

LEARNING TO ADAPT

CLIMATE CHANGE ADAPTATION PROFESSIONAL DEVELOPMENT



Environment Institute
of Australia and
New Zealand Inc.



CITY OF MELBOURNE

A partnership between EIANZ & the City of Melbourne



MELBOURNE 2015

Supported by



RMIT City Campus, La Trobe St, MELBOURNE



LEARNING TO ADAPT

PARTICIPANT'S GUIDE

MELBOURNE 2015

Welcome! Thank you for being part of Learning to Adapt climate change adaptation professional development. We think that innovative, structured professional development is an important response to the challenge that climate change represents for the delivery and management of Australia's infrastructure.

Conservative estimates put the annual cost of unmitigated climate change on Australia's infrastructure at about \$9 billion in 2020 rising exponentially thereafter. According to a Climate Institute Report in 2012 market signals to encourage smarter management of climate-change related risks are weak or non-existent. Information is fragmented, dispersed and often not accessible. We hope that by participating in this training you can help to change this.

We have structured a course that will allow you and a select group of colleagues to research current best practice, engage with leading practitioners in the field of climate change adaptation for infrastructure and then apply your new found knowledge in the real world. The course is designed to suit different learning styles and to be flexible in the face of your other commitments.

We are sure that you and a network of colleagues will leave this course confident in applying skills that will help steer Australia's infrastructure into the future.

Above all we hope that this learning experience is fun!

Date	Module	Venue	Registration	Start/Finish
18 March 2015	<i>Applying the science of climate change impacts</i>	9am: Council Chamber: Building 1, Level 1, RMIT, 124 La Trobe Street, Melbourne, 3000 1.15pm: Building 56, Level 6, Room 90 RMIT, 124 La Trobe Street, Melbourne, 3000	8.30am	9am 5pm
29 April 2015	<i>Assessing and managing climate change risks</i>	'Green Brain' Building 16, Level 7, Conference Rooms 07 & 08, RMIT, 124 La Trobe Street, Melbourne, 3000	8.30am	9am 5pm
20 May 2015	<i>Applying and communicating climate change adaptation action</i>	'Green Brain' Building 16, Level 7, Seminar Rooms 3 & 4, RMIT, 124 La Trobe Street, Melbourne, 3000	8.30am	9am 5pm

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ABOUT OUR PARTNERS



Environment Institute of Australia and New Zealand (EIANZ)

The Environment Institute is a leading professional body in Australia and New Zealand for environmental practitioners, and promotes independent and interdisciplinary discourse on environmental issues. On all issues and all projects the Institute advocates best available environmental practices to be delivered by competent and ethical environmental practitioners.

The Institute was formed in 1987 to meet the needs of environmental practitioners. It is a non-profit, politically independent professional association. The Institute is multi-disciplinary in membership and provides scope and opportunity for professional and academic interchanges across all sectors of the diverse environmental industry.

In 2011 interest from members drove the formation of a Special Interest Section on Climate Change, which has developed an EIANZ Climate Change Action Plan addressing:

- Advocacy,
- Accreditation/Certification
- Capacity Building
- Communication, and
- Governance.

EIANZ NSW Division has been a national leader in providing high quality professional development events on climate change adaptation. Since 2010 the Division has orchestrated a series of Learning to Adapt conferences that have attracted strong interest from environmental professionals in Government, local government and the consulting industry.



City of Melbourne

For more than fifteen years, the City of Melbourne has been working to become one of the world's most sustainable cities. We know that a successful future depends on understanding the risks that climate change poses, reducing our impact and becoming more resilient. As part of this, our goal is for Melbourne to be carbon neutral by 2020. To achieve a sustainable Melbourne, we are creating bold, local solutions for local problems. Read more about our sustainability initiatives at www.melbourne.vic.gov.au/sustainability.

ABOUT OUR SUPPORTERS



Green Building Council of Australia

Launched in 2002, the Green Building Council of Australia (GBCA) is a national, not-for-profit organisation that is committed to developing a sustainable property industry for Australia by encouraging the adoption of green building practices. It is uniquely supported by both industry and governments across the country.

The Green Building Council's mission is to develop a sustainable property industry for Australia and drive the adoption of green building practices through market-based solutions. Its key objectives are to drive the transition of the Australian property industry towards sustainability by promoting green building programs, technologies, design practices and operations as well as the integration of green building initiatives into mainstream design, construction and operation of buildings.



Infrastructure Sustainability Council of Australia

The Infrastructure Sustainability Council of Australia (ISCA) is the peak industry body for advancing sustainability in Australia's infrastructure. ISCA is a member-based, not-for-profit industry (public and private) council.

The Infrastructure Sustainability Council's mission is enhancing the liveability and productivity of major cities and regional communities through advancing sustainability in infrastructure planning, procurement, delivery and operation. ISCA proposes to achieve its mission through:

- Continuing to improve and expand the IS rating scheme in line with industry needs and lessons learnt from current experiences
- Collaborating with government agencies regarding the "upstream" use of the IS rating scheme
- Promoting and facilitating national training, education and knowledge sharing relating to infrastructure sustainability along the entire supply chain
- Contributing, facilitating and promoting industry forums and research on key policy and advocacy issues relating to infrastructure sustainability challenges and opportunities



RMIT University

Located in the heart of Melbourne on RMIT's City campus, the School of Global, Urban and Social Studies (GUSS) is one of RMIT's largest schools and provides programs from certificates to PhDs. The Centre for Urban Research is located in GUSS and dedicated to research excellence in the fields of urban planning and social and environmental urban research. As a thriving inter-disciplinary research centre, it undertakes research on three intersecting themes: Housing and Homelessness; Urban and Regional Planning; and Sustainability and Climate Change. Across these themes, the Centre conducts its research in eight inter-disciplinary Research Programs.



Green Cross Business Adaptation Network

BAN is Australia's only business climate change adaptation and resilience network. We offer member organisations a rare opportunity for networking; for information; for support; for keeping in the loop. Working with Green Cross Australia, BAN is a group of diverse, yet like-minded organisations united in their forward thinking when it comes to climate change adaptation. Green Cross Australia has a history of bringing together businesses from different sectors in creative projects. Together our mantra is Think + Act + Share = Change. It's all about practical, informed action. Climate change presents opportunities as well as challenges. Foresight is crucial. And that's exactly why BAN exists.

ABOUT OUR FACILITATORS



Sustainably Pty Ltd

Sustainably is an enterprise that specialises in education for sustainability through collaborative partnerships.



Dr Fabian Sack – Strategic Director, Sustainably Pty Ltd

Fabian has been a thought leader in corporate responsibility, environmental governance and sustainability over 18 years. He now freelances, providing independent advice and training. He is an associate at the University of Sydney and holds postgraduate qualifications in environmental ethics and education for sustainability. Fabian led Sydney Water's sustainability change management program for a decade and has held senior private and public sector roles working on climate change and stakeholder engagement in the infrastructure and energy sectors. He has contributed to books and journals on ecological footprinting, green skills and social life cycle assessment. Fabian is an active member of the EIANZ and sits on the Total Environment Centre (TEC) Management Committee.

Contact Fabian@sustainably.net.au

Web www.sustainably.net.au

Tel 0408 600 015



Judy Turnbull – Program Director, Sustainably Pty Ltd

Judy has led the development of many collaborative partnerships in the not-for-profit sector over 15 years. She is experienced in establishing and maintaining project communities and volunteer networks across schools, training organisations, higher education, youth, government, employers and unions. These partnerships have helped to create innovative pathways for young Australians and integrate sustainability into the national skills economy. Judy draws on her experience in marketing and in managing events, publications and social media platforms.

Contact Judy@sustainably.net.au

Web www.sustainably.net.au

Tel 0408 861 394

ABOUT OUR GUEST SPEAKERS



Kate Harris - CEO, Centre for Sustainability Leadership

Kate is passionate about actualizing our human potential through developing ourselves, our organisations and our communities. Kate achieves this through creating cutting edge experiential processes in transformational leadership in order to create a positive future. Kate believes in building capability in tomorrow's leaders today through vision, innovation, collaboration and action. Kate is well renowned for creating systemic change through her role at the Centre for Sustainability Leadership, as a transformative facilitator, executive coach and a strategic advisor. Her professional background is in Social Ecology, Organisational Development, Adult Education and Executive Coaching, Creativity, Innovation and Leadership.



Prof. Christian Jakob - School of Earth, Atmosphere and Environment, Monash University Deputy Director, ARC Centre of Excellence for Climate System Science

Christian is the Professor for Climate Modelling at Monash University's School of Earth, Atmosphere and Environment. His expertise and interests lie in the evaluation and improvement of cloud and precipitation processes in weather and climate models. Christian began his career in 1993 as a weather modeler at the European Centre for Medium-Range Weather Forecasts. He came to Australia in 2002 to join the Bureau of Meteorology before taking up his position at Monash in 2007. Christian was a Lead Author on the model evaluation chapter of the recent 5th Assessment Report of the Intergovernmental Panel on Climate Change and he is the current Co-Chair of the World Climate Research Programme's Modeling Advisory Council.



Suzanne Knight – Senior Adviser, Environment Policy Division, Department of Environment, Land, Water and Planning

Suzanne Knight is a senior adviser at the Department of Environment, Land, Water and Planning. She is an experienced public servant who has worked in climate change, biodiversity and environmental sustainability policy. Prior to her current role, she was a manager at Sustainability Victoria covering executive services, ministerial liaison and media. As part of her current role she is overseeing a review of the Victorian Climate Change Act.



Bernie Cotter – Executive Officer, Association of Bayside Municipalities

Bernie Cotter is the Executive Officer for the Association of Bayside Municipalities, Melbourne. He has an extensive background as a senior officer in local government with a focus on coastal management, sustainability and town planning.



Robert Turk – Associate, Environment and Sustainability Leader Victoria, Arup

Robert is the Environment and Sustainability Leader of our Victorian office and has over 17 years experience in a range of carbon and climate change, sustainable development and environmental management projects within Australia and the UK. During his time with Arup, Rob has broadened his knowledge and capabilities to encompass wider strategic land use and infrastructure planning projects.

Robert was Project Manager and primary author of a project commissioned by the Victorian Department of Health to develop a methodology for assessing the impacts of climate change on human health and in particular vulnerable populations within Victoria. The methodology defined a process for determining the potential health impacts of climate change and how this may be moderated through adaptation interventions.

More recently Rob was the Project Director for a project that developed a vulnerability approach for the City of Whitehorse to assess the susceptibility of building stock to projected climatic changes and provide this as an input to their asset management process.

Rob is currently finalising a year long project for the Northern Alliance for Greenhouse Action, determining the key climate impacts and risks for the region, together with a vulnerability assessment and appropriate management actions to inform a Regional Climate Change Adaptation Plan.



Ken Lundy - Principal Consultant, Edge Environment

Ken is a Principal Consultant in At Edge Environment. With over 9 years of experience in the environment and sustainability industry, he has applied his skills to deliver projects in integrated risk assessment, climate change strategy and adaptation planning, carbon and energy management, water management, environmental reporting and sustainability strategy. He has worked on a variety of projects across a number of sectors including transport infrastructure, property, water, Government and resources. Ken sat as Vice President of the Environmental Institute of Australia and New Zealand (NSW Division) from 2008-2010. He is also an Accredited Professional for the delivery of the Infrastructure Sustainability rating systems. At Edge Environment, Ken is responsible for delivering projects on time and to budget. He also leads business development for Edge's property clients.



Michael Nolan - AECOM Global Leader, Climate Adaptation and Resilience

Michael has over 20 years of experience in managing sustainability and climate change outcomes for government and business. He has extensive experience in sustainable infrastructure, climate change adaptation and resilience in Australia, United States, Canada, China, India, Brazil, New Zealand, and United Kingdom.

Michael has led over 120 climate change impact, risk assessment, adaptation and resilience projects relating to ports, road, rail, local government, water, flood management, power, mining, buildings, facilities, coasts, states and cities. Michael represented the Infrastructure Sustainability Council of Australia in developing the Australian Standard AS5334 Climate Change Adaptation for Settlements and Infrastructure.

Michael led the development of the United Nations International Strategy for Disaster Reduction (UN ISDR) City Disaster Resilience Scorecard in collaboration with IBM. Michael is the Resilient Cities lead for the United Nations RISE initiative focused on risk sensitive investment.



Eleanor McKeough – Senior Analyst Corporate Strategy, Melbourne Water

For the past few years Eleanor has been co-ordinating the Climate Change Adaptation Program at Melbourne Water. This has involved working collaboratively with people across the organisation and with other stakeholders to support the business to respond effectively and proactively to the risks and opportunities that an operating within an increasingly variable and changing climate pose.



Jacquelyn Lamb – Climate Analyst, Climate Risk

Jacquelyn Lamb is a physical systems environmental scientist. She specialises in data acquisition, spatial analysis and modelling. Jackie's recent work has focused on modelling the impacts of extreme weather and climate change to urban infrastructure, as well as cost-benefit-analysis of multi-control adaptation measures. Her work with Climate Risk has included projects on urban water distribution, telecommunications, property insurance and local government. Jackie is a trainer specifically for users of the AdaptWater/AdaptInfrastructure tool and the International Adaptation and Risk Registers, as well as other cloud-based adaptation software.



Dr Hartmut Fuenfgeld - Senior Lecturer, School of Global, Urban and Social Studies, Centre for Urban Research, RMIT University

Dr Hartmut Fünfgeld is a Senior Lecturer in the School of Global, Urban and Social Studies and research program leader in the Centre for Urban Research at RMIT University, Melbourne. His research focuses on the social and institutional dimensions of local and regional climate change responses, including how organisations can adapt to climate change impacts through long-term planning. Hartmut has over ten years of experience in working on climate change, sustainability and local governance issues with the public sector and communities in Australia, Europe, Africa and Asia. He has a PhD in human geography from the University of Heidelberg, Germany.



Ben Honan - Public Policy and Corporate Affairs Advisor, Suncorp General Insurance

Ben has over 8 years of general insurance experience working both directly with customers on insurance solutions and as a corporate affairs professional. Ben is currently responsible for public policy development and advocacy for Suncorp General Insurance. A key area of focus in recent years has been advocating for improved disaster risk management practices to reduce the impact of natural hazards on the community. With firsthand knowledge of the impacts of bushfire, flood, cyclone, storm and earthquake disasters he brings a unique insurance industry perspective to public policy debates on risk management.



Tom Davies – founding Director and Chairman, Edge Environment

Over the last decade Tom has enjoyed a series of professional experiences focused on environment and sustainability issues. In 2008 Tom established Edge Environment with two co-founders. Currently Tom's two key areas of work at Edge Environment are developing more resilient built environments and promoting industrial ecology as a means to reduce the Life Cycle impacts of products and close waste loops. Tom also makes contributions to a series of advisory councils, committees, boards and working groups, including the Green Building Council, National Climate Change Adaptation Research Facility, Energy and Water Ombudsman of NSW. Tom has contributed extensively to the Environment Institute of Australia and New Zealand over a decade, including as President of the NSW Division and as Chair of the Climate Change Special Interest Section. For contributions made to the EIANZ tom was awarded the Mary Lou Morris award for outstanding contributions to the EIANZ in 2013.



Jorge Chapa - Executive Director Green Star Technical Development and Operations

As the Executive Director for Green Star Development and Operations, Jorge is responsible for delivering the next generation of Green Star rating tools. Leading the GBCA's growing team of Technical Managers, Jorge directs the ongoing evolution of Green Star and ensures that the Green Star rating tools are technically robust and equipped to deliver more sustainable outcomes for Australia's buildings, fitouts and communities. Jorge has an architecture degree from the University of Monterrey in Mexico, and a Masters in Design Science from the University of Sydney. Jorge brings to his role a wealth of experience from his roles as an ESD consultant and Product Assessor with EcoSpecifier, and Architect with the Buchan Group.



Toby Kent - Chief Resilience Officer, City of Melbourne

Toby Kent has created and implemented resilience and sustainability strategies across a range of sectors. Since the late 1990s he has worked with governments, communities, industry sectors and other stakeholders on five continents.

He helped develop Corporate Citizenship into one of the UK's pre-eminent specialist Sustainability consultancies. He then joined PricewaterhouseCoopers' Sustainability & Climate Change team in the UK, leading work in the Retail and Consumer Goods industry, before running PwC's Sustainability & Climate Change team in Hong Kong.

He moved to Melbourne to take up a post as Head of Sustainable Development at ANZ. He then worked with MMG in Melbourne and Laos, developing community engagement strategies for this fast-growing mining company. He recently joined the City of Melbourne as Chief Resilience Officer, a role fully funded by the Rockefeller Foundation through their 100 Resilient Cities initiative (www.100resilientcities.org).



Lalitha Ramachandran - Director, EcoSens

Lalitha has worked as an environmental professional with the Local Government sector for over 16 years at the international, national and local levels. She has extensive experience in greenhouse mitigation, sustainable asset management systems, and climate adaptation planning and management in cities.

Over the past few years, she has developed the City of Port Phillip's climate adaptation strategy and program, including active involvement in flood and urban heat island modelling and mapping, climate resilient asset management and urban planning, and regional and state climate adaptation activities and policy. Lalitha also has extensive experience in community climate resilience building.

Lalitha now runs her own environmental consultancy.



Professor John Thwaites - Chairman Monash Sustainability Institute & ClimateWorks Australia

John Thwaites is a Monash Professorial Fellow and Chair of both ClimateWorks Australia and the Monash Sustainability Institute. He is a consultant at Maddocks Solicitors providing advice to the firm and its clients on climate change, water, sustainability and corporate social responsibility.

John chairs the National Sustainability Council, the Australian Building Codes Board and the Australian Centre for the Moving Image. He is also a director of the Australian Green Building Council. John is a member of the Leadership Council of the Sustainable Development Solutions Network ("SDSN") launched by the Secretary General of the UN to provide expert advice and support to various international processes working on the development of the post-2015 Sustainable Development Goals.



COURSE OUTLINE

The Learning to Adapt training has been developed in consideration of feedback received from an initial event held UNSW in August 2013. The event, attended by 130 participants from industry, federal, state & local government and the sciences, included presentations from high profile and influential leaders in business and industry. The course was piloted in early 2014 gaining a very positive response. Feedback from the pilot has been used to further improve the program. The Melbourne delivery is part of a series of national deliveries. It will be followed by a course in Brisbane late in 2015.

Pre-requisites

This course has been designed for environmental practitioners with:

- Professional qualifications in environmental management, environmental science, or environmental engineering, or the equivalent professional experience and at least 5 years of experience in relevant business operations.
- The capacity to engage in self directed learning, to organise and critique complex ideas and information, to engage in complex and effective spoken communication, to generate complex written texts and to extract and evaluate embedded mathematical information and mathematical and problem solving strategies.

Purpose

To develop a very high level of competence to contribute to adaptation to climate change by facilitating the development of skills in relation to:

- Applying the science of climate change impacts
- Assessing and managing climate change risks
- Implementing and communicating climate change adaptation action.

Delivery

The course is delivered as three (3) modules, coordinated to offer an integrated course. Each module includes:

1. An on-line forum discussing a series of pre-readings to ensure that participants can make the best use of the guest speakers
2. A one-day intensive delivered at a city location, featuring expert guest speakers leading the group through worked case studies
3. Group tasks applying the skills in a workplace context.

1. Online forum

A week before each one-day intensive, participants are invited to join the online forum. A number of readings and links, suggested by the speakers, are posted and participants invited to start a conversation. The online forum also provides a platform for coordinating the work-based group work and for peer-to-peer support.

2. One-day intensive

The full day intensive component of each module is held at the RMIT CBD Campus and is fully catered. **Registration is at 8.30am and the course will conclude around 5pm.** Each intensive will feature an expert introduction on the module content followed by case studies delivered by very experienced practitioners. The sessions will be interactive, allowing for group discussion and working through examples.

3. Workplace group tasks

Following the one-day intensive participants are invited to work in small groups on workplace projects to embed the course learning outcomes and establish an ongoing peer reference group. To ensure sufficient time for these group tasks the modules are separated by 4 to 6 weeks. Organisations volunteering to host workplace projects (this could be participant's own workplace) benefit by having expert projects delivered without cost, aside from the time of any staff member engaged in the group project.

Learning Outcomes

At the end of Module 1 you will be able to:

- Understand the relevance of climate science to infrastructure decision making by analysing an organisation's interactions with the environment;
- Determine the significance of projected current climate impacts relevant to infrastructure and express this in a report; and
- Contribute to an appropriate response for each interaction by qualifying the accuracy of climate projections and expressing this in business documents.

At the end of Module 2 you will be able to:

- Assess risks resulting from climate change and develop a prioritised management response;
- Lead periodic review of climate change risks and management response and communicate as appropriate; and
- Facilitate implementation of prioritised management response to climate change risks.

At the end of Module 3 you will be able to:

- Develop strategy in response to emerging government climate change adaptation policy, industry standards and international best practice;
- Communicate climate change adaptation policy and industry compliance requirements to management; and
- Communicate possible organisational responses to climate change impacts to relevant staff and stakeholders.



ASSESSMENT

As the course is not accredited no formal assessment will be undertaken. However course design will deliver on a strategy of:

- Peer review and supervisor feedback in relation to the workplace learning project; and
- Observation of group-work in class.

ACCREDITATION

- This is a non-accredited course run through the School of Global, Urban and Social Studies (GUSS), Centre for Urban Research at RMIT resulting in a certificate of attendance from the School of Global, Urban and Social Studies (GUSS), Centre for Urban Research.
- The course content is aligned to the Units of Competence (UoCs) *MSS017001A Analyse and determine organisational risk areas in sustainability and MSS017004A Lead sustainable strategy deployment*, contextualised for climate change adaptation. The course content should attract recognition of prior learning for these UoCs through any suitable endorsed RTO.

Completion of the course will attract recognition:

- By 18 Green Star Sustainable Development CPD points
- 150 CPD points under the Certified Environmental Practitioner Scheme; and
- As a Master Class in Climate Change Adaptation Infrastructure Sustainability Accredited Professional by ISCA

VENUE DETAILS

Location

RMIT University, 124 La Trobe Street, Melbourne, 3000

Public transport

Train

The closest train station to most City campus buildings is Melbourne Central Station on the City Loop.

From Flinders Street Station, you can join a connecting City Loop train service or any tram travelling up Swanston Street (see below).

Tram

Most north-south Yarra Trams run along Swanston Street (routes 1, 3, 5, 6, 8, 16, 64, 67 and 72). For Elizabeth Street services (routes 19, 57, 59), get off at Melbourne Central and walk one block to Swanston Street.

If you're travelling east-west along Flinders Street (routes 48, 70 and 75), Collins Street (routes 109 and 12) or Bourke Street (routes 86 and 96) alight at Swanston Street for connecting trams.

Bus

Many bus lines offer services connecting to train and tram services listed above. Check Public Transport Victoria for details of connecting services in your area.

Parking

There is no on-campus parking available for visitors to the University. However, there are a number of commercial car parks within a very short walk.

Metered street parking is also available around the City campus. Please note, time limits and clearway restrictions apply.

Stay in touch

Become a member of EIANZ, or GBCA/ISCA, and join their LinkedIn groups or twitter feeds. Visit <http://www.eianz.org/membership> for more information.

