION
11:30 - 12:10	TALKING CIRCLES
Room 117	<i>Stream: Scientific Evidence</i>
Room 118	<i>Stream: Ecosystemic Impacts</i>
Room 119	<i>Stream: Human Impacts</i>
Room 127	<i>Stream: Technical, Political and Social Responses</i>
12:10 - 12:50	LUNCH
12:50 - 14:30	Parallel Session 1 (Themed Poster Session, Themed Sessions & Colloquia) Themed Sessions are 15 minute presentations followed by Q&A and group discussion)
Room 115 <i>Poster Session: Communication</i> *Runs 12:50 – 13:50	<p>Climate Literacy, Energy and Communication Dr. Nilmini Silva-Send, Energy Policy Initiatives Center, University of San Diego, San Diego, USA <i>Overview:</i> This presents preliminary results from the developmental stages of a 3-component climate and energy literacy model (climate science-highly influential community leaders-social psychology communication methods) based in the San Diego region.</p> <p>Analysis of Visual Delivery, Resources and Rhetoric Changes by Key Environmental Organizations Impacted from the Field of Graphic Design in a “Post-Inconvenient Truth” Era Adrienne Schwarte, Fine Arts, Maryville College, Maryville, USA <i>Overview:</i> Poster presents a timeline of environmental organizations’ evolution through the graphic design industry showing they’ve altered their graphic design practices to support climate change mitigation and foster human behavioral changes.</p> <p>Making Climate Change Science Education Sexy: Weaving Environmental Competencies into the Fashion Curriculum Dr. Cosette Armstrong, Oklahoma State University, Dr. Melody L.A. LeHew, Dr. Kim Y. Hiller Connell, Kansas State University, Dr. Gwendolyn Hustvedt, Texas State University, San Marcos, Prof. Barbara G. Anderson, Kansas State University, USA <i>Overview:</i> Project report on a funded USDA Higher Education Challenge planning grant supporting the development of climate change science education for fashion curriculum.</p> <p>Climate Change Extension: Presenting the Science Is Necessary but Insufficient Dr Paul Vincelli, Department of Plant Pathology, University of Kentucky, Judith Humble, Lexington, USA <i>Overview:</i> Public education on climate change in Kentucky must speak to core identities of rural Kentuckians. Promoting discussion on this highly divisive topic requires sensitivity to, and respect for, diverse worldviews.</p> <p>Local Climate Change Challenges and Opportunities: Understanding Municipal Official Perspectives Dr. Allison Chatrchyan, Cornell University Cooperative Extension, Dr. Shorna Broussard Allred, Maureen Mullen, Department of Natural Resources, Cornell University, Ithaca, USA <i>Overview:</i> Cornell University and CCE conducted research on local municipal officials’ perceptions of climate change impacts in their communities, the extent of local action and barriers to action in New York.</p>

THURSDAY	Parallel Session 1
Room 116 TOOLS & STRATEGIES FOR EVALUATION & MANAGEMENT	<p>Evaluating the Impacts of Tourism Destination Green Growth Strategies: A Generalized, Adaptable Decision Support System Prof. G. Michael McGrath, School of Management and Information Systems, Victoria University, Australia <i>Overview:</i> A decision support tool designed to assess the impacts of climate change responses is detailed. A distinguishing feature is that it may be conveniently customized for specific tourism destinations.</p> <p>An Organized Toolbox: Choosing the Appropriate Tools and Methods to Support Climate Change Adaptation Kiyomi Morino, Laboratory of Tree-Ring Research, Holly Hartmann, Arid Lands Information Center, The University of Arizona, Tucson, Kimery Wiltshire, Carpe Diem West, Sausalito, USA <i>Overview:</i> To facilitate resource management under climate change, we integrated several organizing frameworks into an interactive 'toolbox'.</p> <p>A Lifecycle Assessment of GTL Processes: An Environmental Impact Assessment Dr. Majeda Khraisheh, Chemical Engineering, Qatar University, Doha, Qatar <i>Overview:</i> This paper will present the results of the environmental burdens of GTL diesel in comparison with biomass biodiesel processes.</p> <p>A Climate Change Vulnerability Screening: Climate Change Events Michael Booth, Environmental Group Lead Pacific Northwest, Cardno-TEC, Seattle, USA <i>Overview:</i> This will discuss working with climate change modeling results to develop a risk-based analysis of facility vulnerability to climate change threats.</p> <p>Integrated Decision Support for Energy/Water Planning in California and the Southwest Dr. David Yates, Research Applications Lab, Dr. Kathleen A. Miller, Climate Science and Applications Program, National Center for Atmospheric Research, Boulder, USA <i>Overview:</i> Analytical tool development for integrated energy and water sector adaptation planning, applied to the US Southwest and California.</p>
Room 117 IMPACTS ON HUMAN HEALTH & HEALTH CARE	<p>Nursing and Climate Change Dr. Phyllis Eide, College of Nursing, Washington State University, Spokane, USA <i>Overview:</i> Human health is impacted directly and indirectly by climate change. The nursing profession needs to be involved with developing effective adaptation strategies.</p> <p>Climate Change, Extreme Heat and Older People Assoc. Prof. Lidia Mayner, Prof. Paul Arbon, Disaster Research Centre, Flinders University, Australia <i>Overview:</i> Older people are considered one of the most vulnerable groups in the community and are at greatest risk during an extreme weather event.</p> <p>Understanding Climate Change and Its Impact on Human Health in Bangladesh Russell Kabir, Dr. Hafiz Khan, Economics & Statistics Department, Middlesex University, London, UK <i>Overview:</i> Aim of this study is to assess the potential impacts of climate change on human health in Bangladesh. Bangladesh was hit by two consecutive cyclones Sidr (2007) and Aila (2009).</p> <p>Climate Change, Community Understanding and Emotional Responses to Heat Waves in Adelaide, Australia Derick Akompab, Prof. Peng Bi, Dr. Susan Williams, Dr. Arthur Saniotis, Discipline of Public Health, University of Adelaide, Adelaide, Prof. Iain A. Walker, Sustainable Ecosystems, Common Wealth Scientific and Industrial Research Organisation, Perth, Australia <i>Overview:</i> This paper describes the public's understanding of the effects of heat waves in relation to climate change, their concerns and emotional responses during period of heat waves in Adelaide.</p>

THURSDAY	Parallel Session 1
<p>Room 118</p> <p><i>CLIMATE INFORMATICS</i></p>	<p>Spatial and Temporal Analysis of Climatic Extremes in the Mountainous Regions of Iran Mohammad Sohrabi, Prof. Jae Ryu, Biological and Agricultural Engineering, University of Idaho, Boise, USA, Bohloul Alijani, Karaj, Iran (Islamic Republic of) <i>Overview:</i> Spatial and temporal variations of climatic crisis, including amount, frequency, and intensity of various climatic events are investigated in the mountainous region in Iran.</p> <p>Assessment of Impacts of Climate Change on the Hydrologic Cycle Dr. Edward McBean, School of Engineering, University of Guelph, Guelph, Canada <i>Overview:</i> Changes are apparent in the hydrologic cycle which influence human activities and aquatic ecosystems. <i>Stream: Scientific Evidence</i></p> <p>Improving Streamflow Estimation under Human Interference for Regional Earth System Models Hongyi Li, Richland, Nathalie Voisin, Hydrology Group, Seattle, Maoyi Huang, Pacific Northwest National Lab, Lai-Yung Leung, Pacific Northwest National Lab, Mark Wigmosta, Pacific Northwest National Lab, USA <i>Overview:</i> Development of a new river routing and reservoir operation model and its on-line testing within CLM at regional scale</p> <p>A Long-term Hydrologically-based Dataset of Land Surface Fluxes and States for Climatic Modeling and Analysis over the Conterminous United States Ben Livneh, Land Surface Hydrology Group Department of Civil and Environmental Engineering, Seattle, Dr Bridget Thrasher, Palo Alto, Dr Dennis Lettenmaier, Seattle, USA <i>Overview:</i> We describe a publicly available observation based dataset over the U.S. of temperature, precipitation, and wind, that can be used to downscale climate model output.</p>
<p>Room 119</p> <p><i>MITIGATION STRATEGIES</i></p>	<p>Climate Change Mitigation Opportunities through Forestry Carbon Projects: Issues, Requirements and Gaps Prof Jagdish Kala, Amity School of Global Warming and Ecological Studies, Amity University, Noida, India <i>Overview:</i> Climate change mitigation opportunities through forestry carbon projects</p> <p>Integrating Aerosol Cooling within Climate Change Mitigation Policy Justin Wood, Faculty of Science & Engineering School of Engineering & Energy, Murdoch University, Perth, Australia <i>Overview:</i> Abatement of activities generating coupled aerosol and GHG emissions may paradoxically produce unintended negative consequences over the short term. An aerosol-aware policy response may hence be required.</p> <p>Heat Island Effect in the Puget Sound: Adaptation and Biomimetic Strategies to Mitigate the Effects of Climate Change Stefanie Young, College of Built Environments Department of Urban Planning and Design, University of Washington, Seattle, USA <i>Overview:</i> Through an investigation of three cities, this paper focuses on how climate change affects urban heat island effect. To mitigate this, current and new adaptation strategies are discussed.</p> <p>Rational Climate Mitigation Targets Dr Karin Edvardsson Björnberg, Royal Institute of Technology (KTH), Stockholm, London School of Economics and Political Science (LSE), London, UK <i>Overview:</i> The effectiveness of three types of climate mitigation targets is analyzed using a framework for rational goal evaluation as an analytical tool.</p> <p>The EC2LIPSE Project: Exploring a Climate Change Lagrange I Point Solution for Earth Merryl Azriel, Jeroen Cappaert, Mr. Andrew Henry, Antoine Amrouni-Keiling, Peter Platzter, Réka Kovács, Danielle DeLatte, Nathan Wong, Dr. Chris Welch, International Space University, France <i>Overview:</i> The EC2LIPSE project provides an interdisciplinary roadmap for space-based climate change mitigation using a solar shield located near the Sun-Earth first Lagrangian point that reduces incident solar radiation by 1.8%.</p>

THURSDAY	Parallel Session 1
Room 127 <i>WATER RESOURCE MANAGEMENT</i>	<p>Modeling Climate Change Effects on the Hydrology of Pacific Northwest Wetland Ecosystems Dr. Se-Yeun Lee, Dr. Alan F. Hamlet, Civil and Environmental Engineering, University of Washington, Dr. Maureen Ryan, Seattle, USA <i>Overview:</i> To develop projections of climate change impacts on wetland habitats we studied hydrologic water balance variables simulated by hydrology models and extended them to various eco-regions in the Pacific Northwest.</p> <p>Uncertainties in Future Columbia River Water Supply Julie Vano, University of Washington, Dennis Lettenmaier, Department of Civil and Environmental Engineering, Seattle, USA <i>Overview:</i> We highlight the promise and challenge of two approaches to translating global climate change information into information useful to local water managers and planners.</p> <p>Implication of Climate Change on Cyclic Metabolism of Water at the Neighborhood: The Case of Indian Cities Dr. Aruna Ramani Grover, Department of Architecture, School of Planning and Architecture, New Delhi, India <i>Overview:</i> The paper examines how climate change would impact cyclic metabolism of water in typical residential neighborhoods of Chennai and New Delhi.</p> <p>Ready or Not: An Evaluation of State Climate and Water Preparedness Planning Ben Chou, Water Program, Natural Resources Defense Council, Washington, USA <i>Overview:</i> State governments across the United States increasingly are taking action to prepare for climate change impacts on water resources. However, many states are not acting and remain woefully unprepared.</p> <p>The Impact of Climate Change on Dry-Land Crop Production in the Yellow River Region: A Spatial Econometric Approach Dr. Jianhong Xue, Department of Agricultural Economics, Jieqiong Wei, Department of Mathematics Department of Agricultural Economics, Northwest A&F University, Yangling, China <i>Overview:</i> A spatial and temporal econometric model is used to evaluate the impact of climate change on crop production in the Yellow River region in China.</p>
Room 138 <i>COLLOQUIUM</i>	<p>Climate Change and Associated Impacts on Morbidity and Mortality: Historical Trends and Future Projections for Three Washington State Counties Dr. Beryl Schulman, Northwest Center for Public Health Practice Department of Health Services School of Public Health, Elizabeth Hom, Department of Epidemiology School of Public Health, Tania Busch Isaksen, Department of Environmental and Occupational Health School of Public Health, Jonnie Hyde, Public Health, Clark County, USA <i>Overview:</i> Findings are presented from a study on climate change-related heat events, their impacts on mortality and hospitalization, and local public health's response.</p>
14:30 – 14:45	BREAK
14:45 – 15:30	<p style="text-align: center;">Parallel Session 2 (Themed Session) Themed Sessions are 15 minute presentations followed by Q&A and group discussion)</p>
Room 116 <i>IMPACTS ON LOCAL CLIMATE</i>	<p>The Correlation of Temperature and Precipitation Decadal Averages in the Northeast Samantha DeMarco, Space Physics, Dr. Rich Snow, Embry-Riddle Aeronautical University, USA <i>Overview:</i> An analysis of temperature and precipitation data suggest totals have been rising and there is a positive correlation between the two variables.</p> <p>How Rising Temperatures Are Changing Winter Hydrology across Ontario Prof. Trevor Dickinson, Water Resources Engineering School of Engineering, University of Guelph, Canada <i>Overview:</i> Across Ontario, Canada, temperatures have been rising steadily, frost-free days have been increasing exponentially, winter rainfall has been increasing and snowfall has been decreasing.</p>
Room 117 <i>CARBON PRICING</i>	<p>A Multi-sectoral, Multi-household, General Equilibrium Model to Assess the Impact of Carbon Price on the Australian Economy Lakmini Disna Sajeewani Gaspé Ralalage, University of New England, Prof. Mahinda Siriwardana, School of Business, Economics and Public Policy, Dr. Judith McNeill, Dr. Xianming Meng, University of New England, Australia <i>Overview:</i> A static energy and emissions focussed computable general equilibrium model is employed to analyse macro economic, sectoral and household effects of carbon price in Australia</p> <p>Estimating Supply Chain Contributions to Carbon Price Induced Inflation Adam McHugh, Engineering and Energy, Murdoch University, Perth, Australia <i>Overview:</i> This paper presents an economic input output-based method designed to estimate the supply chain contributions to the carbon price-induced inflation on a product.</p>

<p>Room 118</p> <p><i>ENERGY USE & GREENHOUSE GAS EMISSIONS</i></p>	<p>Carbon Dioxide (CO₂) Emissions of American Households in Light of Sustainability Strategies Safieh Laaly, School of Engineering Transportation and Urban Infrastructure, Morgan State University, Dr. Gbekeloluwa Oguntimein, School of Engineering, Dr. Mansoureh Jeihani, Transportation and Urban Infrastructure, Sandarva Khanal, Baltimore, USA <i>Overview:</i> Measurement and analysis of greenhouse gas emission (GHG) from human activities to raise awareness and reduce environmental impacts</p> <p>Generation Energy: the Energy Saving Thoughts and Actions of a Power Hungry Generation Samantha Smith, Department of Marketing, Monash University, Melbourne, Australia <i>Overview:</i> Exploring the relationship Gen Ys have with electricity and factors that could influence them to reduce usage.</p>
<p>Room 119</p> <p><i>INTERNATIONAL LAW & POLITICS</i></p>	<p>Conflicts and Compatibility between International Trade and Climate Change Obligations and the Position of the BRICS Dr. Muruga Perumal Ramaswamy, Faculty of Law, University of Macau, Macau, China <i>Overview:</i> The conflict and compatibility dimensions between international trade and climate regimes are explored. Specific national measures of BRICS are examined to test how they conflict or complement relevant international regimes.</p> <p>Non-governmental Organization's Accountability Evaluation and Control: Secure International Cooperation for Mitigating the Effects of Climate Change Stefani Rackes da Silva, Juridical Sciences Section, Curitiba, Dr. Angela Cassia Costaldello, Public Law Department, Universidade Federal do Paraná, Brazil <i>Overview:</i> Public administration evaluates and controls NGO actuation and accountability and promotes the defense of supra-individual rights and the accomplishment of the United Nations Millennium Goals, securing international cooperation reliability.</p>
<p>Room 127</p> <p><i>RISK MANAGEMENT</i></p>	<p>Climate Change Risk Management for Ports Stewart Wright, Environmental Management BC Business Unit Infrastructure & Environment Operations, Jorge Flores, Coastal and Ocean Engineering BC Business Unit Infrastructure & Environment Operations, WorleyParsons Canada, Burnaby, Canada <i>Overview:</i> This paper presents an analysis of climate risks and opportunities for a port's activities, as well as adaptation options, and robust approaches to decision-making.</p> <p>Reduced Time Windows for Prescribed Burning in Continental United States under a Changing Climate Dr. Yongqiang Liu, <i>Center for Forest Disturbance Science, U.S. Department of Agriculture - Forest Service, Athens, USA</i> <i>Overview:</i> This study investigates the impacts of climate change on prescribed burning windows (the times of a year available for prescribed burning) in the continental U.S.</p>
<p>Room 138</p> <p><i>PUBLISHING INFORMATION SESSION</i></p> <p>*Runs from 14:45 – 15:15</p>	<p>Publishing Your Paper or Book with Common Ground Jamie Burns, <i>Managing Editor, Common Ground Publishing, USA</i></p> <p>Publishing Your Paper or Book with Common Ground Jamie Burns, <i>Managing Editor, Common Ground Publishing, USA</i> <i>Overview:</i> In this session the Managing Editor of <i>The International Journal of Climate Change: Impacts and Responses</i> and the On Climate Book Series will present an overview of Common Ground's publishing practices and philosophy. She will also offer tips for turning conference papers into journal articles, present an overview of journal publishing procedures, introduce the On Climate Books Series, and provide information on Common Ground's book proposal submission process. Please feel bring to questions—the second half of the session with be devoted to Q&A.</p>
<p>15:30 – 15:40</p>	<p>BREAK</p>

15:40 - 16:45	<p align="center">Parallel Session 3 (Poster Session, Themed Sessions & Workshops) Themed Sessions are 15 minute presentations followed by Q&A and group discussion)</p>
<p>Room 115</p> <p><i>POSTER SESSION:</i></p> <p><i>LINKING, MONITORING & INDICATORS TO DECISION MAKING</i></p> <p><i>*Runs 15:40 – 16:40</i></p>	<p>Climate Change and Arctic Health: Bringing Far Ranging Information to One Website Sigrid Brudie, Alaska Medical Library UAA/APU Consortium Library, University of Alaska, Anchorage, USA <i>Overview:</i> The Arctic Health website, managed jointly by the National Library of Medicine and the University of Alaska Anchorage, includes an extensive section on impacts of climate change in the Arctic.</p> <p>Environmental Modelers' Perceptions of Stakeholder Engagement Elizabeth Allen, BioEarth Research Team, Clark University, Worcester, USA <i>Overview:</i> There is significant variation in environmental modelers' conceptualizations of stakeholder identities and perceptions of how stakeholder engagement will provide value to the model development process.</p> <p>Monitoring the Health of Coral Reefs via the Marker Proteins under Ocean Warming Ming-Chang Hong, Institute of Marine Biology, National Sun Yat-sen University, Dr. Ming-Chyuan Chen, Department of Marine Biotechnology, National Kaohsiung Marine University, Dr. Keryea Soong, Institute of Marine Biology, National Sun Yat-sen University, Kaohsiung, Taiwan <i>Overview:</i> The data of intracellular responses in the corals before bleaching should be incorporated into coral reef early warning system.</p> <p>Climate Change Indicators as a Core for Adaptation Options in the Czech Republic Dr. Radim Tolasz, Climate Change Department, Czech Hydrometeorological Institute, Czech Republic <i>Overview:</i> The Czech Hydrometeorological Institute has prepared a study about the climate change aspects valid for preparation of adaptation strategy of Czech Republic.</p> <p>Using Spatial Tools to Inform Development and Implementation of Adaptation Strategies in Western Washington Jessi Kershner, EcoAdapt, Eric Mielbrecht, Seattle, USA <i>Overview:</i> Scenarios of future terrestrial and freshwater climate changes in Washington were mapped to identify areas likely to be most impacted in order to develop targeted adaptation strategies for implementation.</p> <p>Satellite Remote Sensing, Koalas and Eucalypts: How to Monitor Remote Ecosystems and Prepare Better Conservation Planning Policies for Climate Change Brandy Ream, University of Queensland, Brisbane, Australia <i>Overview:</i> To use multi-spectral satellite imagery and the koala (<i>Phascolarctos cinereus</i>) foraging field data in a riparian woodland environment, to assess the link between the koala and eucalypt</p>
<p>Room 116</p> <p><i>WORKSHOP</i></p>	<p>Using Indicators to Assess the Vulnerability and Resiliency of Alaskan Fishing Communities to Climate Change Dr. Amber Himes-Cornell, National Oceanic and Atmospheric Administration, Dr. Stephen Kasperski, Alaska Fisheries Science Center Resource Ecology and Fisheries Management Economics and Social Science Research Program, National Oceanic and Atmospheric Organization, Seattle, USA <i>Overview:</i> This project develops and applies socio-economic indicators to assess the vulnerability, resilience, and adaptability of Alaskan fishing-dependent communities to climatic perturbations.</p>
<p>Room 117</p> <p><i>AGRICULTURAL IMPACTS & ADAPTATION</i></p>	<p>Climate Change, Food Security, and Population in Sub-Saharan Africa: Modelling the Linkages Dr. Scott Moreland, Chapel Hill, Ellen Smith, Futures Group, Washington, USA <i>Overview:</i> Piloting of a computer model to demonstrate that addressing high rates of population growth can be a useful complementary strategy for adapting to climate change in the food security area</p> <p>Learning from the Past: A Historical Look at Climate Change Impacts and Adaptation for the Agricultural Sector in the Central Great Plains John Harrington, Department of Geography, Kansas State University, Manhattan, USA <i>Overview:</i> For this paper, we review what has been written about the impacts of climate variability on agriculture, with an emphasis on examples from Kansas and Nebraska.</p> <p>Climate Change Impacts on Small Scale Farmers in North Kinangop Location, Kenya Nancy Wanja Njenga, Environmental Studies, Kenyatta University, Naivasha, Kenya <i>Overview:</i> Research has proved that climate change is a reality that both the rich and poor has to face. North Kinangop small scale farmers are equally facing this climate change challenge.</p>
<p>Room 118</p> <p><i>WORKSHOP</i></p>	<p>Climate Change and Canadian Agriculture: Some Knowledge Gaps Prof. Suren Kulshreshtha, Department of Bioresource Policy, Business and Economics, University of Saskatchewan, Saskatoon, Dr. Elaine Wheaton, Saskatchewan Research Council, Saskatoon, Canada <i>Overview:</i> The impact of climate change on agriculture would be partially diverse due to different climate characteristics and adaptation in parts of Canada.</p>

THURSDAY	Parallel Session 3
<p>Room 119</p> <p><i>ATTITUDES & PERCEPTIONS ABOUT CLIMATE CHANGE IN HIGHER EDUCATION</i></p>	<p>Awareness and Opinion on Climate Change and Effect of Climate-Change Education: A Case Study of Non-science Major Undergraduate Students Dr. Yukimasa Tsubota, Division of Natural Sciences, J. F. Oberlin University, Machida-shi, Japan <i>Overview:</i> Awareness and opinion surveys on climate change and policies have been performed on non-science major students enrolled in Earth Science in order to assess the effect of climate-change education.</p> <p>Surveying Perceptions of Climate Change in Higher Education: Professors' Perspectives Abby Beck, School of Environmental and Public Affairs, University of Nevada Las Vegas, Las Vegas, Dr. Gale Sinatra, Rossier School of Education, University of Southern California, Los Angeles, Jenna Findlay, Department of Sociology, Amy Northrup, School of Environmental and Public Affairs, University of Nevada Las Vegas, Las Vegas, USA <i>Overview:</i> Our study investigates and compares climate change knowledge and attitudes of college students and college professors.</p> <p>Climate Change Knowledge and Perceptions of Texas State University Geography Alumni Elizabeth Ray, Department of Geography, Texas State University-San Marcos, San Marcos, USA <i>Overview:</i> Results of a survey on climate change knowledge and perception of people educated as geographers in Texas.</p>
<p>Room 127</p> <p><i>LONG TERM PERSPECTIVES</i></p>	<p>Importance of the Multi-decadal Oscillation in Understanding the Present Climate Change Dr. Syun-ichi Akasofu, International Arctic Research Center, University of Alaska Fairbanks, USA <i>Overview:</i> The multi-decadal oscillation is crucial in understanding the present climate change.</p> <p>Environmental Change in the Northwest Passage: From Ice Age to the Present Dr. Anna J. Pienkowski, School of Ocean Sciences, Bangor University, Menai Bridge, UK, Dr John England, Department of Earth & Atmospheric Sciences, University of Alberta, Dr Mark F.A. Furze, Department of Physical Sciences Earth Science Division, Grant MacEwan University, Edmonton, Brian MacLean, Steve Blasco, Geological Survey of Canada Atlantic, Dartmouth, Canada <i>Overview:</i> Biogeochemical data from three long marine sediment cores recovered from the central Northwest Passage provide an important long-term context for current climate warming, from deglaciation to the present day.</p> <p>Six-Hundred Years without the Environment in Historical Memory and Social Narrative: A Case Study from China Dr. Patrick Lucas, CIEE Study Center in Beijing, CIEE: Council on International Educational Exchange, China <i>Overview:</i> This paper examines social responses to increasing population pressures on a deteriorating environment in a region of southwestern China over a 600-year span, and implications for communicating climate change today.</p>
<p>Room 138</p> <p><i>ISSUES FOR COASTAL COMMUNITIES: 1</i></p>	<p>Climate Change and the Consequences of Natural Disaster in Seaport Systems: A case study of Gulfport (MS) and Providence (RI) Austin Becker, Emmett Interdisciplinary Program in Environment and Resources, Stanford University, USA <i>Overview:</i> This presentation focuses on two seaport decision making systems - Gulfport, USA and Providence, USA - and begins to tease apart the complicated problems of sea level rise and increased storm intensity.</p> <p>Climate Change Impacts, Vulnerability Assessments, and Adaptation Strategies in Selected Coastal Areas in San Juan, Philippines Dr. Shaneil Ramos-Dipasupil, College of Business and Economics, University of Batangas, Robert Dipasupil, College of Business, Colegio ng Lungsod ng Batangas, Batangas City, Maripaz L. Perez, World Fish Center, Imelda delos Reyes, University of Batangas, Philippines <i>Overview:</i> The study aims to propose a community-based adaptation strategy that is both economically feasible and politically sound, against the impacts of climate change.</p> <p>The Changing Nature of the Beach for Low Carbon Societies: The Australian Case Adrian Franklin, Dr. Felicity Picken, University of Tasmania, Hobart, Australia <i>Overview:</i> This paper considers the impact of the localisation of leisure and vacationing on beach and coastal locations for a future low carbon Australian society.</p>
<p>18:00 - 19:30</p>	<p>RECEPTION AT THE WATERTOWN HOTEL & JOURNAL AWARD WINNER CEREMONY</p>

FRIDAY, 13 JULY	
09:00	REGISTRATION DESK OPEN
09:30 - 10:05	PLENARY SESSION: Ed Knight, <i>Swinomish Indian Tribal Community of LaConner, WA, USA</i> ; <i>Local Response to Climate Change: Swinomish Indian Tribal Community'</i>
10:05 - 10:40	PLENARY SESSION: Jeremy Littell, <i>University of Washington, USA</i> ; <i>'Need, Strategies and Results of a Landscape-scale Examination of Climate Impacts in the Western US"</i>
10:45 - 11:15	BREAK AND GARDEN SESSION
11:20 - 12:25	Parallel Session 4 (Themed Sessions and Workshops) Themed Sessions are 15 minute presentations followed by Q&A and group discussion
Room 116 <i>WORKSHOP</i>	<p>Communicating Climate Change to Natural Resources, Agriculture Audiences, and Stakeholders: The Grassroots Proactive Response of the US Cooperative Extension Service Christopher Jones, Cooperative Extension Gila County, University of Arizona, Globe, Dr. Janean Creighton, College of Forestry Cooperative Extension, Oregon State University, Corvallis, Dr. Michael Crimmins, Department of Soil, Water and Environmental Science Cooperative Extension, University of Arizona, Tucson, Sylvia Kantor, Puyallup, Chad Kruger, Center for Sustaining Agriculture and Natural Resources Cooperative Extension, Washington State University, Wenatchee, Chris Schnepf, Kootenai, Boundary, Bonner, Benewah and Shoshone Counties Cooperative Extension, University of Idaho, Coeur d'Alene, Dr. Brad Withrow-Robinson, Marion, Polk and Yamhill Counties Cooperative Extension, McMinnville, Amy Grotta, Forest Ecosystems & Society, Oregon State University, USA <i>Overview:</i> This is a panel presentation of educational outreach activities with a discussion on how participants might address climate change education in their home countries.</p>
Room 118 <i>SOCIETAL IMPLICATIONS OF CLIMATE CHANGE</i>	<p>The Role of Employers' Organisations and Trade Unions in the Development of Climate Change Policy Peter Glynn, Department of Sustainable Development, Bond University, Gold Coast, Professor Ros Taplin, Australian Centre for Sustainable Mining Practices, University of New South Wales, Sydney, Australia <i>Overview:</i> This will discuss the implications of climate change policy for the labour market, and the role that employer organisations and trade unions play in the development of policy.</p> <p>The Impacts of Climate Change on Milk Production in the United States Yoram Bauman, Program on the Environment, Eric Salathe Jr., Dr. Guillaume Mauger, University of Washington, Seattle, Tamilee Nennich, Purdue University, West Lafayette, USA <i>Overview:</i> We combine downscaled climate data and dairy industry data to estimate U.S. milk production losses from changes in temperature and humidity. Impacts are likely to be measurable but modest.</p> <p>Quantifying Climate Change Impacts on Access to Forest Service and Park Service Lands in the North Cascades, Washington Ronda Strauch, Department of Civil and Environmental Engineering, Dr. Alan F. Hamlet, Civil and Environmental Engineering, University of Washington, Seattle, USA <i>Overview:</i> Damage to infrastructure has generated concerns from land managers that the future climate may increase impacts to transportation systems. GIS was employed to examine access vulnerability to forecasted climate change.</p>
Room 119 <i>IMPACTS ON DEVELOPING WORLD & VULNERABLE POPULATIONS</i>	<p>Racial and Income Disparities in Relation to a Proposed Climate Change Vulnerability Screening Method for California Dr. Paul English, Max Richardson, Division of Environmental and Occupational Disease Control, California Department of Public Health, Richmond, USA <i>Overview:</i> We propose a screening method to identify populations at high risk from climate change impacts using population vulnerability and the effects of cumulative stressors and investigate income and racial disparities.</p> <p>Biting the Hand that Feeds It Brook Meakins, The Law Office of Brook Gwendolyn Meakins, Berkeley, USA <i>Overview:</i> Those that contribute least to climate change are those that suffer the most. But how do those that suffer engage the international community without angering it?</p> <p>Characterizing Regional Capacity for Adapting to Climate Change in Developing Countries: A Case Study on Peru Rosa Mitsumasu Heredia, Seattle, Callie W. Babbitt, Golisano Institute for Sustainability, Rochester Institute of Technology, USA <i>Overview:</i> This work describes a methodology used to characterize sub-national adaptive capacity for responding to climate change to prioritize and properly allocate resources across regions depending on the communities' social needs.</p>

FRIDAY	Parallel Session 4
<p>Room 127</p> <p><i>LOCAL APPROACHES & MOVEMENTS</i></p>	<p>Climate Change Ambassadors: Youth Leaders in Their Communities Megan McGinty, North Cascades Institute, Bellingham, USA <i>Overview:</i> We have been training youth as climate change ambassadors for the past four years. Currently we are assessing program effectiveness and defining the methodologies to replicate success in other locations.</p> <p>Transition Network: Exploring Intersections between Culture, the Climate Crisis, and a Digital Network in the Context of a Community-driven Global Social Movement Emily Polk, Center for the Communication of Sustainable Social Change, University of Massachusetts, Amherst, Northampton, USA <i>Overview:</i> The core aim of this research is to analyze community-led responses to the current global financial and climate crisis via a qualitative analysis of The Transition Network.</p> <p>Synthesizing and Integrating Regional Climate Information into a Local Government Framework: Deploying the CIMPACT-DST Tool in the U.S. and Internationally Spencer Reeder, Climate, Energy, Sustainability, Seattle, Pat Keys, Cascadia Consulting Group, New York, USA <i>Overview:</i> The Climate Impacts Decision Support Tool provides local governments with a consistent way to access regionally relevant climate information and integrate this information in their planning, design, and management tasks.</p>
<p>Room 138</p> <p><i>FEATURED SESSIONS</i></p> <p><i>*Each runs 30 minutes</i></p>	<p>Publishing Your Paper or Book with Common Ground Jamie Burns, <i>Commissioning Editor, Common Ground Publishing, USA</i> Publishing Your Paper or Book with Common Ground Jamie Burns, <i>Commissioning Editor, Common Ground Publishing, USA</i> <i>Overview:</i> In this session the Managing Editor of <i>The International Journal of Climate Change: Impacts and Responses</i> and the On Climate Book Series will present an overview of Common Ground's publishing practices and philosophy. She will also offer tips for turning conference papers into journal articles, present an overview of journal publishing procedures, introduce the On Climate Books Series, and provide information on Common Ground's book proposal submission process. Please feel bring to questions—the second half of the session will be devoted to Q&A.</p> <p>FRIENDS OF THE CEDAR RIVER WATERSHED FEATURED PRESENTATION Youth Are Watching What We Do Cassandra Houghton, <i>Class of 2013, Tahoma School District</i>, Clara Tibbetts, <i>Class of 2012, Tahoma School District</i>, Lucy Tibbetts, <i>Class of 2015, Tahoma School District</i>, Ben Pedigo, <i>Class of 2014, Shoreline School District</i>, Savannah Cowin, <i>Class of 2015, Northshore School District</i>, Peter Donaldson, <i>Watershed Report, Executive Producer and Leadership Coach, Friends of the Cedar River Watershed</i> <i>Overview:</i> As members of the next generation we recognize that climate change will be the primary narrative shaping ecological, social and economic systems in our lifetime. To understand the issues and promote policy solutions at a local scale we work with mentors to research and produce an annually updated series of short videos that track positive change within the geography of our watershed footprint, home to 1.9 million people, including the University of Washington. In this lively and cinemagraphic 30-minute session we will feature selected videos from last year's report, describe our communication strategy, and share our current analysis of next year's policy trends.</p>
<p>12:25 - 13:05</p>	<p>LUNCH</p>

13:05 - 14:45	Parallel Session 5 (Themed Poster Session, Themed Sessions and Colloquia) Themed Sessions are 15 minute presentations followed by Q&A and group discussion
Room 115 POSTER SESSION: ENERGY: ADAPTING TO & DRIVING CHANGE *Runs 13:05 – 14:05	<p>A Pacific Northwest Hydroelectric Project and Climate Change: Assessing Risks and Adaptation Options Ronald Tressler, Environmental Affairs Division Seattle City Light Department, City of Seattle, Amy Snover, JISAO Center for Science in the Earth System, University of Washington, USA <i>Overview:</i> Seattle's public electric utility uses downscaled climate change temperature, precipitation, and modeled hydrology projections to assess potential dam operation adaptations and fish impacts.</p> <p>The Emergent Efficiency Gap: The Energy Upgrade Haves and Have-nots Laura Flynn, Community Development Graduate Group, Community and Regional Development, Davis, USA <i>Overview:</i> This project looks at energy poverty in the United States in an age of increasing climate concern.</p> <p>Feasibility Analysis of Taking Ponds as Adaption Tools for Flood under the Climate Variation Trend Dr. Jieh-Jiuh Wang, Department of Architecture, Ming Chuan University, Taipei, Taiwan <i>Overview:</i> The research is expected to provide a regulatory tool combining ponds, trenches, and canals to be implemented on flood management within spatial design.</p> <p>The Impact of Sprawl Cities on Air Pollution Dr. Leila Ahmadi, Environmental Department, University of Texas, Arlington, USA <i>Overview:</i> In this research we investigate the impact of sprawl cities on energy consumption and air pollution.</p>
Room 116 CLIMATE CHANGE IN SOCIETY: ETHICS & INFLUENCE	<p>Can We Trust Corporate Greenhouse Gas Inventories? David Talbot, Management, Université Laval, Olivier Boiral, Quebec, Canada <i>Overview:</i> The purpose of this presentation is to explore the difficulties and ethical issues related to the measurement development and vérification of greenhouse gas inventories.</p> <p>A Precautionary Approach to Climate Policy Dr. Lauren Hartzell Nichols, Program on Values in Society and Program on Environment, University of Washington, Seattle, USA <i>Overview:</i> I offer a reinterpretation of "the" precautionary principle and its role in climate policy. I defend the Catastrophic Precautionary Principle and a Precautionary Decision-Making Framework.</p> <p>What Do We Talk about When We Talk about Climate Change? Science, Values and Conflict in the Claims we Make about Climate Change Dr Daniel Sherman, Politics & Government, University of Puget Sound, Tacoma, USA <i>Overview:</i> This paper shares lessons learned from teaching students and others to identify the role of science and values in the claims made during arguments about climate change.</p> <p>The Religious Dimensions of Climate Change: Existential Uncertainty, and an Ethic of Risk P. Joshua Griffin, Department of Anthropology, The University of Washington, Seattle, USA <i>Overview:</i> This paper considers the existential dimensions of climate change across three domains of human experience and proposes an "ethic of risk" as a baseline for climate justice.</p> <p>Climate Change Education: Inside Outside Pressures Influencing University Curricula Dr Shireen Fahey, School of Science, Education and Engineering, University of the Sunshine Coast, Maroochydore, Australia <i>Overview:</i> This paper describes the curriculum renewal process that the academics adopted at one university in Australia to provide education for future societies facing the global issue of climate change.</p>

FRIDAY	Parallel Session 5
<p>Room 117</p> <p>STRATEGIES FOR SUSTAINABILITY</p>	<p>Ecosystems and Ecosystem Services May Have Differing Resilience to Increasing Disturbance Rates and Disturbance Interactions Brian Buma, Ecology and Evolutionary Biology Cooperative Institute for Research in Environmental Science, Dr. Carol Wessman, Ecology and Evolutionary Biology, University of Colorado, Boulder, USA <i>Overview:</i> Climate change may increase disturbance rates, and therefore disturbance interactions. Ecosystems may lose resilience and change; however some valuable ecosystem services may remain in different forms.</p> <p>Who Adapts What: A Perspective of Farm Level Adaptation to Climate Change in the Saurashtra and Kutch Region of Western India Dineshkumar Moghariya, Division of Environmental Science, Richard Smardon, SUNY, Syracuse, USA <i>Overview:</i> A study of rural households' adaptation and adaptation barriers to climate change in Saurashtra and Kutch of Western India</p> <p>Optimal Design of a Climatological Network: Beyond Practical Considerations Dr. Guillaume Mauger, Climate Impacts Group, Dr. Greg Hakim, Atmospheric Science, Karin Bumbaco, Office of the WA State Climatologist, Seattle, Dr. Phil Mote, Oregon Climate Change Research Institute and Oregon Climate Services, Oregon State University, Corvallis, USA <i>Overview:</i> We describe a technique for identifying the optimal observing locations for a climatological network, and present results for the U.S. Pacific Northwest.</p> <p>Solutions and Challenges to Addressing Human Population Growth and Global Climate Change Randi Rhodes, Ecology, Evolution & Conservation Biology Department of Biology, Rafael Bergstrom, Mark W. Chynoweth, Lisa Ellsworth, Sarah Henly-Shepard, Darcey Iwashita, Kara Miller, Dr. Christopher A. Lepczyk, Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, USA <i>Overview:</i> Despite known synergistic effects between human population growth and climate change, a review of peer-reviewed literature indicates solutions to population growth are seldom discussed as climate change solutions.</p> <p>Bioenergy Projects and Sustainable Development: Which Project Types Offer the Greatest Benefits? Carrie Lee, Stockholm Environment Institute, Michael Lazarus, Stockholm Environment Institute, Seattle, USA <i>Overview:</i> Improved understanding of the sustainable development potential of bioenergy projects is needed. We evaluated Clean Development Mechanism projects in India, Brazil and Sub-Saharan Africa to identify which best deliver benefits.</p>
<p>Room 118</p> <p>ISSUES FOR COASTAL COMMUNITIES: 2</p>	<p>Prospects for Conserving Endangered Wildlife Populations in Pacific Coast Salt Marshes under Expected Sea-level Rise Dr. John Takekawa, Karen Thorne, Kevin Buffington, Vallejo, Kathleen Swanson, Menlo Park, Dr. Judith Drexler, Western Ecological Research Center, U.S. Geological Survey, Sacramento, USA <i>Overview:</i> Sea-level rise modelling of salt marshes along the Californian coast indicate differential risk to sensitive species. Bottom-up, site-specific models allow land managers to make better informed decisions regarding SLR.</p> <p>Climate Change Adaptation in Coastal Communities: A Blueprint for Investigation and Assessment Dr. Sarah Metcalf, Murdoch University, Perth, Dr. Ingrid van Putten, CSIRO Marine and Atmospheric Research, Prof. Stewart Frusher, Institute for Marine and Antarctic Studies, University of Tasmania, Prof. Malcolm Tull, Murdoch University, Perth, Dr. Nadine Marshall, CSIRO Ecosystem Sciences, Australia <i>Overview:</i> This investigates adaptation to climate change in coastal communities in Australia by using multiple integrated methods such as qualitative modelling and social network analysis.</p> <p>Global Warming and the Effects of Salinity on the Uptake of Lead and Cadmium by Two Mangrove Species, Rhizophora. apiculata Bl. and Avicennia alba Bl. Dr Zubir bin Din, School of Biological Sciences, Universiti Sains Malaysia, Universiti Sains Malaysia, Malaysia <i>Overview:</i> Global warming will cause sea level rise resulting in increase in salinity in coastal areas. This study showed increase in salinity may affect uptake of metals by the mangrove plants.</p> <p>Securing Marine Ecosystem Services in the Face of Climate Change Dr. Mary Ruckelshaus, Natural Capital Project, Stanford University, Seattle, USA <i>Overview:</i> Review of climate impacts on benefits from the oceans and what we can do to secure them.</p> <p>Planning for Mysterious Change: The Challenge of Understanding and Shaping Societal Responses to Ocean Acidification and Climate Change Dr. Patrick Christie, Sophia Amberson, University of Washington, Seattle, USA <i>Overview:</i> This presentation discusses, while accepting uncertainties, the potential implications of acidification and climate change for coastal societies and their responses in the context of Puget Sound tribes and Filipino communities.</p>

FRIDAY	Parallel Session 5
<p>Room 119</p> <p><i>TERRESTRIAL ECOSYSTEMS</i></p>	<p>Early Bloomers in a Changing Climate: Impact of Rising Temperatures on the Flowering Time of Greater Philadelphia Native Plant Species Zoe Panchen, Department of Biology, Carleton University, Ottawa, Canada <i>Overview:</i> Herbarium specimens, field notes and photographic images, indicate that Greater Philadelphia native plants are flowering earlier in response to the rising temperatures of climate change.</p> <p>The Vulnerability of Dipterocarps and Figs in Singapore to Climate Change Kok Ben Toh, Shun Deng Fam, Prof. Loke Ming Chou, Ywee Chieh Tay, Department of Biological Sciences, National University of Singapore, Singapore, Singapore <i>Overview:</i> Using the geographical distribution of dipterocarps and figs, the vulnerability to climate change of these important plants in Singapore forests is assessed.</p> <p>Impacts of Future Climates on Fire-promoting Invasive Grass Distributions in the Hawaiian Islands: C4 vs C3 Courtney Angelo, Dr. Curtis Daehler, Botany Department, University of Hawaii at Manoa, Honolulu, USA <i>Overview:</i> To predict changes in fire-promoting invasive C4 and C3 grass distributions in response to climate change in the Hawaiian Islands, bioclimatic models were developed for nine grasses using MAXENT modeling.</p> <p>Assessing Impacts of Climatic Changes to Singapore's Biodiversity through a Multi-taxa Approach Ywee Chieh Tay, Prof. Loke Ming Chou, Kok Ben Toh, Department of Biological Sciences, National University of Singapore, Singapore, Singapore Valerie Xin Hui Phang, Institute of High Performance Computing, Singapore, Singapore <i>Overview:</i> We identified several groups of taxa that are likely to have heightened sensitivities to the projected climate for Singapore, and will discuss their potential use in local environmental monitoring efforts.</p> <p>A Compilation of Geographic Case Studies on Climate and Conservation: Landscape and Seascape Science, Planning, and Action Dr. Charles Chester, Environmental Studies Program, Brandeis University, Cambridge, USA <i>Overview:</i> This paper introduces the nineteen case studies on landscape/seascape responses to the threat of climate change as compiled in "Climate & Conservation: Landscape & Seascape Science, Planning and Action."</p>
<p>Room 127</p> <p><i>EDUCATION & CLIMATE CHANGE</i></p>	<p>Bottom-up Mitigation of Global Climate Change Micha Tomkiewicz, Department of Physics, Brooklyn College of CUNY, New York City, Lori Scarlatos, Department of Technology and Society, Stony Brook University, USA <i>Overview:</i> Development of a multiplayer electronic learning system built on social/scientific simulations and fed by relevant and timely databases that require students to make choices and examine the consequences of these.</p> <p>Preparing Secondary School Teachers to Teach about Climate Change: The Professional Development Model Used in Southern Nevada as Part of Nevada NSF EPSCoR Dr. Lawrence Rudd, School of Education, Nevada State College, Henderson, Aubrey Bonde, Department of Geoscience, University of Nevada, Las Vegas, Dr. Paul Buck, Division of Earth and Ecosystem Sciences, Desert Research Institute, Las Vegas, USA <i>Overview:</i> Description of the content and results of a professional development model used to train Nevada secondary school teachers in climate change science content and pedagogy.</p> <p>The Central Great Plains Climate Education Partnership: Programs for Agricultural Producers, Rural Communities, and Rural Educators Dr. Benjamin L. Champion, Office of the Provost, Kansas State University, Manhattan, Tarik Abdel-Monem, Public Policy Center, University of Nebraska, Lincoln, USA <i>Overview:</i> This NSF-funded effort has explored climate education program needs through focus groups with regional stakeholders. The presentation will report on these findings.</p> <p>Visible Differences: Communicating with Non-Scientific Audiences Liz C. Throop, School of Art and Design, Georgia State University, Atlanta, USA <i>Overview:</i> Visual communication can make climate-change science understandable to strategically important audiences by making images visually and culturally sensitive.</p> <p>An Inter-cultural and Cross-disciplinary Educational Strategy on Climate Awareness Di Wu, Curriculum and Instruction, University of Minnesota, Minneapolis, USA <i>Overview:</i> The ancient Chinese calendar synthesized the Sun and Moon's influences on food production. It can develop into an educational framework for real-world-relevance of climate in 8th grade science classrooms.</p>

FRIDAY	Parallel Session 5
Room 138 COLLOQUIUM	<p>Indicators for Measuring Progress in Adaptation in Agriculture: Experiences from the Gangetic Basin Dr. Venkata Rama Krishna Prabhakar Sivapuram, Institute for Global Environmental Strategies, Japan, Dr. Rajan Kotru, ICIMOD, Nepal, Divya Mohan, The Energy and Resources Institute, India, Golam Rabbani, Bangladesh Center for Advanced Studies, Bangladesh, Dr. Hayashi Shinano, Tsurita Izumi, Natural Resource Management, IGES, Japan, Syeda Sajeda Haider, Bangladesh Centre for Advanced Studies, Bangladesh Overview: This colloquium is based on results from the regional collaborative research project in the Gangetic basin.</p>
14:45 - 15:00	BREAK
15:00 - 16:25	<p style="text-align: center;">Parallel Session 6 (Themed Poster Session and Themed Sessions) Themed Sessions are 15 minute presentations followed by Q&A and group discussion</p>
Room 115 POSTER SESSION: ADAPTING TO CHANGE *Runs 15:00 – 16:00	<p>Doing More with Less? Meeting Future Healthcare Service Demands in the Context of Climate Change, Christchurch, New Zealand Frances Graham, Ministry of Health, Wellington, New Zealand Overview: This paper describes the impacts of extreme temperature in meeting future healthcare service demands and how results may translate to future health asset procurement under climate change</p> <p>Committed Global Climate Change and Food Security: Linking the Unavoidable Lags between Rapid Emissions Reduction for Climate Stabilization on Crop Yields Using Climate Crop Model Projections Dr Peter Carter, Environmental Health, Climate Emergency Institute, Pender Island, Canada Overview: This project correlates today's committed global climate change with future changes in food crop productivity due to impacts on crop yields, projected from climate crop model results.</p> <p>Legume Adoption Practices in the Central Great Plains of the United States: Economic and Environmental Benefits in Face of Climate Change Dr M. Anowarul Islam, Dr Robin Goose, Dr Urszula Norton, Dr Axel Garcia y Garcia, University of Wyoming, Laramie, Dr Dipak Santra, Scottsbluff, Dr Ramesh Sivanpillai, Dr John Ritten, Dr Jay Norton, Dr Steven Paisley, Dr James Krall, Laramie, USA Overview: This paper reviews the functional adaptability of dryland agroecosystems to changes triggered by increased climatic variability and assesses the regional ability to sustainably produce food and feed despite changing environments.</p> <p>Developing National Extension Capacity to Address Issues Related to Animal Agriculture and Climate Change Elizabeth Whitefield, Animal Science, Washington State University, Puyallup, USA Overview: A five-year project to address issues associated with climate change and animal agriculture will be facilitated through the Livestock & Poultry Environmental Learning Center.</p> <p>The Integrated Regional Earth System Model Dr. Ian Kraucunas, Kathy Hibbard, Jennie Rice, Pacific Northwest National Laboratory, WA, USA Overview: An integrated modeling framework for simulating the interactions among climate, energy, and socioeconomic systems at regional scales.</p> <p>Organic Farming Footprints: An Integrated Extension-Research Project Dr. Steve Verhey, Center for Sustaining Agriculture and Natural Resources, Washington State University, Pullman, USA Overview: Assessment of eCO2 footprint of organic fertilizer options combined with outreach to farmers.</p>

<p>Room 116</p> <p><i>ATTITUDES & PERCEPTIONS ABOUT CLIMATE CHANGE</i></p>	<p>Why We Delay: How Human Cognition Impairs Our Response to Climate Change Dr John Morley Rolls, University of South Australia, Adelaide, Australia <i>Overview:</i> The non-systematic features of normal human processing of information distort our assessment of the risk of human induced climate change, and hence impair our response.</p> <p>The Socio-economic Dimensions of Farmers' Perception of Climate Change in Uganda Sarah Jane Cooper, School of Agriculture, Policy and Development, University of Reading, Reading, UK <i>Overview:</i> How farmers perceive climate change can influence their approach to risk and livelihood decisions. A case study from Uganda explores the socioeconomic attributes that influence these perceptions.</p> <p>Climate Change on Trial: An Analysis of the Media Coverage of Climategate Carol Terracina Hartman, Media and Information Studies Program Knight Center for Environmental Studies, Tsuyoshi Oshita, Michigan State University, East Lansing, USA <i>Overview:</i> The University of East Anglia email scandal sent the science of climate change "to trial". This study analyzes the media coverage of the scandal.</p> <p>Public Attitudes to Carbon Capture and Storage in the United States and Canada: A Qualitative Investigation of Public Opinion in Communities Hosting Demonstration Projects Dr. Christopher Robert Jones, Fiona Scott, Department of Psychology, University of Sheffield, Sheffield, UK <i>Overview:</i> This is a presentation of research into public and stakeholder attitudes on carbon capture and storage in communities in Alberta, Wisconsin, Ohio and West Virginia close to technology demonstrations.</p>
<p>Room 117</p> <p><i>ANALYZING CLIMATE CHANGE POLICY & PROGRAMS</i></p>	<p>The Economics of Low Carbon Cities: Methods, Findings, Impacts of a City Scale Mini Stern Review Professor Andy Gouldson, Centre for Climate Change Economics and Policy, University of Leeds, UK <i>Overview:</i> This paper presents the results of a major new report on the economics of low carbon cities. The findings are being used to stimulate and focus large-scale investments in cities.</p> <p>Intensive and Extensive Parametrization of Energy Use and Income in US States and in Global Urban Environments Yevgeniy Ostrovskiy, Department of Physics, Hunter College, Brooklyn, Michael Cheng, City College Electrical Engineering Department, City College of New York, Micha Tomkiewicz, Physics, Brooklyn College of CUNY, USA <i>Overview:</i> The work tests the IPAT parameterization, as applied to fossil fuels induced climate change, in restricted environments with an emphasis on income and energy use.</p> <p>Making Climate Change Important: How Municipal Governments Shape Citizen Values Jeff Hanlon, School of Government and Public Policy, The University of Arizona, Tucson, USA <i>Overview:</i> This paper measures the effect that municipal level climate change policy has on citizen values and making climate change an important issue to citizens.</p> <p>The Greenhouse Gas Mitigation and Political Action: A Comparative Analysis of Environmental Policies in Quebec (Canada) and Massachusetts (USA) Prof Mario Carrier, Prof Jean Mercier, Mauricio Vazquez Gérin, Fanny Tremblay-Racicot, Université Laval, Canada <i>Overview:</i> Subnational governments have a decisive role in GHG mitigation as climate change challenges grow. We try to understand the coerciveness of public action in North American environmental policies.</p>
<p>Room 118</p> <p><i>ECO-DEVELOPMENT</i></p>	<p>Preparing for a Changing Climate: Washington State's Integrated Climate Response Strategy Hedia Adelman, Washington Department of Ecology, Olympia, USA <i>Overview:</i> Washington State is responding to major climate-related risks by implementing strategies and actions to protect human health; our forest, agriculture, and freshwater supplies; infrastructure; coastlines; and other resources.</p> <p>Developing a Case for Substantial Renewable Energy Use in Mine Site Village Construction and Operation: Reducing Carbon Emissions in the Built Environment David Goodfield, Murdoch University, Perth, Australia <i>Overview:</i> Renewable energy alternatives to carbon intensive power production are well documented. This discusses how to introduce them economically and sustainably in a remote area mining village scenario.</p> <p>Local Planning Processes for Sustainable Development: A Comparative Analysis of Two Case Studies Patrik Baard, Royal Institute of Technology, Stockholm, Sweden <i>Overview:</i> The study is a comparative study of two cases in which a decision making tool, sustainability analysis, was been tested in two different municipalities in Sweden.</p> <p>Climate Change and Agricultural Production in Limpopo Province, South Africa: Impacts and Adaptation Options Phokele Maponya, Department of Environmental Sciences, University of South Africa, Johannesburg, South Africa <i>Overview:</i> The primary aim of my PhD research was to identify the impacts and adaptation options of climate variability and change on agricultural production in Limpopo province in South Africa.</p>

FRIDAY	Parallel Session 6
<p>Room 119</p> <p>ASSESSING CLIMATE CHANGE: WATER SYSTEMS</p>	<p>Assessing the Impact of Climate Change on Water Shortages: A Computable General Equilibrium Model for Korea Dr. Mun Hyun Ryu, Daejeon, Dr. Dooho Park, Dr. Hanjoo Choi, Research Center for Water Policy and Economy, K-water Research Institute, South Korea <i>Overview:</i> We focused on the estimation of economic impacts on Korea specifically related to water supply interruption using a computable general equilibrium (CGE) model.</p> <p>Assessing the Impact of Climate Change on Columbia River Basin Agriculture through Integrated Modeling Kirti Rajagopalan, Washington State University, Kiran Chinnayakanahalli, Air WorldWide, Boston, Jennifer Adam, Department of Civil and Environmental Engineering, Roger Nelson, Claudio Stockle, Department of Biological Systems Engineering, Michael Brady, School of Economic Sciences, Keyvan Malek, Department of Biological Systems Engineering, Shifa Dinesh, Washington State University, Michael Ernest Barber, State of Washington Water Research Center, Pullman, Georgine Yorgey, Center for Sustaining Agriculture & Natural Resources, Chad Kruger, Washington State University, USA <i>Overview:</i> This work describes an integrated modeling framework to study the impacts of climate change on water availability and agricultural production in the Columbia River basin.</p> <p>Responses of Terrestrial Water Cycles to Changes in Phenology in North America during 1981-2010 Mingliang Liu, Jennifer Adam, Department of Civil and Environmental Engineering, Washington State University, Pullman, Zaichun Zhu, Ranga Myneni, Department of Geography & Environment, Boston University, Boston, USA <i>Overview:</i> This study is for investigating how phenology changes, in combination of climate change, affect the long-term and seasonal variations of water fluxes and soil moistures in North America during 1981-2010.</p> <p>Climate Change and Water Management in Urban Contexts: The Case of Mexico City Dr. Gloria Soto-Montes, Department of International Studies, Universida Iberoamericana, Mexico City, Dr. Marina Herrera-Pantoja, State Water Commission of Queretaro, Queretaro, Mexico <i>Overview:</i> This research explores the impacts of climate change on water management, focusing on large urban areas. The discussion is presented with an analysis of the Mexico City Metropolitan Area.</p>
<p>Room 127</p> <p>CHANGING WEATHER PATTERNS</p>	<p>Impact of Climate Change on the Extremes of Observed Daily Temperature Data in the Greater Toronto Area Dr Tanzina Mohsin, Department of Physical and Environmental Sciences, University of Toronto, Toronto, Canada <i>Overview:</i> The study of the impact of climate change on the daily temperature extremes in the Greater Toronto Area suggests that there is a shift towards warmer climate in this region.</p> <p>Assessing Climate Change Impacts on Coastal Ecosystems in Singapore Kok Ben Toh, Department of Biological Sciences, National University of Singapore, Valerie Xin Hui Phang, Computing Science, Institute of High Performance Computing, A*STAR, Singapore, Prof. Loke Ming Chou, Ywee Chieh Tay, Department of Biological Sciences, National University of Singapore, Singapore, Singapore <i>Overview:</i> Assessing the vulnerabilities of Singapore's seagrasses and mangroves to sea level rise, temperature increases, and precipitation changes.</p> <p>Does Climate Change Increase Flood Damage in Korea? Dr. Dooho Park, Research Center for Water Policy and Economy, Dr. Yong-Joon Choi, Research centre for Water Policy and Economy, K-water Research Institute, Daejeon, South Korea <i>Overview:</i> We analyse the Korea's flood damage character based historical rainfall and flood damage data, and forecast the flood damage costs following climate change in Korea.</p> <p>A Comparative Study on the Occurrences of Severe Thunderstorms in Kolkata, India and in South-East USA Himadri Chakrabarty, Institute of Radiophysics and Electronics Department of Computer Science Surendranath College, Calcutta University, Dr. C. A. Murthy, Machine Intelligence Unit, Indian Statistical Institute, Prof. Ashis Das Gupta, Institute of Radiophysics and Electronics University College of Science and Technology, Calcutta University, Kolkata, India <i>Overview:</i> A negative correlation exists in severe storms of Florida, with Kolkata, India. This negative correlation decreases between storms of Kolkata-Luiciana. Gradually, correlation becomes positive for storms of Kolkata and Texas.</p>

FRIDAY	Parallel Session 6
Room 138 <i>INTERNATIONAL LAW & POLITICS</i>	<p>Climate-Induced Migration: What Protection for Displaced People? Marilyn Tremblay, Marie-Ève St-Onge Trudel, Social Sciences Faculty, Laval University, Quebec, Canada <i>Overview:</i> To what extent does international law protect the rights of environmentally displaced people and what are the political obstacles to achieving a comprehensive protection regime for this category of migrants?</p> <p>Lessons from Montreal, Kyoto, and Copenhagen: The Viability of Future International Environmental Policy Agreements Brenna Simonson, Bordentown, USA <i>Overview:</i> Given the successes, failures, and current global constraints, are effective international environmental policy agreements viable in the future?</p> <p>Green Rights Network: Environmental Protection and Economic Development Édelis Martinazzo Dallagnol, Project Management Center of Excellence, Rede Direito Verde (Green Rights Network), Prof. Heloisa Fernandes Câmara, Law, Centro Universitário Curitiba, Prof. Dr. Egon Bockmann Moreira, Law Faculty Public Law, Universidade Federal do Paraná, Curitiba, Brazil <i>Overview:</i> Green Rights Network project merges three years of work from more than one hundred academic and professional volunteers for building interdisciplinary solutions for sustainable development challenges in Brazil.</p>
16:30-17:00	CONFERENCE CLOSING: <i>Graduate Scholar Awards Ceremony and Future Directions</i>

GRADUATE SCHOLARS

Graduate scholars contribute to the flow and overall success of the conference. Their key responsibilities include chairing the parallel sessions, keeping the conference on schedule, providing audio-visual technical assistance and assisting with the registration process.

We would like to thank the following Graduate Scholars who participated in the Climate Change Conference

Courtney Angelo

Courtney Angelo graduated with a B.S. in Plant Science Biology from the University of California at Santa Cruz and she is currently a Ph.D. candidate in Botany at the University of Hawaii at Manoa. Her research focuses on the distributions of C4 and C3 grasses in Hawaii under current and future climates. She is also interested in restoration and invasive species ecology.

Merryl Azreil

Merryl Azreil is completing a Masters in Space Studies at the International Space University in Strasbourg, France. She currently works as an Astrochemistry intern at NASA's Goddard Spaceflight Center and is Managing Editor of the Space Safety Magazine. Merryl aspires to a career in planetary science research and is devoted to the goal of off-world colonization, with particular interest in Venus.

Laura Flynn

Laura Flynn is a Master's Student in the Community Development Graduate Group at the University of California Davis. She studies the effects of energy poverty on low-income communities in the United States. She is also a Graduate Student Researcher at the Western Cooling Efficiency Center, one of five energy centers at UCD. She is a member of the center's new Behavioral Research Initiative. Laura assists on projects that look at the behavior of homeowners and small-business owners on air conditioning maintenance decision-making processes. She also holds a B.A. Degree in Politics and Community Studies from the University of California Santa Cruz. Her professional experience includes working with community organizations to provide energy upgrades to low-income households in California.

Russell Kabir

Russell Kabir is a doctoral student at Middlesex University, London. He is doing his current research on climate change and human health in Bangladesh. He completed his MSc Research Methods from the same university in 2011 and also completed his masters on Public Health in 2008 from North South University, Bangladesh. His principal research interests lie in the areas of: epidemiology and public health, biostatistics, environment and population, health and social care. He has two years teaching experience both at undergraduate and post graduate level in the UK. He has the experience of working as a research assistant both at international and national organization and universities. He has several journal publications and attended various national and international seminars and workshops. He received advanced training on different statistical programmes like SPSS, STATA and Minitab. He is also a member of Royal Statistical Society, London and British Society for Population Studies.

Ben Livneh

Ben Livneh currently lives in Seattle, WA. His Ph.D. work, is titled: "Development of a Unified Land Model for the prediction of surface hydrology and land-atmosphere interaction" and being conducted through the Land Surface Hydrology Group, part of the Department of Civil and Environmental Engineering. His adviser is Dennis Lettenmaier. He has spent time teaching undergraduate courses at Seattle University and has earned two engineering degrees from the University of Western Ontario (Canada). He is avidly interested in the study of climate change and its impacts as they pertain to surface hydrology.

Zoe Panchen

Zoe Panchen is currently a PhD student in the Department of Biology at Carleton University, Ottawa, Canada. Her current research focuses on the phenological, demographic and floristic responses of Arctic plants to climate change. She is also interested in exploring the use of different types of historic data for climate change studies. She completed her MSc. in Public Horticulture in the Longwood Graduate Program at the University of Delaware, where she studied the change in flowering time of Greater Philadelphia native plants in response to climate change. Zoe also has a BSc. and MSc. in Electronic Engineering from Loughborough and Cranfield Universities, UK.

Disna Sajeewani

Disna is a PhD candidate from the University of New England (UNE), Armidale, NSW, Australia. Her research study is focussed on developing a Computable General Equilibrium (CGE) model to analyse macroeconomic, sectoral, employment and household impacts of a carbon price in the Australian economy. For this purpose she has developed a Social Accounting Matrix (SAM) for Australia which serves as the main database in calibrating the CGE model. Since there has been no SAM developed for Australia, this is one of the significant contributions to the research field. Currently she has run several policy simulations using the CGE model and is presenting her major finding at the International Conference on Climate Change and Responses. Disna has completed her MSc degree in Economics at UNE and was awarded a UNE international scholarship to pursue her PhD degree in 2009. She has obtained her BSc (Agricultural Economics) degree from the University of Peradeniya, Sri Lanka in 2002. She has worked as an Agricultural Economist in the Department of Agriculture, Sri Lanka. During her academic and professional career she has presented papers at conferences in Australia and in Sri Lanka. Two papers have been published.

Ronda Strauch

Ronda Strauch is currently a Ph.D. student in the Department of Civil and Environmental Engineering at the University of Washington in Seattle. Her current research focuses on the vulnerability of transportation to climate change, building on her experience over the past 12 years as a supervising engineer at King County Department of Transportation. Prior to this position, Ronda worked as an ecologist for consulting firms and federal agencies in the Pacific Northwest, specializing in environmental and biological assessments. She has a MS from University of Washington, College of Forest Resources, where she studied the effects of climate and other factors on high elevation tree establishment following fire. She also has a BS in Environmental Planning and Management from the University of California at Davis.

Carol Terracina - Hartman

Carol Terracina - Hartman has 18 years experience working in communications, ranging from public radio to daily newspapers to book publishers. She maintains a foothold in the academic world, having served as a campus media advisor for 12 years, working with student journalists in Wisconsin, California and Pennsylvania. The *American River Current* earned General Excellence five consecutive years in JACC statewide competition while she was the advisor. She saw *The Clarion Call* through a redesign, a lab rebuild, and the addition of an online edition, including video. Presently, she is a third-year doctoral student at Michigan State University, working as a grad assistant with the Knight Centre for Environmental Journalism. Her research has been accepted at AEJMC 2011 (mid-winter and national), CMA / ACP 2011, 2011 Conference on Sustainability, Journalism and Media Regeneration; ICERI2011, BEA 2012. She also serves on the advisory committee for IATED 2012. Her research will be published in an upcoming edition of "Public Understanding of Science" and is in revision to "Mass Communication and Journalism Educator."

Julie Vano

Julie Vano is a PhD candidate in the Department of Civil and Environmental Engineering at the University of Washington. She is currently working to assess climate change impacts on water resources in the Columbia and Colorado River basins. Before coming to the University of Washington, she received her MS at the University of Wisconsin's Center for Sustainability and the Global Environment and was a Science and Policy Fellow at the National Academy of Sciences in Washington, DC.

Stefanie Young

Stefanie Young is currently within the Masters of Urban Planning and Design Program within the University of Washington. She is focusing on Environmental Planning, specifically involving climate change. Stefanie has practiced sustainable architecture, performing climate analysis and energy modeling. She has earned a Bachelors of Architecture from the University of Oregon, focusing on Sustainability and Passive Design. At the moment, she is working for Snohomish County in the office of Energy and Sustainability. She has played an integral role in preparing Snohomish County's Intragovernmental Sustainability Plan and has worked extensively on county facility performance in energy and water use.

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LIST OF PARTICIPANTS

Tarik	Abdel-Monem	University of Nebraska	USA
Jennifer	Adam	Washington State University	USA
Charles Bate	Agborntui	University of Kiel	Germany
Ashley	Ahearn	KUOW, NPR Seattle	USA
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Courtney	Angelo	University of Hawaii, Manoa	USA
Cosette	Armstrong	Oklahoma State University	USA
Merryl	Azriel	International Space University	USA
Patrik	Baard	Royal Institute of Technology	Sweden
layal A.	Bani Nasser	Qatar University	Qatar
Yoram	Bauman	University of Washington	USA
Austin	Becker	Stanford University	USA
Sevin	Bilir	King County	USA
Michael	Booth	Cardno-TEC	USA
Elisabeth	Brackney	Nez Perce Tribe	USA
Sally	Bredeweg	USDA-NRCS	USA
Evan	Bredeweg		USA
J. Hollis	Bredeweg		USA
Sigrid	Brudie	University of Alaska Anchorage	USA
Kevin	Buffington	U.S. Geological Survey	USA
Brian	Buma	University of Colorado	USA
Tania	Busch Isaksen	School of Public Health, University of Washington	USA
Peter	Carter	Climate Emergency Institute	Canada
Rika	Cecil	City of Shoreline	USA
Himadri	Chakrabarty	Calcutta University	India
Ajoy Kumar	Chakraborty	Computer Society of India	India
Benjamin L.	Champion	Kansas State University	USA
Allison	Chatrchyan	Cornell University Cooperative Extension	USA
Charles	Chester	Brandeis University	USA
Ben	Chou	Natural Resources Defense Council (NRDC)	USA
Kevin A.	Cooper	Colorado Mountain College	USA
Sarah Jane	Cooper	University of Reading	UK
Janean	Creighton	Oregon State University	USA
Édelis Martinazzo	Dallagnol	Rede Direito Verde (Green Rights Network)	Brazil
Mario	de Haro-Marti	University of Idaho	USA
Samantha	DeMarco	Embry-Riddle Aeronautical University	USA
Trevor	Dickinson	University of Guelph	Canada
Zubir bin	Din	Universiti Sains Malaysia	Malaysia
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Peter	Donaldson	Friends of the Cedar River Watershed	USA
Sheila	Donnelly	Life Chiropractic College West	USA
Karin	Edvardsson Björnberg	London School of Economics and Political Science	UK
Phyllis	Eide	Washington State University	USA
Hanna M.	Eklund	Chugach Regional Resources Commission	USA

Joanna	Ekrem	Washington State Department of Ecology	USA
Paul	English	CA Dept of Public Health	USA
James	Evans	Life Chiropractic College West	USA
Shireen	Fahey	University of the Sunshine Coast	Australia
Jorge	Flores	WorleyParsons Canada	Canada
Laura	Flynn	Human and Community Development	USA
Adrian	Franklin	University of Tasmania	Australia
Howard	Frumkin	University of Washington School of Public Health	USA
Heather M.	Galindo	COMPASS	USA
Lakmini Disna Sajeewani	Gaspe Ralalage	University of New England, Armidale	Australia
Peter	Glynn	Bond University	Australia
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Aruna Ramani	Grover	School of Planning and Architecture	India
Heather W.	Hackman	Hackman Consulting Group	USA
Syeda Sajeda	Haider	Bangladesh Centre for Advanced Studies	Bangladesh
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Andy	Haub	City of Olympia	USA
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Amber	Himes-Cornell	National Oceanic and Atmospheric Administration	USA
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Safieh	Laaly	Morgan State University	USA
John	Labadie		USA
Carrie	Lee	Stockholm Environment Institute, U.S.	USA
Se-Yeun	Lee	University of Washington	USA
Melody L.A.	LeHew	Kansas State University	USA
April	Leytem	USDA	USA
Hongyi	Li	Pacific Northwest National Lab	USA
Marion	Lieser	OXFAM Germany	Germany
Jeremy	Little	University of Washington	USA
Yongqiang	Liu	U.S. Department of Agriculture - Forest Service	USA
Mingliang	Liu	Washington State University	USA
Ben	Livneh	Land Surface Hydrology Group	USA
David G.	Lloyd		Australia
Brad	Logsdon	Nazarbayev University	Kazakhstan
Douglas	Lombardi	Nevada Regional Professional Development Program	USA
Katherine	Low	K2 Sustainability Consulting	USA
Patrick	Lucas	Council on International Educational Exchange	China
Judith	Maghanoy	Philippine Department of Agriculture	Philippines
Yehia	Manawi	Qatar University	Qatar
Phokele	Maponya	University of South Africa	South Africa
Vilse Salete	Martinazzo Dallagnol		Brazil
Guillaume	Mauger	College of the Environment, UW	USA
Lidia	Mayner	Flinders University	Australia
Edward	McBean	Univesity of Guelph	Canada
Megan	McGinty	North Cascades Instiute	USA
G. Michael	McGrath	Victoria University	Australia
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Elizabeth	Ray	Texas State University, San Marcos	USA
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Spencer	Reeder	Cascadia Consulting Group	USA
Abeera	Rehmat	University of Nevada, Las Vegas	USA
Randi	Rhodes	University of Hawaii, Manoa	USA
Max	Richardson	CA Dept of Public Health	USA
Salvacion	Ritual	Philippine Department of Agriculture	Philippines
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Mun Hyun	Ryu	K-water Research Institute	South Korea
Jae	Ryu	University of Idaho	USA
Eric	Salathe Jr.	University of Washington	USA
Kendra	Sand	Booz Allen Hamilton	USA
David	Schmidt	University of Minnesota	USA
Chris	Schnepf	University of Idaho	USA
Beryl	Schulman	University of Washington	USA
Adrienne	Schwarte	Maryville College	USA
Fiona	Scott	University of Sheffield	UK
Linda	Sheehan	Thompson Rivers University	Canada
Daniel	Sherman	University of Puget Sound	USA
Hayashi	Shinano	IGES	Japan
Tina	Sikka	Simon Fraser University	Canada
Nilmini	Silva-Send	University of San Diego	USA
Brenna	Simonson	Tufts University	USA
Gale	Sinatra	University of Southern California	USA
Venkata Rama Krishna	Prabhakar Sivapuram	Institute for Global Environmental Strategies	Japan
Rebecca	Skeelee	Coastal Resources Management Office	USA
Samantha	Smith	Monash University	Australia
David W.	Smith	Texas AgriLife Extension	USA
Amy	Snover	University of Washington	USA
Mohammad	Sohrabi	University of Idaho	USA
Teodoro	Solsoloy	Bureau of Agricultural Research	Philippines
Gloria	Soto-Montes	Universidad Iberoamericana	Mexico
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Ronda	Strauch	University of Washington	USA
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Radim	Tolasz	Czech Hydrometeorological Institute	Czech Republic
Micha	Tomkiewicz	Brooklyn College of CUNY	USA
Marilyn	Tremblay	Laval University	Canada
Fanny	Tremblay-Racicot	Université Laval	Canada
Ronald	Tressler	Seattle City Light Department, City of Seattle	USA
Yukimasa	Tsubota	J. F. Oberlin University	Japan

Luis M.	Tupas	USDA National Institute of Food and Agriculture	USA
Robert	Uniatowski	University of Delaware	USA
Jennifer	Vanderhoof	King County Department of Natural Resources & Parks	USA
Julie	Vano	University of Washington	USA
Steve	Verhey	Washington State University	USA
Paul	Vincelli	University of Kentucky	USA
Nathalie	Voisin	Pacific Northwest National Laboratory	USA
Markus	Von Prause	Washington State Department of Ecology	USA
JIEH-JIUH	Wang	Ming Chuan University	Taiwan
Elizabeth	Whitefield	Washington State University	USA
Justin	Wood	Murdoch University	Australia
Stewart	Wright	WorleyParsons Canada	Canada
Di	Wu	University of Minnesota	USA
Jianhong	Xue	Northwest A&F University	China
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THE INTERNATIONAL JOURNAL OF CLIMATE CHANGE: IMPACTS AND RESPONSES

ABOUT THE JOURNAL

The International Journal of Climate Change: Impacts and Responses seeks to create an interdisciplinary forum for the discussion of evidence of climate change, its causes, its ecosystemic impacts and its human impacts. The journal also explores technological, policy, strategic and social responses to climate change.

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The International Journal of Climate Change: Impacts and Responses is a fully peer reviewed scholarly journal, one of approximately twenty-four academic journals published by Common Ground. Common Ground's approach to peer review is open and inclusive. Instead of being dominated by the exclusive academic hierarchies represented by many traditional editors and their networks, Common Ground journals build lateral knowledge communities. Our referee process is criterion-referenced, and referees are selected on the basis of subject matter and disciplinary expertise. Ranking is based on clearly articulated criteria. The result is a refereeing process that is scrupulously fair in its assessments. At the same time, the process offers a carefully structured and constructive contribution to the shape of the published paper.

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JOURNAL AWARD

The International Journal of Climate Change presents an annual International Award for Excellence in the area of Climate Change: Impacts and Responses. All papers submitted for publication in the Journal are entered into consideration for this award. The review committee for the award is the International Advisory Board for the Journal and the Conference. The committee will select the winning paper from the ten highest-ranked papers emerging from the referee process and according to the selection criteria outlined in the referee guidelines. The winning author(s) will be invited to the next annual Climate Change Conference, where they will be formally presented with their award. They will receive a free registration to attend this conference.

This year's award winners are: Tina Sikka
For the paper: "Geoengineering in a World Risk Society"

Abstract: In the following paper, I draw on Ulrich Beck's model of the world risk society to examine, unpack and critique geoengineering technologies. Briefly, geoengineering can be defined as large-scale technological interventions into the environment in an attempt to mitigate or even reverse climate change. They include such proposals as painting the surfaces of buildings white to reflect the sun's rays, placing mirrors in space for similar ends or the more interventionist seeding of oceans with iron in order to encourage the growth of carbon absorbing algae blooms. What is startling about geoengineering is that despite its seeming outlandishness, it has recently been seriously considered by a number of governments, corporations, research institutes and professional scientific bodies.

In an attempt to better understand and appreciate the possible normative, political, economic and environmental consequences of such large-scale technological interventions, I have found Beck's thesis of reflexive modernity and the world risk society to be particularly useful and illuminating. Essentially, Beck's thesis is that we live in a world that distinguished from the past by the extent to which it is constituted by global technological risks that one, tears down traditional boundaries between people and their environments (de-localization); two, resists anticipation by conventional scientific and/or rational means; three, denies compensation or insurability against danger; and four, re-orientes social attention to the constant anticipation of catastrophe. These risks, as Beck argues, "represents a shock for the whole of humanity" who never could have anticipated "the self-destructiveness—not only physically but also ethical—of unleashed modernity" (Beck, 2006, p. 330).

In applying these insights to geoengineering, it becomes clear that these technologies are, by definition, risk technologies. I argue that it is their inherently global, unpredictable, uninsurable and potentially catastrophic character, which can be both inimitable, frightening, which renders them in need of further study. As such, in undertaking an examination of these questions, I have chosen to divide this article into the following sections: I begin with a brief introduction to geoengineering technologies and discuss not only what they are and what they are supposed to do. Following this, I delve into a more considered discussion of how geoengineering technologies are in fact risk technologies as Beck defines them. I begin with an overview of reflexive modernization, followed by discussions Beck's concepts of risk, insurability and responsibility, and subpolitics, which I use to examine geoengineering in turn.

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Amareswar Galla, The University of Queensland, Australia
Bill Cope, University of Illinois at Urbana-Champaign, USA

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General Requirements:

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The publication process is as follows:

- When we receive a paper, it is verified against template and submission requirements. If there are any problems, authors will be asked to resubmit the paper.
- The paper will be prepared and matched to two appropriate referees. When a paper has been submitted to the referees, authors will receive an email notification. Additionally, authors may be asked to referee up to 3 papers.
- When the referee reports are uploaded, authors will be notified by email and provided with a link to view the reports (after the referees' identities have been removed).
- If a paper is accepted, we will confirm conference registration before sending a Publishing Agreement.
- Authors will then be asked to accept the Publishing Agreement and submit the final paper.
- Papers will be typeset and proofs made available for final approval before publication in the journal's online bookstore as well as in individual author Creator Sites.

The final date for submission of papers to the Journal (for one way blind refereeing) is 13 August, 2012 – one month after the close of the conference.

Papers are published continuously in the online bookstore. Authors may view the status of their paper at any time by logging into their CGPublisher account at www.CGPublisher.com.

OTHER JOURNALS PUBLISHED BY COMMON GROUND

Aging and Society: An Interdisciplinary Journal provides an international forum for the discussion of a rapidly growing segment of the population, in developed countries as well as in developing countries. Contributions range from broad theoretical and global policy explorations to detailed studies of the specific physiological, health, economic, and social dynamics of aging in today's global society.

Website: www.AgingandSociety.com/journal

The International Journal of the Arts in Society aims to create an intellectual frame of reference for the arts, and to create an interdisciplinary conversation on the role of the arts in society. This peer-reviewed journal is intended as a place for critical engagement and examination of ideas that connect the arts to their contexts in the world.

Website: www.Arts-Journal.com

The International Journal of the Book provides a forum for publishing professionals, librarians, researchers, authors, retailers, and educators to discuss that iconic artifact, the book—and to consider its past, present, and future. Discussions range from the reflective to the highly practical, with an eye towards new practices of writing, publishing, and reading.

Website: www.Book-Journal.com

The International Journal of the Constructed Environment publishes broad-ranging and interdisciplinary articles on human configurations of the environment and the interactions between the constructed, social and natural environments. This peer-reviewed journal brings together researchers, teachers, architects, designers, and others interested in how we interact with our environment.

Website: www.ConstructedEnvironment.com/journal

Design Principles and Practices: An International Journal is a site of discussion exploring the meaning and purpose of “design” and the use of designed artifacts. This peer-reviewed journal examines transdisciplinary conversations between the theoretical and the empirical, the pragmatic and the idealistic.

Website: www.Design-Journal.com

The International Journal of Diversity in Organizations, Communities and Nations allows educators, professionals, and anyone interested in the mediation of cultural difference and diversity to empirically and strategically discuss globalization, identity and social group formation. This peer-reviewed journal reflects the business of negotiating diversity in organizations and communities.

Website: www.Diversity-Journal.com

Food Studies: An Interdisciplinary Journal provides an interdisciplinary forum for the discussion of agricultural, environmental, nutritional, health, social, economic and cultural perspectives on food. Contributions range from broad theoretical and global policy explorations, to detailed studies of specific human-physiological, nutritional and social dynamics of food.

Website: www.Food-Studies.com/journal/

The Global Studies Journal is devoted to mapping and interpreting new trends and patterns in globalization. This peer-reviewed journal attempts to do this from many points of view and from many locations in the world, working between empirical and general modes of engagement with one of the central phenomena of our contemporary existence.

Website: www.GlobalStudiesJournal.com

The International Journal of Health, Wellness and Society addresses a number of interdisciplinary health topics, including: physiology, kinesiology, psychology, health sciences, public health, and other areas of interest. This peer-reviewed journal is relevant to anyone working in the health sciences, or researchers interested in exploring the intersections between health and society.

Website: www.HealthandSociety.com/journal

The International Journal of the Humanities provides a space for dialogue and publication of new knowledge which builds on the past traditions of the humanities whilst setting a renewed agenda for their future. The humanities are a domain of learning, reflection and action, and a place of dialogue between and across epistemologies, perspectives and content areas. It is in these unsettling places that the humanities might be able to unburden modern knowledge systems of their restrictive narrowness.

Website: www.TheHumanities.com/Journal/

The International Journal of the Image interrogates the nature of the image and the functions of image-making. This peer-reviewed, cross-disciplinary journal brings together researchers, practitioners, and teachers from areas of interest including: architecture, art, cultural studies, design, education, history, linguistics, media studies, philosophy, religious studies, semiotics, and more.

Website: www.OntheImage.com/journal

The International Journal of Learning sets out to foster inquiry, invite dialogue and build a body of knowledge on the nature and future of learning. This peer-reviewed journal provides a forum for any person with an interest in, and concern for, education at any of its levels and in any of its forms, from early childhood to higher education and lifelong learning.

Website: www.Learning-Journal.com

The International Journal of Knowledge, Culture and Change Management examines the nature of the organization in all its forms and manifestations. Across a variety of contexts, a pragmatic focus persists—to examine the organization and management of groups of people collaborating to productive ends, and to analyze what makes for success and sustainability.

Website: www.Management-Journal.com

The International Journal of the Inclusive Museum asks: In this time of fundamental social change, what is the role of the museum, both as a creature of that change, and as an agent of change? This peer-reviewed journal brings together academics, curators, researchers, and administrators to discuss the character and future of the museum.

Website: www.Museum-Journal.com

The International Journal of Religion and Spirituality in Society aims to create an intellectual frame of reference for the academic study of religion, and to create interdisciplinary conversations on the role of religion and spirituality in society. This peer-reviewed journal seeks to critically examine ideas that connect religious philosophies to their contexts throughout history.

Website: www.Religion-Journal.com

The International Journal of Science in Society provides an interdisciplinary forum to discuss the past, present, and future of the sciences and their relationships to society. This peer-reviewed journal examines broad theoretical, philosophical and policy explorations and detailed case studies of particular intellectual and practical activities at the intersection of science and society.

Website: www.Science-Society.com/Journal

The International Journal of Interdisciplinary Social Sciences aims to examine the nature of disciplinary practices and the interdisciplinary practices that arise in the context of 'real world' applications. This rigorously peer-reviewed journal also interrogates what constitutes 'science' in a social context, and the connections between the social and other sciences.

Website: www.SocialSciences-Journal.com

Spaces and Flows: An International Journal of Urban and ExtraUrban Studies addresses some of the most pressing and perturbing social, cultural, economic and environmental questions of our time. This peer-reviewed journal focuses on spaces of production, consumption, and living, and flows of people, goods, and information as crucibles and vectors of ongoing transformation.

Website: www.SpacesandFlows.com/Journal

The International Journal of Sport and Society provides a forum for wide-ranging and interdisciplinary examination of sport. This peer-reviewed journal examines the history, sociology, and psychology of sport; sports medicine and health; physical and health education; and sports administration and management. Discussions range from broad conceptualizations to highly specific readings.

Website: www.SportandSociety.com/Journal

The International Journal of Environmental, Cultural, Economic and Social Sustainability creates a place for the publication of papers presenting innovative theories and practices of sustainability. This peer-reviewed journal is cross-disciplinary in its scope, a meeting point for natural and social scientists, researchers and practitioners, professionals and community representatives.

Website: www.Sustainability-Journal.com

The International Journal of Technology, Knowledge and Society creates a place for the publication and presentation of innovative theories and practices relating technology to society. This peer-reviewed journal is cross-disciplinary in its scope and provides a meeting point for technologists with a concern for the social and social scientists with a concern for the technological.

Website: www.Technology-Journal.com

Ubiquitous Learning: An International Journal sets out to define an emerging field. Ubiquitous Learning is a new educational paradigm made possible in part by the affordances of digital media. Our changing learning needs can be served by ubiquitous computing. This peer-reviewed journal investigates the affordances for learning through digital media, in school, and throughout everyday life.

Website: www.Ubi-Learn.com/journal

The Journal of the World Universities Forum seeks to explore the meaning and purpose of the academy in times of striking social transformation. This peer-reviewed journal brings together university administrators, teachers and researchers to discuss the prospects of the academy and to exemplify or imagine ways in which the university can take a leading and constructive role.

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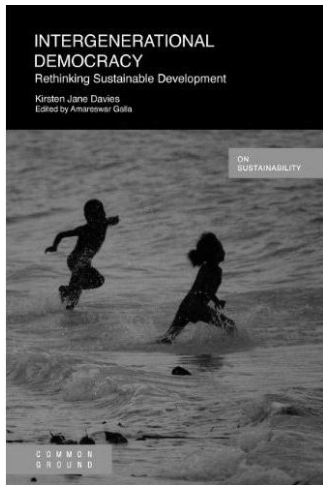
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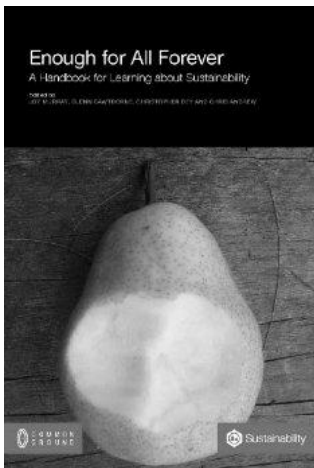
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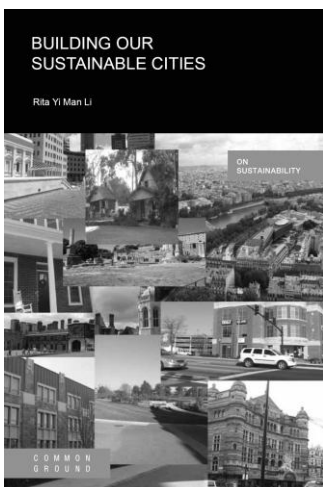
Intergenerational Democracy: Rethinking Sustainable Development By Kirsten Jane Davies

This book takes an intimate look at the influences underpinning human-environmental relationships, with a special focus on ethnic heritage and multi-culturalism. This book advocates for concerted efforts to re-establish viable and sustainable Cycles of Life by proposing models that can assist this process. The foundation of these models is Intergenerational Democracy (ID), a whole-of-community method of engagement and participation that requires the inclusion of citizens representing all ages (from 8 to 100+ years). ID recognizes that there are many quieter but equally legitimate voices, particularly those of children, which are rarely heard in policy and planning forums. ID cuts through barriers of inequality by engaging and connecting whole communities in planning and managing their sustainable futures. This book includes three case studies that describe the importance of capturing the voices of children, the planet's future custodians. The book stresses the importance of rebuilding environmental relationships at the local level, centred on the social and environmental identity of each place, as the basis for rethinking sustainable development.



Enough for All Forever: A Handbook for Learning about Sustainability By Joy Murray, Glenn Cawthorne, Christopher Dey, and Chris Andrew

Enough for All Forever is a handbook for learning about sustainability. It has been written specifically for educators: classroom practitioners; school and system administrators and managers; those who develop curriculum; academics; and others who share the goal of environmental equity for all. It is about integrating sustainability into teaching and learning at all levels. The focus of the book is how to live sustainably, in harmony with a planet that has finite resources. This is not a 'one size fits all' handbook. Rather, it is a broad collection of work from over fifty different authors, all of them experts in their field and all committed to doing something about sustainability.



Building our Sustainable Cities By Rita Yi Man Li

Sustainable development has become a hot topic worldwide in recent decades. Following the Copenhagen Summit, politicians and the general public were once again faced with the reality of inevitable climate change. Is there anything we can do to stop global warming? Are there any possible ways to achieve the goal of zero carbon? What can we, as laymen in the global village, do in the coming years so that future generations can enjoy a natural environment similar to ours?

This book consists of three parts. The first part is an introduction that provides a general overview of sustainable development in China, Singapore, the United Kingdom, the United States of America and Australia. The second part introduces the concept of sustainability in the built environment. The third part of this book focuses on sustainable land use planning in Hong Kong.

NOTES



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CONFERENCE EVALUATION FORM

We appreciate you taking the time to complete this evaluation form. Your feedback will assist us in planning future conferences. Please also include comments with specific feedback relating to each of the questions.

This evaluation can also be found at <http://on-climate.com/conference-2012/evaluation/>

1. How did you find out about the Climate Change Conference?

- Online** (Website: _____)
- Colleague**
- Email**
- Other** (Please Specify: _____)

2. Please rate on a scale of 1 to 5. 1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neutral, 4 = Satisfied, and 5 = Very Satisfied.**Pre-Conference**

Registration and Payment Process	1	2	3	4	5
Communication from Conference Staff	1	2	3	4	5

At the Conference

Conference Location	1	2	3	4	5
Conference Venue	1	2	3	4	5

Overall Assessment

Relevance of Conference Focus and Themes	1	2	3	4	5
Presentations and Content	1	2	3	4	5

3. Where would you like to see this conference held in the future?**4. Please suggest any changes or improvements you would like us to make at future conferences**

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