## Seventh International Conference on

# Climate Change: Impacts and Responses

Whose Climate? Negotiating the Governance of Environmental Change

10-11 APRIL 2015 | UNIVERSITY OF BRITISH COLUMBIA-ROBSON SQUARE | VANCOUVER, CANADA ON-CLIMATE.COM





### SEVENTH INTERNATIONAL CONFERENCE ON CLIMATE CHANGE: IMPACTS AND RESPONSES

UNIVERSITY OF BRITISH COLUMBIA-ROBSON SQUARE VANCOUVER, CANADA

10-11 APRIL 2015

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### International Conference on Climate Change: Impacts and Responses $\mathsf{www.on-climate.com}$

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Dear Climate Change Conference Delegate,

Welcome to the Seventh 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, considers its impacts, and addresses current and potential responses. Thank you for joining this important dialogue and for 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; the 2011 conference was held in Rio de Janeiro, Brazil; the 2012 conference was held at the University of Washington in Seattle, USA; the 2013 conference was held in Port Louis, Mauritius; and the 2014 conference was held at the University of Iceland, Reykjavik, Iceland.

In addition to organizing the Climate Change Conference, Common Ground publishes papers from the conference at www.Climate-Journal.com, and we encourage all conference participants to submit an article 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, humanities, and the arts, to name several (see http://commongroundpublishing.com). Our aim is to create a new form of the knowledge community, where people meet in person and also remain connected virtually, making the most of the potentials for access via digital media. We are also committed to creating a more accessible, open and reliable peer review process. Alongside opportunities for well-known academics, we are creating new publication openings for academics from developing countries, for emerging scholars, and for researchers from institutions that have historically focused on teaching.

Thank you to everyone who has prepared for this conference. I would like to extend a special thank you to our partners at the Pacific Institute for Climate Solutions–Nancy Hales, Stephanie Inman, Dr. Thomas Pedersen, Dr. Stephen Sheppard, and Dr. Tim Takaro. I would also like to thank my Common Ground colleagues who have put such a significant amount of work into this conference: Kim Kendall and Izabel Szary.

We wish you all 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. And we hope you will be able to join us at next year's conference in Hanoi, Vietnam!

Yours sincerely,

Dr. Phillip Kalantzis-Cope Director, Common Ground Publishing

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#### **Our 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.

#### Our Message

Heritage knowledge systems are characterized by vertical separations—of discipline, professional association, institution, and country. Common Ground identifies some of the pivotal ideas and challenges of our time and builds knowledge communities that cut horizontally across legacy knowledge structures. Sustainability, diversity, learning, the future of the humanities, the nature of interdisciplinarity, the place of the arts in society, technology's connections with knowledge, the changing role of the university—these are deeply important questions of our time which require interdisciplinary thinking, global conversations, and cross-institutional intellectual collaborations. Common Ground is a meeting place for these conversations, shared spaces in which differences can meet and safely connect—differences of perspective, experience, knowledge base, methodology, geographical or cultural origins, and institutional affiliation. We strive to create the places of intellectual interaction and imagination that our future deserves.

#### Our Media

Common Ground creates and supports knowledge communities through a number of mechanisms and media. Annual conferences are held around the world to connect the global (the international delegates) with the local (academics, practitioners, and community leaders from the host community). Conference sessions include as many ways of speaking as possible to encourage each and every participant to engage, interact, and contribute. The journals and book series offer fully-refereed academic outlets for formalized knowledge, developed through innovative approaches to the processes of submission, peer review, and production. The knowledge community also maintains an online presence—through presentations on our YouTube channel, monthly email newsletters, as well as Facebook and Twitter feeds. And Common Ground's own software, **Scholar**, offers a path-breaking platform for online discussions and networking, as well as for creating, reviewing, and disseminating text and multi-media works.

## Climate Change: Impacts & Responses

The Climate Change knowledge community is dedicated to the concept of independent, peer-led groups of scholars, researchers, and practitioners working together to build bodies of academic knowledge related to topics of critical importance to society at large. Focusing on the intersection of academia and social impact, the Climate Change knowledge community brings an interdisciplinary, international perspective to discussions of new developments in the field, including research, practice, policy, and teaching.

#### Themes

*Theme 1: Scientific Evidence* What is evidence is there of climate change?

- 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 disequilbria: 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

What are the impacts of climate change on natural environments?

- 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

What evidence is there that human activity has contributed to climate change, and what are the impacts of climate change on human life?

- 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: Technical, Political, and Social Responses

How do scientists, technologies, policy makers, and community members respond to climate change?

- Environmental policies in response to climate change
- Controversy and denial: politics, the media, and scientists with dissenting views
- The international politics of climate change
- The past, present, and future of international agreements
- 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, offsets, and trading
- Emission standards
- Climate ethics and the precautionary principle
- Eco-development, eco-efficiency

#### 2015 Special Focus: Whose Climate? Negotiating the Governance of Environmental Change

It is now widely agreed that one of the principal obstacles to addressing climate change are structures of governance. A consensus is emerging in the form of a scientific analysis. And we have a growing sense of the kinds of technological transition and transformations in social practices that are needed. However, the largest problem is one of political will, particularly in an international regime where governance structures, despite globalization, are very weak. Within the broad range of themes addressed by this knowledge community, our area of special focus in 2015 will be structures of governance to address climate change, from local communities, to the nation state, to the national arena. What ways forward do we have given structural weaknesses in our systems of governance at every level?

#### Scope and Concerns

#### Climate Change: 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 revolutionized 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 labor 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.

Some of the changes we are experiencing today may be part of the course of natural history. Other changes, many scientists agree, are the byproduct of human activity. 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 practical concern and growing 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 raise concerns 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 by simulating possible changes in Dynamic Global Vegetation models, clearly demonstrates that there will be further species loss. Many species ill-adapted to environmental disturbances may vanish without a trace before scientists can detect 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 weather events could be especially damaging. Thus, there is 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 series, 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 upon which they are dependent at a landscape level. 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 recognized by scientists to be an agent of climate change, though the precise mix of natural and human causes has yet to be determined. With conscious agency lacking in other species, comes a unique species responsibility for the future course of natural history.

On the experience of the past one hundred thousand years, humans are clearly capable of adaptive responses. Our species has the capacity or can develop the capacity to nurture nature though a period of transition, for instance by creating corridors to assist species adaptation and inventing new agricultures which alleviate and mitigate the effects of climate change. Humans are also capable of precautionary action, reducing greenhouse gases for instance as part of a broader strategy of sustainable development. We may even be able to master technologies which balance and stabilize climate change.

The key, however, will be the extent to which our species can take a proactive role, be that technological 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 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.

#### **Community Membership**

Annual membership to the Climate Change community is included in your conference registration. As a community member, you have access to a broad range of tools and resources to use in your own work: electronic access to the full journal and book collections; a full **Scholar** account, offering an innovative online space for collaborative learning in your classes or for broader collaborative interaction with colleagues (within a research project or across the globe); and annual conferences where you can present your work and engage in extensive interactions with others with similar interests who also bring different perspectives. And you can contribute to the development and formalization of the ideas and works of others—as a journal or book reviewer, as a conference participant, and as a contributor to the newsletters and community dialogue.

#### Membership Benefits

- Personal electronic subscription to the complete journal collection for one year after the conference (all past and current issues).
- Personal electronic subscription to the book series for one year after the conference.
- One article submission per year for peer review and possible publication in any of the journals in the collection.
- Participation as a reviewer in the peer review process and the potential to be listed as an Associate Editor of the journal after reviewing three or more articles.
- Subscription to the monthly community email newsletter, containing news and information for and from the knowledge community.
- Ability to add a video presentation to the community YouTube channel, whether or not it was presented in person at the conference or is published in the journal.
- Access to the Scholar "social knowledge" platform: free use of Scholar as your personal profile and publication portfolio
  page, as a place to interact with peers and forms communities that avoid the clutter and commercialism of other social
  media, with optional feeds to Facebook and Twitter.
- Use Scholar in your classes—for class interactions in its Community space, multimodal student writing in its Creator space, and managing student peer review, assessment, and sharing of published students' works in its Publisher space. Contact us to request Publisher permissions for Scholar.

#### Engaging in the Community

#### Present and Participate in the Conference

You have already begun your engagement in the community by attending the conference, presenting your work, and interacting face-to-face with other members. We hope this experience provides a valuable source of feedback for your current work and the possible seeds for future individual and collaborative projects, as well as the start of a conversation with community colleagues that will continue well into the future.

#### Publish Journal Articles or Books

We encourage you to submit an article for review and possible publication 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 community. As a member of the community, you will also be invited to review others' work and contribute to the development of the community knowledge base as an Associate Editor. As part of your active membership in the community, you also have online access to the complete works (current and previous volumes) of *The International Journal of Climate Change: Impacts and Responses* and to the book series. We also invite you to consider submitting a proposal for the book series.

#### Engage through Social Media

There are several methods for ongoing communication and networking with community colleagues:

- Email Newsletters: Published monthly, these contain information on the conference and publishing, along with news of interest to the community. Contribute news or links with a subject line 'Email Newsletter Suggestion' to support@on-climate.com.
- Scholar: Common Ground's path-breaking platform that connects academic peers from around the world in a space that is modulated for serious discourse and the presentation of knowledge works. To learn more about Scholar, please see the end of the program.
- Facebook: Comment on current news, view photos from the conference, and take advantage of special benefits for community members at: http://www.facebook.com/OnClimate.CG.
- Twitter: Follow the community: @onclimate.
- YouTube Channel: View online presentations or contribute your own at http://on-climate.com/the-conference/types-of-conference-sessions/online-presentations.

#### THE INTERNATIONAL ADVISORY BOARD FOR THE CLIMATE CHANGE COMMUNITY

- Alison Anderson, University of Plymouth, Plymouth, UK
- Tapan Chakrabarti, Chairman, Department of Biotechnology Task Force on Biodiversity Conservation and Environment, National Environmental Engineering Research Institute (NEERI), Nagpur, India
- Gowtam Raj Chintaram, Executive Chairman, ANPRAS /Earth-Mauritius, Port Louis, Mauritius
- Thomas Krafft, Geomed Research Corporation, Bad Honnef, Germany
- Gordon Wilson, The Open University, Milton Keynes, UK
- Zhihua Zhang, Deputy Director of Polar Climate and Environment Library, Beijing Normal University, Beijing, China



#### About Our Publishing Approach

For three decades, Common Ground Publishing has been committed to creating meeting places for people and ideas. With 24 knowledge communities, Common Ground's vision is to provide platforms that bring together individuals of varied geographical, institutional, and cultural origins in spaces where renowned academic minds and public thought leaders can connect across fields of study. Each knowledge community organizes an annual academic conference and is associated with a peer-reviewed journal (or journal collection), a book imprint, and a social media space centered around Common Ground's pathbreaking 'social knowledge' space, **Scholar**.

Through its publishing practices, Common Ground aims to foster the highest standards in intellectual excellence. We are highly critical of the serious deficiencies in today's academic journal system, including the legacy structures and exclusive networks that restrict the visibility of emerging scholars and researchers in developing countries, as well as the unsustainable costs and inefficiencies associated with traditional commercial publishing.

In order to combat these shortcomings, Common Ground has developed an innovative publishing model. Each of Common Ground's knowledge communities organizes an annual academic conference. The registration fee that conference participants pay in order to attend or present at these conferences enables them to submit an article to the associated journal at no additional cost. Scholars who cannot attend the conference in-person may still participate virtually and submit to the journal by obtaining a community membership, which also allows them to upload a video presentation to the community's YouTube channel. By using a portion of the conference registration and membership fees to underwrite the costs associated with producing and marketing the journals, Common Ground is able to keep subscription prices low, thus guaranteeing greater access to our content. All conference participants and community members are also granted a one-year complimentary electronic subscription to the journal. Moreover, each article that we publish is available for a \$5 download fee to non-subscribers, and authors have the choice of publishing their paper open access to reach the widest possible audience and ensure the broadest access possible.

Common Ground's rigorous peer review process also seeks to address some of the biases inherent in traditional academic publishing models. Our pool of reviewers draws on authors who have recently submitted to the journal, as well as volunteer reviewers whose CVs and academic experience have been evaluated by Common Ground's editorial team. Reviewers are assigned to articles based on their academic interests and expertise. By enlisting volunteers and other prospective authors as peer reviewers, Common Ground avoids the drawbacks of relying on a single editor's professional network, which can often create a small group of gatekeepers who get to decide who and what gets published. Instead, Common Ground harnesses the enthusiasm of its conference delegates and prospective journal authors to assess submissions using a criterion-referenced evaluation system that is at once more democratic and more intellectually rigorous than other models. Common Ground also recognizes the important work of peer reviewers by acknowledging them as Associate Editors of the volumes to which they contribute.

For over ten years, Common Ground has been building web-based publishing and social knowledge software where people can work closely to collaborate, create knowledge, and learn. The third and most recent iteration of this project is the innovative social knowledge environment, **Scholar**. Through the creation of this software, Common Ground has sought to tackle what it sees as changing technological, economic, distributional, geographic, interdisciplinary and social relations to knowledge. For more information about this change and what it means for academic publishing, refer to *The Future of the Academic Journal*, edited by Bill Cope and Angus Phillips (Elsevier 2009).

We hope that you will join us in creating dialogues between different perspectives, experiences, knowledge bases, and methodologies through interactions at the conference, conversations online, and as fully realized, peer-reviewed journal articles and books.



#### The International Journal of Climate Change: Impacts and Responses

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#### **Publication Frequency**

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#### Indexing

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- Ulrich's Periodicals Index
- The Australian Research Council (ERA)
- EBSCO Environment Index
- EBSCO Environment Complete

#### Acceptance Rate

40%

#### Circulation

187,327

#### Foundation Year

2009

#### INTERNATIONAL AWARD FOR EXCELLENCE

The International Journal on Climate Change: Impacts and Responses presents an annual International Award for Excellence for new research or thinking in the area of climate change. All articles submitted for publication in *The International Journal on Climate Change: Impacts and Responses* are entered into consideration for this award. The review committee for the award is selected from the International Advisory Board for the journal and the annual Climate Change Conference. The committee selects the winning article from the ten highest-ranked articles emerging from the review process and according to the selection criteria outlined in the reviewer guidelines. The remaining nine top papers will be featured on our website.

#### This Year's Award Winners

Dr. Reazul Ahsan, University of South Australia, Australia Prof. Jon Kellett, University of Adelaide, South Australia Dr. Sadasivam Karuppannan, Barbara Hardy Institute, Adelaide, South Australia

#### For the Article

"Climate Induced Migration: Lessons from Bangladesh"

#### Abstract

Over the past decade, human understanding of the potential variety and range of climate change impacts has expanded. For example, besides physical and environmental impacts it is clear that climate change is a driver of social change. This is particularly apparent through the creation of a new social community of "climate migrants." In 1995, there were about twenty-five million environmental refugees around the world but this number is anticipated to rise to 200 million by 2050, many of them as a result of climate change. One of the countries most severely affected by climate induced migration is Bangladesh. This paper analyses how consideration of this growing body of climate migrants fits with traditional migration theory. Using a case study approach drawing on empirical research amongst migrants in Bangladesh, it examines the drivers of migration, the impacts on individual and family livelihoods of the explosion of climate migrants and the subsequent effects on urbanisation of major cities in Bangladesh.

#### SUBMISSION PROCESS

Every conference delegate with an accepted proposal is eligible and invited to submit an article to *The International Journal on Climate Change: Impacts and Responses.* Full articles can be submitted using Common Ground's online conference and article management system CGPublisher. Below please find step-by-step instructions on the submission process.

- 1. Submit a presentation proposal to the conference (in-person or community membership).
- 2. Once your conference proposal or paper abstract has been accepted, you may submit your article to the journal by clicking "add a paper" from your proposal/abstract page. You may upload your article anytime between the first and the final submission deadlines, which can be found on the next page.
- 3. Once your article is received, it is verified against template and submission requirements. Your identity and contact details are then removed, and the article is matched to two appropriate reviewers and sent for review. You can view the status of your article at any time by logging into your CGPublisher account at www.CGPublisher.com.
- 4. When reviewer reports are uploaded, you will be notified by email and provided with a link to view the reports (after the reviewers' identities have been removed).
- 5. If your article has been accepted, you will be asked to accept the Publishing Agreement and submit a final copy of your article. If your paper is accepted with revisions, you will be asked to submit a change note with your final submission, explaining how you revised your article in light of the reviewers' comments. If your article is rejected, you may resubmit it once, with a detailed change note, for review by new reviewers.
- 6. Accepted articles will be typeset and the proofs will be sent to you for approval before publication.
- 7. Individual articles may be published online first with a full citation. Full issues follow at regular, quarterly intervals. All issues are published 4 times per volume.
- 8. Registered conference participants will be given online access to the journal from the time of registration until one year after the conference end date. Individual articles are available for purchase from the journal's bookstore. Authors and peer reviewers may order hard copies of full issues at a discounted rate.

#### SUBMISSION TIMELINE

The timeline for the deadlines of Volume 7 are as follows:

- 1. July 15, 2015
- 2. October 15, 2015

Note: Please feel free to submit at any time. If your article is submitted after the deadline for Volume 7, it will be considered for Volume 8. However, the sooner you submit, the sooner your article will begin the peer review process. Also, as we publish "online-first," early submission will mean that your article will be published as soon as it is ready, even if that is before the full issue is published.

#### For More Information, Please Visit:

http://on-climate.com/submitting-your-work/journal-articles/submission-process

#### JOURNAL SUBSCRIPTIONS, OPEN ACCESS, ADDITIONAL SERVICES

#### Institutional Subscriptions

Common Ground offers print and electronic subscriptions to all of its journals. Subscriptions are available to the journal and to custom suites based on a given institution's unique content needs. Subscription prices are based on a tiered scale that corresponds to the full-time enrollment (FTE) of the subscribing institution. You may use the Library Recommendation form in the back of this pamphlet to recommend that your institution subscribe to *The International Journal on Climate Change: Impacts and Responses*.

#### Personal Subscriptions

As part of their conference registration, all conference participants (both community membership and in-person) have a one-year online subscription to *The International Journal on Climate Change: Impacts and Responses.* This complimentary personal subscription grants access to both the current volume of the [journal or collection] as well as the entire backlist. The period of complimentary access begins at the time of registration and ends one year after the close of the conference. After that time, delegates may purchase a personal subscription. To view articles, go to http://ijc.cgpublisher.com/. Select the "Login" option and provide a CGPublisher username and password. Then, select an article and download the PDF. For lost or forgotten login details, select "forgot your login" to request a new password.

#### For more information, please visit:

http://on-climate.com/publications/journal/subscriptions-and-orders or contact us at journals@commongroundpublishing.com.

#### Hybrid Open Access

*The International Journal of Climate Change: Impacts and Responses* is Hybrid Open Access. Hybrid Open Access is an option increasingly offered by both university presses and well-known commercial publishers.

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- Author(s)/editor(s)
- Draft back-cover blurb
- Author bio note(s)
- Table of contents
- Intended audience and significance of contribution
- Sample chapters or complete manuscript
- Manuscript submission date

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- A brief description of your professional credentials
- A list of your areas of interest and expertise
- A copy of your CV with current contact details

If we feel that you are qualified and we require refereeing for manuscripts within your purview, we will contact you.



## Common Ground Publishing Books

#### Recent Books Published by Common Ground

These and other books are available at http://theuniversitypressbooks.cgpublisher.com/



Transitions to Sustainability Theoretical Debates for a Changing Planet Ketter Manufacty and Manufacty a storet



#### Ecopragmatics

Edward T. Wimberley and Scott Pellegrino

In an era when environmental policy discussions have become increasingly rancorous and balkanized Ecopragmatics provides a framework for addressing seemingly intransigent environmental issues by relying upon a method of pragmatic analysis and inquiry grounded in the ideas of William James and John Dewey. This approach eschews ideological posturing in favor of a consequentialist approach wherein reasonable and shared solutions to environmental problems are pursued on the basis of their perceived value to the community and in regard to natural environments and ecosystems. This approach incorporates a communitarian perspective to promote an atmosphere of collaboration by discerning the motivational factors informing the decisions of key stakeholders and subsequently framing policy issues to encourage compromise and ongoing partnership

Transitions to Sustainability: Theoretical Debates for a Changing Planet

David Humphreys and Spencer Stober (eds)

The contributions in this pioneering volume are divided into six thematic sections: culture, systems, business, art, rights, and citizenship. The chapters—empirically rich and critically guided—are written by leading scholars from around the world. The book makes a vital contribution to debates on sustainability and will prove essential reading for anyone who is concerned about global environmental change and our options for addressing it.

## The International Conference on Climate Change: Impacts and Responses

#### THE CLIMATE CHANGE CONFERENCE

#### **Conference Principles and Features**

The structure of the conference is based on four core principles that pervade all aspects of the knowledge community:

#### International

This conference travels around the world to provide opportunities for delegates to see and experience different countries and locations. But more importantly, the Climate Change conference offers a tangible and meaningful opportunity to engage with scholars from a diversity of cultures and perspectives. This year, delegates from over 20 countries are in attendance, offering a unique and unparalleled opportunity to engage directly with colleagues from all corners of the globe.

#### Interdisciplinary

Unlike association conferences attended by delegates with similar backgrounds and specialties, this conference brings together researchers, practitioners, and scholars from a wide range of disciplines who have a shared interest in the themes and concerns of this community. As a result, topics are broached from a variety of perspectives, interdisciplinary methods are applauded, and mutual respect and collaboration are encouraged.

#### Inclusive

Anyone whose scholarly work is sound and relevant is welcome to participate in this community and conference, regardless of discipline, culture, institution, or career path. Whether an emeritus professor, graduate student, researcher, teacher, policymaker, practitioner, or administrator, your work and your voice can contribute to the collective body of knowledge that is created and shared by this community.

#### Interactive

To take full advantage of the rich diversity of cultures, backgrounds, and perspectives represented at the conference, there must be ample opportunities to speak, listen, engage, and interact. A variety of session formats, from more to less structured, are offered throughout the conference to provide these opportunities.

#### Session Descriptions

#### Plenary Sessions

Plenary speakers, chosen from among the world's leading thinkers, offer formal presentations on topics of broad interest to the community and conference delegation. One or more speakers are scheduled into a plenary session, most often the first session of the day. As a general rule, there are no questions or discussion during these sessions. Instead, plenary speakers answer questions and participate in informal, extended discussions during their Garden Sessions.

#### Garden Sessions

Garden Sessions are informal, unstructured sessions that allow delegates a chance to meet plenary speakers and talk with them at length about the issues arising from their presentation. When the venue and weather allow, we try to arrange for a circle of chairs to be placed outdoors.

#### Talking Circles

Held on the first day of the conference, Talking Circles offer an early opportunity to meet other delegates with similar interests and concerns. Delegates self-select into groups based on broad thematic areas and then engage in extended discussion about the issues and concerns they feel are of utmost importance to that segment of the community. Questions like "Who are we?", "What is our common ground?", "What are the current challenges facing society in this area?", "What challenges do we face in constructing knowledge and effecting meaningful change in this area?" may guide the conversation. When possible, a second Talking Circle is held on the final day of the conference, for the original group to reconvene and discuss changes in their perspectives and understandings as a result of the conference experience. Reports from the Talking Circles provide a framework for the delegates' final discussions during the Closing Session.

#### Paper Presentations

Paper presentations are grouped by general themes or topics into sessions comprised of three or four presentations followed by group discussion. Each presenter in the session makes a formal twenty-minute presentation of their work; Q&A and group discussion follow after all have presented. Session Chairs introduce the speakers, keep time on the presentations, and facilitate the discussion. Each presenter's formal, written paper will be available to participants if accepted to the journal.

#### Colloquium

Colloquium sessions are organized by a group of colleagues who wish to present various dimensions of a project or perspectives on an issue. Four or five short formal presentations are followed by commentary and/or group discussion. A single article or multiple articles may be submitted to the journal based on the content of a colloquium session.

#### Workshop/Interactive Session

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.

#### Poster Sessions

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

#### Virtual Presentations

If unable to attend the conference in person, an author may choose to submit a virtual presentation. Opportunities and formats vary but may be a presentation through our YouTube channel or an online discussion with interested delegates at the conference. Abstracts of these presentations are included in the online "session descriptions," and an article may be submitted to the journal for peer review and possible publication, according to the same standards and criteria as all other journal submissions.

## CONFERENCE PROGRAM AND SCHEDULE



## The International Conference on Climate Change: Impacts and Responses

#### DAILY SCHEDULE

Thursday, 9, A	<b>vpril</b>
18:15	Conference Registration Desk Open
19:00–20:30	Evening Lecture – Dr. Gavin Schmidt, Goddard Institute, NASA, USA
Friday, 10, Ap	ril
08:00	Conference Registration Desk Open
09:00–09:15	Conference Opening-Phillip Kalantzis-Cope, Common Ground Publishing, USA
09:15–09:30	Conference Welcome—Thomas F. Pedersen, Pacific Institute for Climate Solutions, Canada
09:30–10:00	Plenary Session—Kathryn Harrison, University of British Columbia, Canada
10:00–10:30	Plenary Session—Alex Clapp, Simon Fraser University, Canada
10:30-11:00	Break and Garden Session (Garden Session held in room C400)
11:00-11:45	<ul> <li>Calking Circles</li> <li>C215: Scientific Evidence &amp; Assessing Impacts in Divergent Ecosystems</li> <li>C225: 2015 Special Focus: 'Whose Climate? Negotiating the Governance of Environmental Change'</li> <li>C400: Technical, Political and Social Responses</li> <li>C485: Human Impacts and Impacts on Humans</li> </ul>
11:45–12:35	Lunch
12:35–13:50	Parallel SessionsC215: Governance, Economics, and InequalitiesC225: Climate Issues in Agriculture and FarmingC400: Global Tipping PointsC485: Social ResponsesTheatre: Late Additions 1 (Check board for additions)
13:50–14:05	Break
14:05–15:45	<ul> <li>Parallel Sessions</li> <li>C215: Political Responses</li> <li>C225: Impacts on Human Health</li> <li>C485: Colloquium: Identifying Climate Change Mitigation Pathways in Canada</li> <li>Threatre: Featured Colloquium: Impacts of Climate Change on Health: A Growing Challenge for Health Systems</li> </ul>
15:45–16:45	Conference Welcome Reception (Held in room C400)



## The International Conference on Climate Change: Impacts and Responses

#### Saturday, 11, April

08:30–09:00	Conference Registration Desk Open
09:00–10:40	Plenary Colloquium - The BC Experience with Climate Change Action
10:40–10:50	Break
10:50–12:05	Parallel Sessions C215: Technical Responses C225: Infrastructures and Sustainability C400: Issues in the Environment C485: Social Responses to Climate Change Theatre: Workshop: Local Government and Transformation to Address Climate Change in British Columbia Communities
12:05–12:50	Lunch
12:50–13:35	Parallel Sessions C400: Featured Workshop: What Works in Fostering Behaviour Change on Global Warming? A Synthesis of Social Mobilization Research in British Columbia Theatre Lobby: Poster Session
13:35–13:45	Break
13:45–15:00	Parallel Sessions C215: Natural Resources and Change Scenarios C225: Geopolitics and Adaptive Measures C400: Anthropogenic Factors in Climate Change C485: Institutional Responses and Strategies Theatre: Change Adaptation
15:00–15:10	Break
15:10–16:25	Parallel Sessions C215: The Policies and Politics of Changing Climates C225: Mitigation and Reparation C400: Impacts on Humans C485: Climate Change Responses Theatre: Late Additions <i>(Check board for additions)</i>
16:30–17:00	Closing Session (Held in the Theatre)



#### **VENUE MAP**

The conference will be held in the rooms marked with a black star below. All rooms are located on the Classroom Level of UBC Robson Square.



#### CONFERENCE PARTNER: PACIFIC INSTITUTE FOR CLIMATE SOLUTIONS

The International Conference on Climate Change: Impacts and Responses is pleased to partner with The Pacific Institute for Climate Solutions (PICS). PICS pulls together the intellectual capital of the province into a dynamic knowledge network that integrates multi-disciplinary approaches to climate change. PICS will be sponsoring a public lecture on 9 April at UBC Robson Square and giving a colloquium on the morning of the 11th titled "The BC Experience with Climate Change Action." This colloquium will focus on several facets of the British Columbia experience with climate change action including carbon tax impacts, the carbon neutral government experience, forest adaption planning, liquified natural gas issues, and much more. In addition, PICS will be giving featured parallel sessions focusing on such issues as health and encouraging behavior changes. For more information about PICS and please visit their website: http://pics.uvic.ca/



### Pacific Institute for Climate Solutions

Knowledge. Insight. Action.

#### **CONFERENCE HIGHLIGHTS**

#### **Special Events**

Evening Lecture with Dr. Gavin Schmidt Thursday, 9 April—19:00–20:30

**Description:** The Pacific Institute for Climate Solutions and the Climate Change Conference are delighted to host an evening lecture with Dr. Gavin Schmidt on 9 April at UBC Robson Square. Dr. Gavin Schmidt is the Director of the Goddard Institute for Space Studies at the National Aeronautics and Space Administration (NASA) and recently gave a TED talk on the emergent patterns of climate change.

#### About Dr. Gavin Schmidt

His main research interest lies in understanding the variability of the climate, both its internal variability and the response to external forcing. In particular, how changes related to varying forcings relate to variations due to intrinsic (unforced) climate variability such as oscillations in the ocean's deep thermohaline circulation that affect ocean heat transports or atmospheric modes of variability like the North Atlantic Oscillation. He mainly uses large-scale Earth System Models for the atmosphere, ocean, ice and land to investigate these questions. The most recent update to the GISS ModelE is described in Schmidt et al. (2014a).

He is particularly interested in ways in which model skills can be evaluated over the instrumental period and in paleo-climate records, with a focus on periods that might provide key constraints on the system (Schmidt, 2010). He recently coordinated a white paper on how these measures of skill in representing past climate changes can be directly used to inform future projections (Schmidt et al, 2014b).

The evidence of long term paleo-climate variability exists primarily in the form of proxy data recorded in deep sea cores, ice cores, tree rings and other proxies such as the the skeletal remains of corals or in speleothems (cave deposits). The main difficulty is that the proxy data are records of multiple processes and hence, it is difficult to unambiguously ascribe a climatic cause to any particular recorded event, hence incorporating 'forward models' of the proxies themselves is a key step in being able to assess the proxy 'fingerprints' of change.

#### Reception Friday, 10 April—15:45–16:45

**Description:** On 10 April the Climate Change Conference and Common Ground Publishing will be holding a welcome reception at the conference venue after the last session of the day. Join delegates and plenaries for drinks, light hor d'orves and a chance to converse!

#### FEATURED PACIFIC INSTITUTE FOR CLIMATE SOLUTIONS SESSIONS

Colloquium: Impacts of Climate Change on Health: A Growing Challenge for Health Systems Friday, 10 April—14:05–15:45

Tim Takaro, Simon Fraser University and Climate Change Health Policy Group, Vancouver, Canada Sarah Henderson, Centres for Disease Control and University of British Columbia, Vancouver, Canada Carl Lowenburger, Simon Fraser University, Vancouver, Canada Bimal Chhetri, Simon Fraser University and BC Center for Disease Control, Vancouver, Canada Maya Gislason, Simon Fraser University, Vancouver, Canada Stacy Barter, BC Healthy Communities Society, Vancouver, Canada Description: The health impacts of climate are now well documented and range from direct effects such as mortality and

Description: The health impacts of climate are now well documented and range from direct effects such as mortality and morbidity from heat to indirect effects from flooding, waterborne diseases and other shifting infectious disease patterns such as West Nile Virus. Health systems which are major contributors to greenhouse gas production themselves are not well equipped to address these impacts. An additional challenge is that vulnerability to the health impacts of climate change are not evenly distributed in the population. This session will describe heat related illness, gastrointestinal disease linked to extreme weather events, and changes in habitat suitable for infectious disease vectors. It will conclude with a with a focus on vulnerable populations in both global and local contexts and a discussion of policy efforts to reduce the sector's carbon footprint in British Columbia while improving the capacity for Public Health to respond to future impacts of climate change.

*Plenary Colloquium: The BC Experience with Climate Change Action* Saturday, 11 April—9:00-10:40

Thomas F. Pedersen, Pacific Institute for Climate Solutions, University of Victoria, Victoria, BC, Canada Suzanne Spence, BC Ministry of Environment, Victoria, BC, Canada

Werner Kurz, Pacific Forestry Centre, Natural Resources Canada, Victoria, BC, Canada

Matt Horne , Pembina Institute, Vancouver, BC, Canada

Malcolm Shields, City of Vancouver, BC, Canada

**Description:** In 2007 and 2008, the Government of British Columbia set out an ambitious and multi-pronged legislative agenda, designed to address the climate challenge. Emissions reductions targets were legislated, carbon-neutrality for government and public institutions became mandatory, municipalities were required to reduce emissions, an offsets program was introduced that had implications for forest management, and a comprehensive, escalating carbon emissions tax was imposed. In more recent years, natural gas produced by fracking has vaulted ahead of climate action as a primary focus of government. This session will explore each of these five topics and describe successes as well as issues that have arisen after the heady days of climate action in 2007 and 2008. British Columbia's innovative carbon tax program has been internationally applauded not just for its success but for the design elements that were critical to making progress. In 2010 BC became the first major jurisdiction in North America to achieve carbon neutral operations. How did that happen? BC's forests have immense capacity to sequester carbon, but realizing that capacity will require both adaptation to a different future climate as well as adjustments to management practices. How can those best be put in place? Vancouver is increasingly seen as a leader in reducing emissions from a major urban city. What sits behind that success? And export of liquefied natural gas from BC has been touted as a climate solution, but is it really? As the session will make clear, British Columbia has made some progress in the area of climate-change mitigation but it faces many challenges–some of them new– that will require concerted action and robust leadership at many levels those challenges are to be appropriately addressed in coming years.

Workshop: What Works in Fostering Behaviour Change on Global Warming? A Synthesis of Social Mobilization Research in British Columbia Saturday, 11 April—12:50-13:35

Stephen Sheppard, University of British Columbia, Vancouver, Canada Deepti Mathew lype, University of British Columbia, Vancouver, Canada

**Description:** The Pacific Institute for Climate Solutions (PICS) has delivered a unique cluster of applied research projects on Social Mobilization, attitudes, and behaviour change around climate solutions, with a particular focus on: resolving social barriers to clean energy solutions; methods for evaluating social mobilization effectiveness; developing new digital media/tools to engage the "silent majority;" improving understanding of the impact of digital media. The original 5 social mobilization research projects have now been completed, together with allied PICS-funded projects, and research/evaluation findings have been documented. These findings come at a crucial time for BC's program on climate action, as communities struggle to meet their Greenhouse Gas (GHG) emission reduction targets, municipalities implement Community Energy and Emissions Plans, and the public hotly debates various energy issues. The objective of this session is to present a unique, substantive research synthesis that draws together the outcomes from empirical data on "what works" in social mobilization in a BC context, suitable for uptake by scientists, educators, practitioners, policy-makers and action groups. Results from various BC communities using different mobilization approaches demonstrate examples of behaviour change & effective practices at the local level. A synthesis White Paper, summarizing overall findings and recommendations for climate action, is planned for release in March 2015.

#### PLENARY SPEAKERS

#### Alex Clapp

Alex Clapp is Associate Dean of the Faculty of Environment and Professor of Geography at Simon Fraser University in British Columbia, Canada. He received his BA in Linguistics in 1983 from Yale, and MA and PhD in Geography in 1993 from the University of California at Berkeley. He taught at the University of Toronto for five years from 1993 to 1998 before coming to Simon Fraser University in 1998. His research interests in environmental policy range from forest conservation and remapping to boundary organizations and the politics of adversarial science.

#### Kathryn Harrison

Kathryn Harrison is Professor of Political Science at the University of British Columbia. She is also a chemical engineer, and started her career working in the Canadian oil sands. She is the author of the book Passing the Buck: Federalism and Canadian Environmental Policy and co-author of Risk, Science, and Politics, and she has edited three volumes, the most recent of which is Global Commons, Domestic Decisions: The Comparative Politics of Climate Change.

#### Matt Horne

Matt Horne is the Pembina Institute's associate director for British Columbia. Drawing on fifteen years of experience with energy and climate change issues in Canada, he is a leading voice on the environmental impacts associated with LNG development and B.C.'s climate policies. His research into LNG has examined opportunities to limit greenhouse gas emissions from the proposed industry, and also looked at LNG and climate change in a global context. He holds a Bachelor of Engineering from Dalhousie University and a Master of Resource and Environmental Management from Simon Fraser University.

#### Werner Kurz

Dr. Werner Kurz is a Senior Research Scientist at the Canadian Forest Service (Natural Resources Canada) in Victoria, BC. He leads the development of Canada's National Forest Carbon Monitoring, Accounting and Reporting System and the Forest Carbon Management Project of the Pacific Institute for Climate Solutions. His research focuses on carbon dynamics in forests and harvested wood products and the opportunities of the forest sector to contribute to climate change mitigation. He co-authored six reports of the Intergovernmental Panel on Climate Change (IPCC). He serves as adjunct professor at the University of British Columbia and at Simon Fraser University.

#### **Thomas Pedersen**

Dr. Thomas Pedersen was appointed Executive Director of the Pacific Institute for Climate Solutions beginning September 1, 2009. His previous positions included Dean of Science (2003-2009), Professor of Oceanography and Director of the School of Earth and Ocean Sciences at the University of Victoria (2002-2003), and Associate Dean, Research for the Faculty of Graduate Studies at the University of British Columbia (2000-mid2002). Pedersen holds a degree in geology from UBC and a PhD in marine geochemistry from the University of Edinburgh. He is a fellow of the Royal Society of Canada and of the American Geophysical Union. He is an internationally recognized authority on ocean chemistry, has published extensively in the field of paleoceanography, and has longstanding interests in climate change issues and the application of government policy to climate-change mitigation and adaptation.

#### Malcolm Shield

Malcolm Shield is Professional Engineer having completed his Masters of Engineering (Hons) at Imperial College, London, and his Doctorate the University of British Columbia. Malcolm joined the City of Vancouver in 2010 and worked on the development of the carbon reduction pathways that underpin the City's Greenest City Action Plan. As Climate Policy Manager, he is responsible for the City's carbon planning, management and reporting as well as the implementation of its decarbonisation strategies.

#### Suzanne Spence

Suzanne Spence is an Executive Director at the BC Climate Action Secretariat, and oversees the provincial Carbon Neutral Government program where she works to achieve greenhouse gas reductions and promote innovative technology across the broader public sector. Her current focus is on leading a shift to greater emissions reductions within the BC public sector. She holds a Master of Business Administration in Executive Management.

## FEATURED WORKSHOP SPEAKERS: WHAT WORKS IN FOSTERING BEHAVIOUR CHANGE ON GLOBAL WARMING? A SYNTHESIS OF SOCIAL MOBILIZATION RESEARCH IN BRITISH COLUMBIA

#### Stephan Sheppard

Dr. Stephan Sheppard is a Professor teaching and conducting research in climate change planning, public perceptions, and visualization in the Faculty of Forestry and Landscape Architecture programme at UBC. He received a BA/MA in Agricultural and Forest Sciences at Oxford, a MSc. in Forestry at UBC, and a Ph.D. in Environmental Planning at UC. Berkeley. He directs the Collaborative for Advanced Landscape Planning, an interdisciplinary research group using perception-testing and immersive/interactive visualization to support public awareness and collaborative planning on climate change and sustainability issues. He has over 35 years' experience in environmental assessment and public participation internationally. He has written or co-written two books on visual simulation, and recently published "Visualizing Climate Change: A Guide to Visual Communication of Climate Change and Developing Local Solutions. This book is the first to provide a comprehensive guide to visual communication of climate change. Current research interests lie in perceptions of climate change and renewable energy, planning for low-carbon resilient communities, and video games as a community engagement/mobilization tool on climate change.

#### Deepti Mathew lype

Deepti Mathew lype is a passionate environmental sustainability and conservation professional, she has over 13 years of experience working in India & Canada in education, community engagement, donor relations and project management. She is currently responsible for coordinating research activities, leading outreach and extension programs, and liaising with community and other stakeholders for sustainability & climate-change related research projects at UBC's Collaborative for Advanced Landscape Planning (CALP). Before joining CALP, she was a Development Officer within the Development and Alumni Engagement portfolio at UBC Faculty of Forestry, where she was responsible for fundraising, community engagement & alumni relations. She also has project management experience, leading strategic educational initiatives at the World Wide Fund for Nature-India (WWF-India) in New Delhi, in addition to promoting environmental and sustainability education and community outreach programs at prominent schools in India.

## FEATURED COLLOQUIUM SPEAKERS: IMPACTS OF CLIMATE CHANGE ON HEALTH: A GROWING CHALLENGE FOR HEALTH SYSTEMS

#### Stacy Barter

Stacy Barter, M. Ed., is a Community Engagement and Learning Specialist with BC Healthy Communities. She has worked for over 20 years with a wide range of communities, not-for-profit and public sector organizations in Canada and Latin America, focusing on sustainable community development, multi-stakeholder collaboration and positive change processes. Most recently her work with BC Healthy Communities has included a focus on public engagement for climate action, the links between health and climate change, and processes to support healthy community development in complex environments. She is co-author of "Building Healthy Communities at the Intersection of Chronic Disease and Climate Change" and "Health Authority Perceptions and Capacity for Action: Health Impacts of Climate Change in BC".

#### Maya Gislason

Dr. Maya Gislason is a member of the Faculty of Health Sciences at Simon Fraser University in Vancouver, Canada.

#### Sarah Henderson

Dr. Sarah Henderson works for the Centres for Disease Control and University of British Columbia in Vancouver, Canada...

#### Carl Lowenburger

Dr. Carl Lowenburger works for the Department of Biological Science at Simon Fraser University in Vancouver, Canada.

#### Tim Takaro

Dr. Tim Takaro is a physician-scientist and Professor in the Faculty of Health Sciences at Simon Fraser University. He was trained in occupational and environmental medicine, public health and toxicology, at Yale, the University of North Carolina and University of Washington. His research is primarily about the links between human exposures and disease, and determining effective public health based preventive solutions to such risks. His current research on human health and climate change focuses on water quality, extreme weather events and gastro-intestinal illness in BC communities and building and mapping watershed vulnerability and resilience in rural Nicaragua. He is Canadian co-chair of the Health Professionals Advisory Board to the International Joint Commission on border waters, Program Committee member for the Pacific Institute for Climate Solutions, and chair of the Climate Change Health Policy Group in BC. Current research collaborations include projects in India, Iraq, Mongolia, Mexico, Nicaragua, the U.S. and Canada.

#### **GRADUATE SCHOLARS**

#### Mukesh Dev Bhattarai

Mukesh Dev Bhattarai is a doctoral candidate under Environmental Resource and Policy Program at Southern Illinois University Carbondale, USA (SIUC). His dissertation focuses on the roles of key ingredients of agriculture in aggravating and/or mitigating impacts of climate change and identification of possible policy instruments to address the impacts of climate change. For his research, he is conducting a life cycle analysis (including carbon footprint) and implementing an interdisciplinary approach (climate science, modeling, economics, management and human behavior) to understanding the real-world impact of climate change on agriculture and business performance and practices. He holds a MS in Environmental Science and Technology from International Institute for Hydraulic and Environmental Engineering and MS in Chemical Engineering from Kirov Forest Science and Technology Academy, St. Pittsburgh, Russia. He is also associated with a SIUC project funded by US National Science Foundation on climate change impact, focusing on agriculture and water resources in the United States heartland. Prior to joining SIUC, he served as a Director, Research and Planning Department of Asian Productivity Organization in Japan.

#### Sabrina Dekker

Sabrina Dekker is currently undertaking her PhD at University College Dublin, where she is researching how cities are addressing the impacts of climate change on human health. Recently, she was a visiting PhD Researcher with the International Centre for Climate Governance (FEEM) in Venice, Italy, where she contributed to their work on climate change and health. Prior to commencing her PhD, Sabrina worked with Sustainable Cities in Vancouver, Canada; researching the implementation of integrated sustainability plans in Canadian and international cities to develop a framework for cities within the Sustainable Cities Plus Network. Sabrina holds a double Master's degree in Public Affairs from Sciences Po (Paris, France) and Public Policy from the Lee Kuan Yew School of Public Policy (LKY) at the National University of Singapore (Singapore). She specialized in Human Security, and Economic and Territorial Development at Sciences Po, and in Public and Global Health Policy, and Urban Development Policy at LKY. During her studies she was involved in the evaluation of Red Cross aid projects in Indonesia; and consulted the Bureau International des Expositions in the development of an evaluation framework for EXPO host cities.

#### Adekunle Dosumu

Adekunle Dosumu is a PhD candidate at School of Biological Sciences, University of Essex, Colchester, UK. He completed a BSc (Hons.) in Zoology and MSc in Ecology/ Environmental Biology at University of Ibadan, Nigeria. His PhD research is on environmental impact and wellbeing benefits of spectator and participant dominated sport. He is currently an Instructor Service Operator and an Environmental Champion with Transport for London (TfL). He is a member of Institute of Environmental Management and Assessment (IEMA), Essex Sustainability Institute (ESI), The Aerosol Society, The Institute of Environmental Sciences and Chartered Institute of Waste Management (CIWM). He is interested in environmental management, environmental sustainability, workplace safety and public health. He is very passionate about preserving the natural environment. His latest publication is on Greenhouse Gas Emissions: Contributions Made by Football Clubs in England.

#### Eric Kretsch

Eric Kretsch is a graduate student in the Department of Marine Affairs at the University of Rhode Island (URI). In May 2014, he graduated from URI with a B.S. in Marine Affairs and Environmental and Natural Resource Economics. While attending URI, he secured summer internships with the U.S. FWS, Marine Biological Laboratory, and the U.S. EPA. In his junior and senior year, he was an EPA Greater Research Opportunities Fellow and participated in independent research looking into the possible economic benefits of upgrading combined sewer overflows in Providence, RI. In December of 2014, he received an Enhancement of Graduate Research Award from the URI Graduate School to help conduct his thesis research. His current research interests pertain to protecting and preparing coastal infrastructure for increased sea level rise and storm surge inundation. He is also interested in investigating port vulnerably to storm events and the economic benefits of adapting our coasts to climate change, including modelling the cost-benefit of adaptation strategies.

#### Hamed Hakim

Hamed Hakim is a Ph.D. student at the University of Florida and is working as a graduate research assistant at Powell Center for Construction & Environment. Parallel to his Ph.D. in Construction Management, He is following a Master of Science in Finance at Warrington College of Business Administration. He received his B.Sc. in Civil Engineering with an emphasis on Water Resources from Isfahan University of Technology and his M.Sc. in Construction Engineering Management from University of Florida. Since 2012, he has devoted his time to study and conduct research on green buildings and the sustainable built environment. He has written case-studies and paper publications on the status of Net-Zero Energy Schools and is developing this topic over the course of his Ph.D. He has over three years of working experience as a project engineer in commercial building projects, as well as experience in the heavy civil construction.

#### **Dellarue Howard**

Dellarue Howard is a Ph.D student in the School of Planning at the University of Waterloo. His research explores the linkages between community planning and climate change adaptation, within the context of Small Island Developing States. His research is part of the Partnership for Canada-Caribbean Climate Change Adaptation (ParCA) project which include researchers from across Canada and the Caribbean who are examining various aspects of climate change adaptation. Prior to commencing his PhD, he worked as a Project Officer with the Caribbean Network for Urban and Land Management (CNULM) based at the University of the West Indies, Trinidad and Tobago. There he assisted in the implementation of European Union grant funded projects aimed at building capacity in urban planning within the Caribbean. His professional experience also includes over seven years as a secondary school teacher in Jamaica and Japan, where he taught Geography and conversational English respectively. He enjoys travelling and experiencing new cultures.

#### Lindsay Luke

Lindsay Luke has worked in resource management and environmental assessment throughout British Columbia and in the Northwest Territories. She is an alumna from Camosun College and Royal Roads University in BC. She is currently a graduate student at the University of Saskatchewan.

#### Miriam Matejova

Miriam Matejova is a PhD student of Political Science, a Vanier Scholar, a Killam Laureate and a Liu Scholar at the University of British Columbia in Vancouver. Her research interests are international security and global environmental politics. She has written and co-authored papers on international peacebuilding, Canada's foreign intelligence, and environmental security. Prior to coming to UBC, Miriam worked as an analyst at the Canadian International Development Agency and as an economist at Environment Canada where she specialized in federal environmental impact assessment and protection of species at risk. Miriam holds a BA (Hons) in International Studies from the University of Northern British Columbia and an MA in International Affairs from Carleton University's Norman Paterson School of International Affairs.

#### Kelly Stevens

Kelly Stevens grew up in Rochester, New York before moving to Tallahassee, Florida in pursuit of a master's in meteorology at Florida State University, and later a master's in public administration from the same institution. While in Florida, she also worked as a meteorologist at the Florida Department of Environmental Protection's Division of Air Resource Management in the Office of Policy Analysis and Program Management for over five years. During her time in Florida, she worked on Florida's electric utility greenhouse gas cap-and-trade rule development, co-authoring a study on offset protocols that was later published in the International Journal of Climate Change Strategies and Management. Currently, she is a PhD candidate in public administration and international affairs at the Maxwell School at Syracuse University. She works with Peter Wilcoxen and David Popp in the Center for Policy Research on energy, environmental, and technology policy research. Her dissertation focuses on changes in natural gas capacity and utilization.

## FRIDAY, 10 APRIL



8:00-9:00	REGISTRATION DESK OPEN
9:00-9:15	CONFERENCE OPENING: PHILLIP KALANTZIS-COPE, COMMON GROUND PUBLISHING, USA
9:15-9:30	CONFERENCE WELCOME: THOMAS F. PEDERSEN, PACIFIC INSTITUTE FOR CLIMATE SOLUTIONS, CANADA
9:30-10:00	PLENARY SESSION: KATHRYN HARRISON, UNIVERSITY OF BRITISH COLUMBIA, CANADA
10:00-10:30	PLENARY SESSION: ALEX CLAPP, SIMON FRASER UNIVERSITY, CANADA
10:30-11:00	BREAK AND GARDEN SESSION (KATHRYN HARRISON GARDEN SESSION HELD IN C400. ALEX CLAPP GARDEN SESSION HELD IN C215)
11:00-11:45	TALKING CIRCLE
C215	Talking Circle: Scientific Evidence & Assessing Impacts in Divergent Ecosystems
C225	Talking Circle: 2015 Special Focus: 'Whose Climate? Negotiating the Governance of Environmental Change'
C400	Talking Circle: Technical, Political and Social Responses
C485	Talking Circle: Human Impacts and Impacts on Humans
11:45-12:35	LUNCH
12:35-13:50	PARALLEL SESSIONS
C215	Governance, Economics, and Inequalities
	California's Push to Transform to a Low Carbon Society: Is It Doomed by the Booming US Shale Market? Dr. Nilmini Silva-Send, Energy Policy Initiatives Center, University of San Diego, San Diego, USA Overview: California's AB32 to reduce GHGs will "re-make California's entire energy economy." Will vast shale oil and gas in the US and perhaps even in California derail this transformation? Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change
	Causal Responsibility, Asymmetric Opportunity and Inequality in Anthropogenic Climate Change: A Behavioral Economics Model of Climate Change Negotiations Dr. Nicholas Alan Seltzer, <i>Department of Political Science, University of Nevada, Reno, Reno, USA</i> Dr. Reuben Kline, <i>Department of Political Science, Stony Brook University, Stony Brook, USA</i> <i>Overview:</i> We introduce an experimental game that captures the interdependent social dilemma of anthropogenic climate change and its mitigation, and present the results of experiments conducted in the US and China. <i>Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change</i>
	Climate Change Adaptation: How Do We Know We're Winning? Dr. John Labadie, Seattle, USA Overview: Adaptation is a diffuse, complex activity. Evaluation is a useful tool in managing adaptation programs. It adds value to the process. What does "evaluation" look like in the adaptation context? Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change
C225	Climate Issues in Agriculture and Farming
	The Investigation of Farmers Adaptive Capacity: A Case Study in the West of Iran Behrooz Rasekhi, Department of Agronomy, College of Agriculture, Kermanshah Branch, Islamic Azad University, Kermanshah, Iran (Islamic Republic of) Hasan Sedighi, Department of Agricultural Extension and Education, University of Tarbiat Modares, Iran., Tehran, Iran (Islamic Republic of) Mohammad Chizari, Department of Agricultural Extension and Education, University of Tarbiat Modares, Iran., Tehran, Iran (Islamic Republic of) Mohammad Chizari, Department of Agricultural Extension and Education, University of Tarbiat Modares, Iran., Tehran, Iran (Islamic Republic of) Overview: Adaptive capacity is the ability of individuals and groups to adapt or adjust to climate variability and change and accommodate shock and stress to systems. Theme: Human Impacts and Impacts on Humans
	The Vulnerability of Small-holder Agriculture to Climate Change in Boset Woreda, Oromia Region, Ethiopia Emebet Bekele, Institute of Natural Resources and Environmental Management, Port Harcourt, Nigeria Overview: This research paper examined vulnerability of smallholder agriculture to climate change by comparing vulnerability indicators. It also assessed the perceptions of farmers on climate change and adaptation measures. Theme: Human Impacts and Impacts on Humans

## FRIDAY, 10 APRIL

12:35-13:50	PARALLEL SESSIONS
C400	Global Tipping Points
	Predicting Global Tipping Points Micha Tomkiewicz, Dept. of Physics, Brooklyn College of CUNY, Brooklyn, USA Rui Yan Ma, Dept. of Physics, Queens College, Queens College, CUNY, Queens, USA Overview: The study will focus on our attempts to predict tipping points in the climate system through critical slowdown and increase variability in time series data. Theme: Scientific Evidence
	Phenological Mapping for Climate Change Research         Prof. Vit Vozenilek, Dept. of Geoinformatics, Palacky University, Olomouc, Olomouc, Czech Republic         Dr. Radim Tolasz, Climate Change Department, Czech Hydrometeorological Institute, Praha 4 - Komořany, Czech         Republic         Dr. Lenka Hajkova, Meteorology and Climatology Division, Czech Hydrometeorological Institute, Usti nad Labem, Czech         Republic         Dr. Alena Vondrakova, Dept. of Geoinformatics, Palacky University, Olomouc, Olomouc, Czech Republic         Ales Vavra, Dept. of Geoinformatics, Palacky University, Olomouc, Olomouc, Czech Republic         Overview: The authors employed spatial analysis of twenty-year series of phenological observations. They came to the conclusion that there was a shift in the onset of phenological phases in 1991-2010.         Theme: Scientific Evidence
	Regional Differences of the Dust Events in Mongolia Amgalan Ganbat, Department of Atmospheric Sciences, National Central University of Taiwan, Jhongly, Taiwan Prof. Gin-Rong Liu, Center for Space and Remote Sensing Research, National Central University, Jhongli, Taiwan Overview: We discuss the regional differences in the characteristics of relationships among frequencies of dusty day(sum of dust storm and drifting dust), surface wind and precipitation during 2000-2013 in Mongolia. Theme: Scientific Evidence
C485	Social Responses
	ENGOs, Informal Social Networks, and Mobilizing the Public to Deal with Climate Change Dr. David B. Tindall, <i>Department of Sociology, University of British Columbia, Vancouver, Canada</i> Georgia Piggot, <i>Department of Sociology, University of British Columbia, Vancouver, Canada</i> <i>Overview:</i> This study examines the social influence of environmental movement members on climate change attitudes in the Canadian general public. <i>Theme: Technical, Political and Social Responses</i>
	Blame Canada: Environmental Movements, National Media, and Canada's Reputation as a Climate Villain Dr. Mark CJ Stoddart, Department of Sociology, Memorial University, St. John's, Canada Jillian Smith, Department of Sociology, Memorial University, St. John's, Canada Dr. David B. Tindall, Department of Sociology, University of British Columbia, Vancouver, Canada Overview: We examine how Canadian national news coverage provided space for environmental organizations to use the 2009 Copenhagen COP-15 meetings to "name and shame" Canada for its poor environmental performance. Theme: Technical, Political and Social Responses
	Challenges in Mainstreaming Climate Change Adaptation into Local Land Use Planning: Evidence from Albay, Philippines Sining C. Cuevas, School of Geography, Planning, and Environmental Management, University of Queensland, Brisbane, Australia Dr. Ann Peterson, School of Geography, Planning and Environmental Management, University of Queensland, Brisbane
	Australia Dr. Tiffany Morrison, School of Geography, Planning and Environmental Management, University of Queensland, Brisbane, Australia Dr. Tiffany Morrison, School of Geography, Planning and Environmental Management, University of Queensland, Brisbane, Australia Dr. Catherine Robinson, Commonwealth Scientific and Industrial Research Organisation, Brisbane, Australia Overview: This study offers empirical evidence on the barriers and opportunities for mainstreaming climate change adaptation into local land use planning in Albay, Philippines.

12:35-13:50	PARALLEL SESSIONS
Theatre	Late Additions 1 (Check board for additions)
	The Effect of Climate Change on the Occurrence of Pests and Diseases on Potatoes in Benguet Province Ms. Hilaria Badival, <i>Research, Department of Agriculture-Cordillera Administrative Region, Baguio City, Philippines</i> <i>Overview:</i> This paper is focused on the effect of climate on the occurrence of pests and diseases in the production of the potato. <i>Theme: Technical, Political and Social Responses</i>
	Analyzing the Mitigation Potential of Climate Change through Soil Organic Carbon Sequestration in a Corn Belt Watershed Mukesh Bhattarai, <i>Environmental Resources and Policy Program, Southern Illinois University Carbondale (SIUC)</i> ,
	Carbondale, USA Overview: The sequestration of carbon through facilitating the retention of the soil's organic carbon constitutes one of the main possibilities for climate change in mitigating agriculture's contributions to global warming. Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change
13:50-14:05	BREAK
14:05-15:45	PARALLEL SESSIONS
C215	Political Responses
	Urban Climate Action Planning: Demonstration of GHG Mitigation Tool for Analysis of Local Energy and Climate Policies Elizabeth Johnston, Energy Policy Initiatives Center, University of San Diego, San Diego, USA Dr. Nilmini Silva-Send, Energy Policy Initiatives Center, University of San Diego, San Diego, USA Overview: California cities must do their fair share to reduce GHGs from local policies. We will demonstrate our mitigation tool used to help cities analyze local policies. Theme: Technical, Political and Social Responses
	The Implications of a US Border Tax Adjustment on Carbon Intensive Goods for Treaty Formation Dr. Ross Astoria, <i>Department of Politics, Philosophy, and Law, Kensoah, USA</i> <i>Overview:</i> This paper consider the best way to design a US border tax adjustment on imported carbon intensive goods so as to facilitate effective treaty formation. <i>Theme: Technical, Political and Social Responses</i>
	Making Carbon Pricing Work without Global Agreement Dr. Jane N. O'Sullivan, School of Agriculture and Food Sciences, The University of Queensland, Brisbane, Australia Overview: Choice of carbon pricing system is critical to mitigation. International carbon trading presents many barriers to sufficient and equitable change. A consumption-based tax is explained which enables strong unilateral action. Theme: Technical, Political and Social Responses

14:05-15:45	PARALLEL SESSIONS
C225	Impacts on Human Health
	Planning for the Impacts of Climate Change on Human Health: A Focus on Cities Sabrina Dekker, School of Geography, Planning, and Environmental Policy, University College Dublin, Coquitlam, Canada Overview: The objective of this paper is to determine how cities are planning for the impacts of climate change on human health, especially as they strive to make cities resilient. Theme: Human Impacts and Impacts on Humans
	Climate Challenges: Development of Heat Adaptation Strategies for the Elderly Assoc. Prof. Hans-Peter Hutter, Institute of Environmental Health, Center for Public Health, Medical University Vienna, Austria, Vienna, Austria Assoc. Prof. Dr. Arne Arnberger, Institute of Landscape Development, Recreation and Conservation Planning, University of Natural Resources and Life Sciences Vienna, Vienna, Austria Brigitte Allex, Institute of Landscape Development, Recreation and Conservation Planning, University of Natural Resources and Life Sciences Vienna, Vienna, Austria Dr. Renate Eder, Institute of Landscape Development, Recreation and Conservation Planning, University of Natural Resources and Life Sciences Vienna, Vienna, Austria Prof. Franz Kolland, Institute of Sociology, University of Vienna, Vienna, Austria Prof. Beate Blaettner, Department of Nursing and Health Science, University of Applied Sciences Fulda, Fulda, Germany Prof. Annette Grewe, Department of Nursing and Health Sciences, University of Applied Sciences Fulda, Fulda, Germany Prof. Michael Kundi, Institute of Environmental Health, Center for Public Health, Medical University Vienna, Austria, Vienna, Austria Dr. Peter Wallner, Medicine and Environmental Protection, Vienna, Austria, Vienna, Austria Overview: The STOPHOT-project is the first investigation in Austria to establish a comprehensive knowledge base on heat perception, awareness of heat risks and adaptive/coping behaviors among older adults.
	The Health Impacts of Severe Climate Shocks in Colombia Mauricio Giovanni Valencia-Amaya, Faculty of Economics, Universidad del Rosario & Universidad de Antioquia, Bogotá D.C., Colombia Dolores de la Mata, Buenos Aires, Argentina Overview: This paper studies the link between severe weather shocks in Colombia and municipality-level incidence of dengue and malaria, using a differences-in-differences strategy. Theme: Human Impacts and Impacts on Humans
	Impact of Climate Change on Seniors' Health in Ibadan, Oyo State, Nigeria Aina Thompson Adeboyejo, Department of Urban and Regional Planning Faculty of Environmental Sciences, Ladoke Akintola University of Technology, Ogbomoso Nigeria., Ogbomoso, Nigeria Aluko Oluwapelumi Esther, Department of Urban and Regional Planning, : Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria Olamiju John Kehinde, Department of Urban and Regional Planning, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Ogbomoso, Nigeria Overview: This study examines the impact of climate change on seniors' health in Ibadan, South-Western Nigeria. The incidence and variations of climate related diseases were correlated with climatic parameters. Theme: Human Impacts and Impacts on Humans

## FRIDAY, 10 APRIL

14:05-15:45	PARALLEL SESSIONS
C485	Colloquium
	Identifying Climate Change Mitigation Pathways in Canada Catherine Potvin, Department of Biology, McGill University, Montreal, Canada Ashlee Cunsolo-Willox, Nursing, cross-appointed in Indigenous Studies, Cape Breton University, Canada Lauchlan Fraser, Natural Resource Sciences and Biological Sciences, Thompson Rivers University, Canada Alain Bourque, Founder and Coordinator of Impacts and Adaptation program, Canada John Robinson, Institute for Resources, Environment & Sustainability, and Dept. of Geography Organization, University of British Columbia, Canada Dr. Stephen Sheppard, Collaborative for Advanced Landscape Planning (CALP) Dept. of Forest Resources Management/ School of Architecture and Landscape Architecture, University of British Columbia, Vancouver, Canada Sally Aitken, Forest and Conservation Sciences, University of British Columbia, Canada Dr Fikret Berkes, Natural Resources Institute, University of Manitoba, Winnipeg, Canada Rosine Faucher, Political Science, McGill University, Montreal, Canada Tarah Wright, Environmental Science, Dalhousie University, Truro, Canada Natalie Richards, Biology, McGill University, Montreal, Canada Dr. Mark CJ Stoddart, Department of Sociology, Meroral, Canada Dr. Mark CJ Stoddart, Department of Sociology, Meroral, Canada Overview: Visioning, visualization and scenario building has been used in rural/urban settings across Canada, identifying desired technology, policy, community responses to climate change to suggest socially acceptable mitigation pathways. Theme: Technical, Political and Social Responses
Theatre	Featured Colloquium
	Impacts of Climate Change on Health: A Growing Challenge for Health Systems Dr. Tim Takaro, Faculty of Health Science, Simon Fraser University and Climate Change Health Policy Group, Vancouver, Canada Dr. Sarah Henderson, Centres for Disease Control and University of British Columbia, Vancouver, Canada Dr. Carl Lowenburger, Dept Biological Science, Simon Fraser University, Vancouver, Canada Bimal Chhetri, Faculty of Health Sciences, Simon Fraser University and BC Center for Disease Control, Vancouver, Canada Dr. Maya Gislason, Faculty of Health Sciences, Simon Fraser University, Vancouver, Canada Stacy Barter, BC Healthy Communities Society, Vancouver, Canada Overview: This colloquium will describe health system response needed to address the impacts of climate change, including heat-related mortality, infectious diseases and the identification of vulnerable populations. Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change
15:45-16:45	CONFERENCE RECEPTION

8:30-9:00	REGISTRATION DESK OPEN
9:00-10:40	PARALLEL SESSIONS
Theatre	The BC Experience with Climate Change Action Matt Horne, Pacific Institute for Climate Solutions, Vancouver, Canada Dr. Werner Kurz, Canadian Forest Service (Natural Resources Canada), Canada Suzanne Spence, BC Climate Action Secretariat, Canada Malcolm Shield, City of Vancouver, Vancouver, Canada Tom Pedersen, The Pacific Institute for Climate Solutions, Vancouver, Canada Overview: This session will explore several topics and describe successes as well as issues that have arisen after the days of climate action in 2007 and 2008. Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change
10:40-10:50	BREAK
10:50-12:05	PARALLEL SESSIONS
G215	<ul> <li>Iechnical Hesponses</li> <li>Utilization of Natural Gas Capacity in Response to US Clean Power Plan</li> <li>Kelly Ann Stevens, <i>Center for Policy Research, Maxwell School of Citizenship and Public Affairs, Syracuse University, Syracuse, USA</i></li> <li><i>Overview:</i> This study evaluates the factors that have influenced utilization of natural gas power plants in order to make policy recommendations for state-level compliance with the U.S. EPA's Clean Power Plan.</li> <li><i>Theme: Technical, Political and Social Responses</i></li> <li>Impacts of Sea Level Rise on Wastewater Infrastructure</li> <li>Dr. Phillip Thompson, <i>Center for Environmental Justice and Sustainability, Seattle University, Seattle, USA</i></li> <li><i>Overview:</i> This paper discusses mitigation strategies for protecting wastewater infrastructure in Seattle from sea level rise.</li> <li><i>Theme: Technical, Political and Social Responses</i></li> <li>Applying the PMBOK Response Planning Standards to Sea-Level Rise in Florida: Risk Mitigation Solutions for Florida Infrastructure</li> <li>Dr. Maryam Mirhadi Fard, <i>Powell Center for Construction &amp; Environment, University of Florida, Gainesville, USA</i></li> <li>Hamed Hakim, <i>Powell Center for Construction &amp; Environment, University of Florida, Gainesville, USA</i></li> <li>Prof. Charles J. Kibert, <i>Powell Center for Construction &amp; Environment, University of Florida, Gainesville, USA</i></li> <li>Prof. Charles J. Kibert, <i>Powell Center for Construction &amp; Environment, University of Florida, Gainesville, USA</i></li> <li><i>Overview:</i> This paper proposes a methodology for assessing both the risks to Florida infrastructure posed by sea level rise and proposed engineering and relocation mitigation strategies.</li> <li><i>Theme: Technical, Political and Social Responses</i></li> </ul>
C225	Infrastructures and Sustainability Impact of Climate Change on Critical Infrastructure and Security Dr. Linda Kiltz, School of Public Policy and Administration, Walden University, Silverdale, USA Overview: This paper analyzes how climate change vulnerability will impact critical infrastructure in the U.S. and how it is linked to security. Theme: Human Impacts and Impacts on Humans Biodiversity and Climate Change in Central Africa: Perceptions, Attitudes and Policies Dr. Trevon Fuller, Institute of the Environment and Sustainability, University of California, Los Angeles, Los Angeles, USA Anthony Trochez, Department of Education, University of California, Los Angeles, USA Thomas P. Narins, Department of Geography, University of California, Los Angeles, USA Dr. Thomas Smith, Center for Tropical Research, Institute of the Environment and Sustainability, University of California, Los Angeles, USA Dr. Walter Allen, Graduate School of Education and Information Studies, University of California, Los Angeles, Los Angeles, USA Overview: This study develops a framework for conserving the biodiversity of the Central African rainforest under climate change that is informed by the socioeconomic constraints of the region.

10:50-12:05	PARALLEL SESSIONS
C400	Issues in the Environment
	The Carbon Capturing Mechanism Using Peat Treatment in Cameron Highland Malaysia
	ShunYing Kwang, KC Kwang & Sons Ltd., Cameron Higland, Malaysia EeFu Kwang, 33, Lorry Store Main Road Kampong Raja, 39010, KC Kwang & Sons Pte Ltd, Cameron Highland, Malaysia
	Davis Tee, R&D & HSE, KC Kwang & Sons Pte Ltd, Cameron Highland, Malaysia Dr. Ching Seong Tan, R&D, K. C Kwang & Sons Pte Ltd & Multimedia University, Cameron Highland, Malaysia Overview: We aim to reduce CO2 emission and develop best management practices for highland agricultural activities in Cameron Highland Malaysia. We propose to infuse peat treatment into the current land use. Theme: Assessing Impacts in Divergent Ecosystems
	How Traveling Athletes Affect the Environment
	Adekunie Dosumu, School of Biological Sciences, University of Essex, Colchester, UK Overview: Running is among the popular sports in the UK. Greenhouse gas (GHG) emissions from travel of participants to running clubs, parks and the gym could have significant environmental impact. Theme: Scientific Evidence
	Modeling Greenhouse Gas Emission in Evacuation Traffic: The Case of Hurricane Rita Evacuation in 2005 Dr. Praveen Maghelal, Department of Public Administration, University of North Texas, Denton, USA Dr. Xiangyu Li, Department of Political Science and Criminal Justice, West Texas A&M University, Canyon, USA Overview: This is one of first studies that estimates the CO2 emission resulting from mass evacuation during natural disasters.
0.405	Theme: Assessing impacts in Divergent Ecosystems
C485	Social Responses to Climate Change
	Perceived Risk, Uncertainty, and the Commons Dilemma Prof. Gary Pickering, <i>Environmental Sustainability Research Centre, Brock University, St Catharines, Canada Overview:</i> This study establishes the contribution of perceived powerlessness, perceived risk, uncertainty, and the commons dilemma in influencing inaction on climate change in Canadian adults. <i>Theme: Technical, Political and Social Responses</i>
	A Web Platform for Capitalizing on High-resolution Projections in Applications on Regional Climate Change
	Dr. Yingjiu Bai, Graduate School of Media and Governance, Keio University, Fujisawa, Japan
	Prof. Ikuyo Kaneko, Graduate School of Media and Governance, Keio University, Fujisawa, Japan
	Prot. Hiroaki Nishi, Graduate School of Science and Technology, Kelo University, Yokohama, Japan Dr. Hidetaka Sasaki, Atmospheric Environment and Applied Meteorology Research Department, Meteorological Research
	Institute, Isukuba, Japan Dr. Akihiko Murata, Atmospheric Environment and Applied Meteorology Research Department, Meteorological Research Jestitute, Taylaya, Japan
	Kazuo Kurihara, Atmospheric Environment and Applied Meteorology Research Department, Meteorological Research Institute, Tsukuha, Japan
	Dr. Izuru Takayabu, Atmospheric Environment and Applied Meteorology Research Department, Meteorological Research Institute, Tsukuba, Japan
	Overview: This methodology could be transferred to developing countries via the Internet. Theme: Technical, Political and Social Responses
	Increased Temperature Affects Human Skin Cells Increasing Skin Cancer Risk: Increased Temperature
	Prof. Melanie Ziman, School of Medical Sciences, Edith Cowan University, Perth, Australia
	Leslie Calapre, School of Medical Science, Edith Cowan University, Perth, Australia
	Dr. Elin Gray, School of Medical Sciences, Edith Cowan University, Perth, Australia Dr. Pascal Descargues, Genoskin, Toulouse, France
	<i>Overview:</i> Investigation of the effects of increased temperatures and UV exposure on skin cells in vitro and ex vivo show cellular and molecular changes associated with increased risk of skin cancer. <i>Theme: Human Impacts and Impacts on Humans</i>

10:50-12:05	PARALLEL SESSIONS
Theatre	Workshop
	Local Government and Transformation to Address Climate Change in British Columbia Communities Meg Holden, Urban Studies Program and Geography Department, Simon Fraser University, Vancouver, Canada Dr. Ann Dale, School of Environment and Sustainability, Royal Roads, Victoria, Canada Dr. Stephen Sheppard, Collaborative for Advanced Landscape Planning (CALP) Dept. of Forest Resources Management/ School of Architecture and Landscape Architecture, University of British Columbia, Vancouver, Canada Dr. John Robinson, Institute for Resources, Environment and Sustainability, University of British Columbia, Vancouver, Canada Alastair Moore, School of Environment, Education and Development, University of Manchester/Royal Roads University, Vancouver, Canada Eric Brown, Urban Studies, Simon Fraser University, Vancouver, Canada Dr. Mark Stevens, School of Community and Regional Planning, University of British Columbia, Vancouver, Canada Overview: We reflect on policy innovation and action at the local government level in BC communities. Hear case study research on BC community leaders of particular climate change policy and action. Theme: Technical, Political and Social Responses
12:05-12:50	LUNCH
12:50-13:35	PARALLEL SESSIONS
C400	Featured Workshop
	What Works in Fostering Behaviour Change on Global Warming? A Synthesis of Social Mobilization Research in British Columbia Dr. Stephen Sheppard, Collaborative for Advanced Landscape Planning (CALP) Dept. of Forest Resources Management/ School of Architecture and Landscape Architecture, University of British Columbia, Vancouver, Canada Deepti Mathew Iype, Collaborative for Advanced Landscape Planning (CALP) Department of Forest Resources Management, Faculty of Forestry, University of British Columbia, Vancouver, Canada Overview: This synthesis will summarize and showcase success stories, lessons learned, and implications revealed by a cluster of Social Mobilization research projects supported by the Pacific Institute for Climate Solutions. Theme: Scientific Evidence

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12:50-13:35	PARALLEL SESSIONS
Theatre	Posters
Lobby	Lifecycle Analysis of Greenhouse Gas Emissions from the Mining and Milling of Uranium in Saskatchewan David Parker, <i>Civil &amp; Geological Engineering, University of Saskatchewan, Saskatoon, Canada</i> <i>Overview:</i> This study presents a detailed study of lifecycle greenhouse gas emissions during the uranium mining-milling phase of the nuclear fuel cycle for three paired mine-mill operations in northern Saskatchewan. <i>Theme: Technical, Political and Social Responses</i>
	Effects of Climate Change Considerations in Environmental Impact Assessment: The Case of British Columbia's Natural Gas Sector Lindsay Luke, Department of Geography, University of Saskatchewan, Saskatoon, Canada Dr. Bram Noble, Department of Geography and Planning, University of Saskatchewan, Saskatoon, Canada Overview: This research examines the effects of climate change considerations on the environmental impact assessment process with a focus on British Columbia's natural gas industry. Theme: Technical, Political and Social Responses
	Nursing Educators and Climate Change: An Attitudinal Study Dr. Phyllis Eide, College of Nursing, Washington State University, Spokane, USA Overview: Incorporating knowledge about climate change's health impacts into nursing education curricula requires understanding about educators' attitudes regarding the topic, which will drive decisions as to course content. Theme: Technical, Political and Social Responses
	The Soil Profile Temperature under Agricultural and Natural Ecosystems Dr. Abdirashid Elmi, Environmental Technology Management Department, Kuwait University, Kuwait, Kuwait Overview: This study attempts to answer the question of whether or not soil temperature changes can be used as a reliable indicator of global climate change under hot and desert ecosystems. Theme: Assessing Impacts in Divergent Ecosystems
	Emergence of No-analog Bioclimates in British Columbia: New Methods for Measuring Analog Goodness-of-fit in Bioclimate Envelope and Species Distribution Modeling Colin Mahony, <i>Department of Forest and Conservation Sciences, University of British Columbia, Vancouver, Canada Overview:</i> We propose a new method for detection of novel bioclimates in climate change projections. Preliminary results indicate emergence of substantially novel climates in coastal British Columbia. <i>Theme: Assessing Impacts in Divergent Ecosystems</i>
	Fracking Field Trips Matthew Jenkins, Department of Art, Metropolitan State University of Denver, Denver, USA Overview: This study offers a collection of photographs of field trips to hydraulic fracturing sites in Colorado. Theme: Human Impacts and Impacts on Humans
	Forest Development and Removal of Environmental Pollutants through Nationally Appropriate Mitigation Actions Zahra Zakeralhosseini, <i>Department of Environment, Tehran, Iran (Islamic Republic of)</i> <i>Overview:</i> This is a multi-purpose solution using Multi-Criteria Approach (MCA)to remove environmental pollutants caused by increasing greenhouse gases through NAMAs. <i>Theme: Human Impacts and Impacts on Humans</i>
	Impacts of Climate and Sea-level Changes on the Mangroves from Brazilian Littoral Prof. Marcelo Cancela Lisboa Cohen, <i>Institute of Geoscience, Federal University of Pará, Belem, Brazil</i> <i>Overview:</i> Based on multi-proxy analyses of sediment cores from Brazilian littoral, I identified the impacts of climatic and sea-level changes on mangroves during the last centuries. <i>Theme: Assessing Impacts in Divergent Ecosystems</i>
	Stakeholder Involvement in Understanding the Economic Impacts of Climate Change and Storm Events on Maritime Infrastructure: Rhode Island Pilot Study Eric Kretsch, Department of Marine Affairs, University of Rhode Island, Kingston, USA Dr. Austin Becker, Departments of Marine Affairs and Landscape Architecture, University of Rhode Island, USA Overview: Often it is difficult to understand the impacts of climate change and storm events on the economy. This project attempts to clarify impacts using stakeholder involvement. Theme: Human Impacts and Impacts on Humans
	Assessing the Impact of Irrigation on Global Warming Tayler McPeak, Department of Geography and Earth Sciences, University of Nebraska at Kearney, Kearney, USA Vijendra Boken, Department of Geography and Earth Sciences, University of Nebraska at Kearney, Kearney, USA Overview: Irrigation tends to increase the concentration of water vapor, one of the greenhouse gases. This study examines the relationship between irrigated acres, soil moisture, and the temperatures in Nebraska. Theme: Assessing Impacts in Divergent Ecosystems

12:50-13:35	PARALLEL SESSIONS
	Predicting Korean Pine Distribution under Climate Change Ahn Yoonjung, Landscape Architecture and Rural System Engineering, Seoul National University, Seoul, South Korea Dong Kun Lee, Landscape Architecture and Rural System Engineering, Seoul National University, Seoul, South Korea Ho Gul Kim, Landscape Architecture and Rural System Engineering, Seoul National University, Seoul, South Korea Jae Uk Kim, Environmental Information Research, Korea Environment Institute, Seoul, South Korea Overview: This study analyzed the distribution of Korean pine (Pinus koraiensis) which is one of major and vulnerable species under climate change in South Korea. Theme: Assessing Impacts in Divergent Ecosystems
	Optimization of a Carbon Footprint Calculator: Regional Energy Use and Offset Considerations Anna Kelly, School of Public Policy, Oregon State University, Corvallis, USA Patrick Kelly, Corvallis, USA Julian Preciado, Corvallis, USA Dr. Sally Duncan, Oregon State University Policy Analysis Laboratory, Oregon State University, Corvallis, USA Dr. Frederick Colwell, Department of Ocean, Earth & Atmospheric Sciences, Oregon State University, Corvallis, USA Overview: We present an optimization of a detailed carbon calculator applied at the local level, and connected with local NGOs to establish feasible carbon offsets through energy efficiency and conservation efforts. Theme: Technical, Political and Social Responses
	The Number of Storms Modeled as a Poisson Random Variable to Northeast Coast of South America Prof. Lazaro Nonato Vasconcellos de Andrade, <i>Departamento de Ciências Exatas e da Terra (Department of Earth's Science)., Universidade do Estado da Bahia - UNEB., Salvador, Brazil</i> Ronaldo Santos Guedes, <i>Departamento de Ciências Exatas e da Terra (Earth's Science Department), Universidade do estado da Bahia - UNEB., Salvador, Brazil</i> <i>Overview:</i> Return periods of continental northwest coast of South America storms were estimated from Poisson processes and extreme value techniques. The hypothesis that storm frequencies are increasing in time is tested. <i>Theme: Scientific Evidence</i>
13:35-13:45	BREAK
13:45-15:00	PARALLEL SESSIONS
C215	Natural Resources and Change Scenarios
	The Link between Altered Soil Processes Due to Rising Atmospheric CO2 and Global Tree Decline Barbara Czerniakowski, This research was conducted by the Bioscience Research Division, Department of Primary Industries, Victoria (Australia) where I was a principle researcher investigating causes of Australian native tree decline. At present, an Independent Scientist holding DPI's research licence to present and to publish the results of this research., Melbourne, Australia Overview: The proposed influence of rising CO2 on the Australian native tree decline and its potential link with other tree declines will be presented. Theme: Scientific Evidence
	The Irreversibility of Sea Level Rise Kirsten Zickfeld, Department of Geography, Simon Fraser University, Vancouver, Canada Overview: Sea level will continue to rise even if greenhouse gas emissions will be halted completely. Can artificial removal of carbon dioxide form the atmosphere reverse and stabilize sea level rise? Theme: Scientific Evidence

13:45-15:00	PARALLEL SESSIONS
C225	Geopolitics and Adaptive Measures
	Comparative Study on Municipal Emissions Trading Schemes in Asia: China, India, and Japan Dr. Kenichi Imai, Research Department, Asian Growth Research Institute, Kitakyushu, Japan Overview: This paper compares and analyses municipal emissions trading schemes of China, India, and Japan, and their expected impacts on the abatement targets, the abatement costs, and the abatement technologies. Theme: Technical, Political and Social Responses
	How Does a Claim of Sovereignty over the Arctic by Russia and Canada Can Reflect Realism Theory Miss Fazolatkhon Nasretdinova, <i>American Graduate School in Paris, France, American Graduate School in Paris, France,</i> <i>Massy, France</i> <i>Overview:</i> This paper illustrates how a claim of sovereignty over the Arctic by Russia and Canada can reflect Realism theory?" <i>Theme: Technical, Political and Social Responses</i>
	Climate Protection and Adaption: Towards A Nature-orientated, Climate-friendly Metropolitan Region 2050 Dr. Kristin Barbey, <i>KIT, Karlsruhe Institute of Technology Lecturer, Researcher City of Karlsruhe, agency of urban planning,</i> <i>Architect, Karlsruhe, Germany</i> <i>Overview:</i> This research project develops an integrative concept, which connects spatial strategies climate protection & adaptation and offers an overview about required transforming processes towards a Nature-orientated, Climate-friendly Metropolitan Region 2050. <i>Theme: Technical, Political and Social Responses</i>
C400	Anthropogenic Factors in Climate Change
	The Ground-Level Ozone-related Social Welfare Impact of Climate Change Dr. Jin Huang, Environment and Resources, Abt Associates, Mountain View, USA Dr. Anna Belova, Environment and Resources Division, Abt Associates Inc., Pittsburgh, USA Dr. Jonathan Dorn, USA Dr. Frank Divita, USA Overview: We estimate the magnitude and composition of social welfare impacts associated with climate-change induced ground-level ozone changes, explicitly taking into account the intervention of existing U.S. air quality standards. Theme: Human Impacts and Impacts on Humans
	Municipal Solid Waste Management in Greater Jos, Nigeria Gwom Peter, School of the Built Environment Heriot Watt University Edinburgh United Kingdom, Heriot-Watt University Edinburgh, Edinburgh, UK Prof. Colin Jones, School of the Built Environment, Heriot -Watt University, Edinburgh, UK Prof. Adebayo Adeloye, School of the Built Environment, Heriot-Watt University, Edinburgh, UK Overview: Municipal solid waste management is an integral system. The current status of Greater Jos has been affected by unfavourable economic, institutional, legislative, technical and operational constraints. Theme: Technical, Political and Social Responses

13:45-15:00	PARALLEL SESSIONS
C485	Institutional Responses and Strategies
	Teaching Climate Change in a Business School Curriculum: The Case of an Intermediate-level Financial
	Management Course Dr. John B. Mitchell, Department of Finance and Law College of Business Administration, Central Michigan University, Mt. Pleasant USA
	Overview: A simple method incorporating teaching of climate change in a business curriculum including assignment, grading rubric, and source material links. Project increases student awareness and conformity with climate change science.
	Sustainability Education Across the Curriculum: Higher Education Strategies
	Dr. Srijana Bajracharya, <i>Health Promotion &amp; Physical Education, Ithaca College, Ithaca, USA Overview:</i> This proposal describes a process of designing and integrating a course on sustainability theme to satisfy a long term goal of combating overall climate change. <i>Theme: Technical, Political and Social Responses</i>
	Scientists' Views and Stands on Global Warming and Climate Change: A Content Analysis of Congressional Testimonies
	Dr. Xinsheng Liu, Institute for Science, Technology and Public Policy in the Bush School of Government and Public
	Service, rexas Adm University, College Station, USA Dr. Arnold Vedlitz, Institute for Science, Technology and Public Policy in the Bush School of Government and Public Service, Texas A&M University, College Station, USA
	Dr. James W. Stoutenborougn, Department of Political Science, Idano State University, Pocatello, USA Dr. Scott Robinson, Department of Political Science, University of Oklahoma, Norman, USA Overview: Empirical research of climate scientists' congressional hearing testimonies shows a clear message that there is a climate change problem, its cause is at least partially anthropogenic, and support for policies. Theme: Technical, Political and Social Responses
Theatre	Change Adaptation
	A Facilitative Tool for Finding Common Ground on Climate Policy in the Face of Uncertainty and Disagreement April Danae Presler, The Evergreen State College, Olympia, USA
	Overview: I discuss testing risk management approaches to discussing climate change and how this enables diverse groups to find common ground on climate policy. Theme: Technical, Political and Social Responses
	Farmer Perceptions of Climate Change and Responses in Danish Agriculture Bryndis Woods, Environment and Natural Resources, University of Iceland and Aarhus University, Copenhagen, Denmark Helle Ørsted Nielsen, Aarhus University, Aarhus, Denmark Dr. Anders Branth Pedersen, Aarhus University, Copenhagen, Denmark Daði Már Kristófersson. University of Iceland. Revkiavík, Iceland
	Overview: This paper investigates perceptions of climate change and elicits the importance of such perceptions as a determinant of past crop choice and future willingness to adapt. Theme: Technical, Political and Social Responses
15:00-15:10	BREAK

15:10-16:25	PARALLEL SESSIONS
C215	The Policies and Politics of Changing Climates
	Structural versus Cultural Influences on National Climate Change Policies David Goetze, Political Science Department, Utah State University, Logan, USA Chong Chen, Political Science Department, Utah State University, Logan, USA Jenna Williams, Political Science Department, Utah State University, Logan, USA Jessica Andreasen, Political Science Department, Utah State University, Logan, USA Scott Winslow, Political Science Department, Utah State University, Logan, USA Overview: In this study, the authors examine and compare cultural and structural influences on climate change policies in Brazil, China, Germany, and the United States. Theme: Technical, Political and Social Responses
	MNCs' Human Rights Responsibility under International Climate Change Governance Tsung-Sheng Liao, <i>Department of Law, National Chung Cheng University, Chiayi, Taiwan</i> <i>Overview:</i> MNCs' responsibility for human rights infringement under climate change might be the cornerstone to bring MNCs into structures of climate change governance. Also, a new Protocol of MNCs is suggested. <i>Theme: Technical, Political and Social Responses</i>
	Framing Community Climate Change Adaptation: Challenges and Implication for Physical Planning in Caribbean Small Island Developing States Dellarue Howard, School of Planning, University of Waterloo, Waterloo, Canada Overview: This is a critique of the conceptual thinking and development of climate change adaptation related policies in the Caribbean and their impact on adaptation outcomes at the community level. Theme: Technical, Political and Social Responses
C225	Mitigation and Reparation
	Climate Reparations and Scientific Uncertainty: The Role of Computational Models in International Climate Change Liability Georges Alexandre Lenferna, <i>Philosophy Department, University of Washington, Seattle, USA</i> <i>Overview:</i> This paper examines whether despite scientific uncertainty computational models of climate change can provide sufficient evidence in support of compensation claims by least developed countries harmed by climate change. <i>Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change</i>
	Synergy between Population Policy, Climate Adaptation and Mitigation Dr. Madeline Weld, <i>Population Institute Canada, Ottawa, Canada</i> Dr. Jane N. O'Sullivan, <i>School of Agriculture and Food Sciences, The University of Queensland, Brisbane, Australia</i> <i>Overview:</i> Population growth multiplies the climate challenge. Enhanced support for voluntary family planning could reduce adaptation and mitigation burden by over 40% this century while improving development outcomes. <i>Theme: Human Impacts and Impacts on Humans</i>
	Climate Change Governance in Megadiverse Countries: The Case of REDD+ in Latin America Alicia Guzmán León, <i>Tec de Monterrey, Mexico City, Mexico</i> <i>Overview:</i> REDD+ is currently implemented in 56 countries. Its effectiveness resides on its capacity to adapt to each context. What are the implications of REDD+ to governance locally, nationally, and globally? <i>Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change</i>

15:10-16:25	PARALLEL SESSIONS
C400	Impacts on Humans
	The Regulatory Uphill Battle of Reducing Ground-Level Ozone in a Changing Climate Dr. Christian Reuten, Air Quality, RWDI AIR Inc., Calgary, Canada Dr. Bruce Ainslie, Environment Canada, Vancouver, Canada Dr. Douw G. Steyn, Department of Earth, Ocean & Atmospheric Sciences, The University of British Columbia, Vancouver, Canada Dr. Peter L. Jackson, Natural Resources and Environmental Studies Institute, University of Northern British Columbia, Prince George, Canada Dr. Ian McKendry, Department of Geography, The University of British Columbia, Vancouver, Canada
	Overview: Future temperature increases in urban centres might increase ground-level ozone concentrations and require additional regulatory reduction efforts. Theme: Human Impacts and Impacts on Humans
	Evidences of Climate Change and Residents' Vulnerability in Lagos Mainland, Nigeria Dr. Olajoke Abolade, Department of Urban and Regional Planning, Ladoke Akintola University of Technology,Ogbomoso Nigeria., Ogbomoso, Nigeria Dr. Folasade Oyenike Adigun, David Oyinlade Adejumobi, Department of Urban and Regional Planning Faculty of environmental Sciences, Ladoke Akintola University of Technology, Ogbomoso, Nigeria Mohammed Hussani, Department of Urban and Regional Planning, Ladoke Akintola University of Technology, Ogbomoso, Over State, Nigeria, Japain, Nigeria
	Overview: This paper examines evidences of climate change and residents vulnerability in Lagos Mainland, Nigeria. Theme: Human Impacts and Impacts on Humans
C485	Climate Change Responses
	A University's Role in Responding to Climate Change Nelson Cainghog, Padayon Public Service Office, University of the Philippines, Quezon City, Philippines Dr. J. Prospero de Vera, Office of the Vice President for Public Affairs, University of the Philippines, Quezon City, Philippines Overview: Using data from documents, the University of the Philippines' role in responding to climate change in the Philippines is examined using models of scholarship as discovery, integration, application and teaching.
	Theme: Technical, Political and Social Responses The Long Shadow of Disasters: Impacts of Framing Contests on National-Local Power Relations and
	Decentralized Disaster Governance Dr. Kristoffer Berse, National College of Public Administration and Governance, University of the Philippines Diliman, Quezon City, Philippines Dr. J. Prospero de Vera, Office of the Vice President for Public Affairs, University of the Philippines, Quezon City, Philippines Overview: The paper examines the impacts of national-local power relations and decentralized disaster governance policies on the role of the private sector, international institutions, and civil society in post-disaster policymaking.
	Theme: Technical, Political and Social Responses Environmental Health Risk Assessment as a Solution to Climate Change "Policymaking Failure" Dr. Peter Carter, Environmental Health, Climate Emergency Institute, Pender Island, Canada Overview: A solution to what we term "policymaking failure" is using the IPCC AR5 science in an environmental health risk assessment with recommendations, which is not done by the AR5. Teame: Technical, Political and Social Responses
Theatre	Late Additions 2 (Check board for additions)
	Designing Crops for the Canadian Climate: Climate Change and Plant Responses Prof. Bernard Grodzinski, <i>Department of Plant Agriculture, Ontario Agricultural College, University of Guelph, University of Guelph, Guelph, Canada</i> <i>Overview:</i> This paper focuses on enhancing sink strength as a means to up-regulate canopy photosynthesis and plant productivity under elevated levels of CO2 and higher temperature. <i>Theme: Scientific Evidence</i>
	Climate Change Policy and the Role of Forests: An Emerging Governance, Political Denial and Resolution Discourse Olivia Muza, Environmental Advocacy and Communications, Progressio UK Southern African Office, Harare, Zimbabwe Overview: Current climate solutions and policies are scientifically driven. Loopholes in governance derail climate mitigation and adaptation implementation. Political ownership of environmental change is indispensable. But, is there a/will and a/ way? Theme: Special Theme: Whose Climate? Negotiating the Governance of Environmental Change
16:25-16:30	BREAK

16:30-17:00 CONFERENCE CLOSING (Held in the Theatre)

#### LIST OF PARTICIPANTS

Kyle	Aben	The Pacific Institute for Climate Solutions	Canada
Olajoke	Abolade	Ladoke Akintola University of Technology	Nigeria
Aina Thompson	Adeboyejo	Ladoke Akintola University of Technology	Nigeria
Sally	Aitken		Canada
Abdullah A.	Alhegbani	Imam Mohammed Bin Saud University	Saudi Arabia
Fahad	Alkolibi	King Saud University	Saudi Arabia
Abdulaziz M.	Alswilem	IMS University	Saudi Arabia
Lazaro Nonato Vasconcellos de	Andrade	Universidade do Estado da Bahia	Brazil
Jessica	Andreasen	Utah State University	USA
Kyle	Andreasen	Utah State University	USA
Edit	Antal	UNAM	Mexico
Ross	Astoria	University of Wisconsin, Parkside	USA
Hilaria	Badival	Department of Agriculture	Philippines
Yingjiu	Bai	Keio University	Japan
Srijana	Bajracharya	Ithaca College	USA
Kristin	Barbey	Karlsruhe Institute of Technology	Germany
Emebet	Bekele	University of Port Harcourt	Nigeria
Fikret	Berkes	University of Manitoba	Canada
Kristoffer	Berse	University of the Philippines	Philippines
Mukesh	Bhattarai	Southern Illinois University Carbondale	USA
Coralie	Breen	University of Victoria	Canada
Nelson	Cainghog	University of the Philippines	Philippines
Nastenka	Calle	The Pacific Institute for Climate Solutions	Canada
Marcelo	Cancela Lisboa Cohen	Federal University of Pará	Brazil
Peter	Carter	Climate Emergency Institute	Canada
Bimal	Chhetri	Simon Fraser University; BC Center for Disease Control	Canada
Alex	Clapp	Simon Fraser University	Canada
Amanita	Coosemans	Balanced Ecological Management Co.	Canada
Sining C.	Cuevas	University of Queensland	Australia
Eamon	Curran	New Zealand High Commission	Canada
Barbara	Czerniakowski	Not Affililated	Australia
J. Prospero	de Vera	University of the Philippines	Philippines
Sabrina	Dekker	University College Dublin	Canada
Jane Elizabeth	Desbarats	BCIT	Canada
Adekunle	Dosumu	University of Essex	UK
Francis	Doyle	Wildlife Dynamics Consulting	Canada
Phyllis	Eide	Washington State University	USA
Abdirashid	Elmi	Kuwait University	Kuwait
Fernande	Faulkner	Canadian Club of Rome	Canada
Trevon	Fuller	University of California, Los Angeles	USA
Jimmy	Fung	HKUST	Hong Kong
Charles	Gadi	Good News for All Ministry	United Republic of Tanzania
Amgalan	Ganbat	National Central University of Taiwan	Taiwan

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Мауа	Gislason	Simon Fraser University	Canada
David	Goetze	Utah State University	USA
Madeline	Goodwin	The Evergreen State College	USA
Bernard	Grodzinski	University of Guelph	Canada
Alicia	Guzmán León	Tec de Monterrey	Mexico
Hamed	Hakim	University of Florida	USA
Kathryn	Harrison	University of British Columbia	Canada
Sarah	Henderson	Centres for Disease Control; University of British Columbia	Canada
Craig	Henschel	British Columbia Institute of Technology	Canada
Meg	Holden	Simon Fraser University	Canada
Matt	Horne	Pembina Institute	Canada
Dellarue	Howard	University of Waterloo	Canada
Saad M.	Howladar	Albaha University	Saudi Arabia
Jin	Huang	Abt Associates	USA
Hans-Peter	Hutter	Medical University Vienna	Austria
Gyou Cheol	Hwang	OSP (Office of Strategic R&D Planning)	South Korea
William	Illerbrun		Canada
Kenichi	Imai	Asian Growth Research Institute	Japan
Megan	Jameson	The Pacific Institute for Climate Solutions	Canada
Matthew	Jenkins	Metropolitan State University of Denver	USA
Elizabeth	Johnston	University of San Diego	USA
John	Kalonga	Good News for All Ministry	Canada
Anna	Kelly	Oregon State University	USA
Linda	Kiltz	Walden University	USA
Eric	Kretsch	University of Rhode Island	USA
Werner	Kurz	Canadian Forest Service	Canada
ShunYing	Kwang	K. C. Kwang & Sons Pte Ltd	Malaysia
Kyae Lim	Kwon	Simon Fraser University	Canada
John	Labadie	Self-employed Consultant	USA
Maryse	Lambert	Hydro-Québec	Canada
Georges Alexandre	Lenferna	University of Washington	USA
Tsung-Sheng	Liao	National Chung Cheng University	Taiwan
Doreen	Liberto	Earth Design, Inc.	USA
Julius	Lindsay	City of Mississauga	Canada
Xinsheng	Liu	Texas A&M University	USA
Carl	Lowenburger	Simon Fraser University	Canada
Lindsay	Luke	University of Saskatchewan	Canada
Krista	Lyons	Boise State University	USA
Praveen	Maghelal	Masdar Institute	United Arab Emirates
Colin	Mahony	University of British Columbia	Canada
Susan	Mason	Boise State University	USA
Miriam	Matejova	University of British Columbia	Canada
Deepti	Mathew lype	University of British Columbia	Canada
Tayler	McPeak	University of Nebraska at Kearney	USA
John B.	Mitchell	Central Michigan University	USA

Alastair	Moore	University of Manchester; Royal Roads University The Recific Institute for Climate Solutions	Canada
		The Pacific Institute for Climate Solutions	
	Muza	Regional Office-EA	zimbabwe
Janvier	Mwizerwa	EFOGEC	Rwanda
Thomas P.	Narins	University of California, Los Angeles	USA
Dina	Nash		USA
Jeffrey	Nash	University of Arkansas at Little Rock	USA
Fazolatkhon	Nasretdinova	American Graduate School in Paris, France	France
Fontu	Ndongfack	Forestry and Environmental Conservation Society	Cameroon
Jane N.	O'Sullivan	The University of Queensland	Australia
David	Parker	University of Saskatchewan	Canada
Tom	Pedersen	The Pacific Institute for Climate Solutions	Canada
Gwom	Peter	Heriot-Watt University Edinburgh	UK
Gary	Pickering	Brock University	Canada
Georgia	Piggot	University of British Columbia	Canada
Catherine	Potvin	McGill University	Canada
April Danae	Presler	The Evergreen State College	USA
Behrooz	Rasekhi	Islamic Azad University	Iran (Islamic Republic of)
Christian	Reuten	RWDI AIR Inc.	Canada
Gerhard	Reuter	University of Alberta	Canada
Natalie	Richards	Pacific INsit	Canada
John	Robinson	University of British Columbia	Canada
Nicholas Alan	Seltzer	University of Nevada, Reno	USA
Stephen	Sheppard	University of British Columbia	Canada
Malcolm	Shield	City of Vancouver	Canada
Nilmini	Silva-Send	University of San Diego	USA
Catherine	Slater		Canada
Suzanne	Spence	BC Climate Action Secretariat	Canada
Kelly Ann	Stevens	Syracuse University	USA
Mark CJ	Stoddart	Memorial University	Canada
Larry	Surkan	Western Ecology LTD	Canada
given-names	surname	email	organisation
Tim	Takaro	Simon Fraser University	Canada
Ching Seong	Tan	K. C Kwang Farming & Multimedia	Malaysia
Anette	Thingsted	BC Ministry of Forests, Lands, and Natural Resource Operations	Canada
Mary Margaret	Thomas	Washington Physicians for Social Responsibility	USA
Phillip	Thompson	Seattle University	USA
David B.	Tindall	University of British Columbia	Canada
Micha	Tomkiewicz	Brooklyn College of CUNY	USA
Washi John	Ubongo	JMK Technologies	Canada
Mauricio Giovanni	Valencia-Amaya	Universidad del Rosario; Universidad de Antioquia	Colombia
Nkengafah	Veronica Fonya	Hanseo University	South Korea

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Vit	Vozenilek	Palacky University, Olomouc	Czech Republic
Guangyu	Wang	University of British Columbia	Canada
Tongli	Wang	University of British Columbia	Canada
Madeline	Weld	Population Institute Canada	Canada
Jenna	Williams	Utah State University	USA
Bryndis	Woods	University of Iceland; Aarhus University	Denmark
Rui	Yan Ma	Queens College, CUNY	USA
Ahn	Yoonjung	Seoul National University	South Korea
Zahra	Zakeralhosseini	VCC	Canada
Kirsten	Zickfeld	Simon Fraser University	Canada
Melanie	Ziman	Edith Cowan University	Australia

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