



Australia Awards

## Sector: Environment

### Short Course: Climate Change Adaption

---

#### Program Outline

This is an intensive 8-week residential course intended to provide professionals employed in government, NGOs and the private sector in African countries with a synoptic and contextual understanding of the legal frameworks, governance and economic rationale underpinning effective climate change adaptation. In considering climate change adaptation as a field of study we focus on key theories (conceptual frameworks), methods and sources of information. Key concepts include the IPCC assessment framework, risk, 'co-benefit' and 'no-regret' policy responses, and adaptation evaluation criteria. Analytical methods covered in the course include climate change scenario analysis and conceptual modelling. Participants will acquire knowledge to assist evidence-based policy development and reform, develop critical research, evaluation, interpretation and analysis skills, explore and model socio-economic impact and improve regulatory oversight, policy intervention or services delivery relating to climate change adaptation

#### Course objectives

By the end of this course, Participants will:

- Understand key foundational and advanced concepts and practices required for effective climate change adaptation policy development and implementation, and comprehend the political, socioeconomic, regional and international risks, costs and benefits these may entail;
- Understand the science behind climate change impact and vulnerability assessment, including data collection and monitoring/surveillance mechanisms for assessing the status of environmental changes;
- Experience methods and tools for developing and accessing climate change adaptation options with stakeholders;
- Understand the management of the environment, regulation, and legal aspects of governance as socio-ecological systems in which human behaviour management is an intrinsic component;
- Identify and critically consider the core components of international and regional legal frameworks, treaties and institutions for responding to climate change for African policy makers, including adaptation financing
- Appreciate the complexities of national and regional coordination around climate change adaptation at different scales of governance, from the complexities of effective engagement with traditionally marginalised stakeholders, to the complexities of multi-lateral action;
- Understand shared challenges and contextual differences in climate change adaptation across Asia, Africa and the Pacific and the regional and national legal and policy responses in Africa.

The program will be highly interactive with a mix of lectures, seminars, practical exercises and field trips. The complexity and impinging intersectionality of law, policy, economics, ecology, diversity, sustainability, governance, regulation, environment, human rights, gender and social inclusiveness will be shaped and addressed through the lens of specially- facilitated case studies and scenarios of African contexts offered by individual Participants or raised proactively as part of their work portfolio responsibilities or RAP commitments. Participants will also develop their leadership skills and attributes in lobbying, advocacy, communication, teamwork, negotiation, conflict resolution and project or programme management with a deeper and textured contextual appreciation of the gender, diversity and social inclusiveness aspects of climate change adaptation.

## Characteristics of ideal candidates

Participants are expected to hold a mid or senior-level policy, practice, research or reform role, whether in government, civil society or the private sector. We expect that participants have completed secondary schooling and at least three years' tertiary education, have at least five years' work experience at mid to senior levels, and a reasonably good understanding of the subject matter. It is expected that the majority of these participants will understand basic concepts related to water resource management, and that a significant number may be working in parts of the government or NGOs working in this area.

## Course content – including pre and post engagement requirements

The programme consists of five integrated themes: formal learning; applied learning, leadership, gender & social inclusion; and, extension activities & post-course implementation of each Participant's RAP.

Participants will develop an understanding of the legal frameworks, governance and economic rationale underpinning effective climate change adaptation. They will acquire knowledge and skills for evidence-based policy development and reform, critical research, evaluation, interpretation and analysis, understand how to model socioeconomic impact and gain insights for improving regulatory oversight, policy intervention or services delivery relating to water resource management. The course will include extensive participation by invited speakers from key Australian government agencies and state owned corporations, including the Department of Environment and Energy, Australian Water Partnership, ACT Environment, Planning and Sustainable Development Directorate, ACT Independent Competition and Regulatory Commission, ACT Health, Icon Water, Community Fire Units, Winton Wetlands Trust, Victorian Department of Environment, Land, Water and Planning, Vic Forests, and NSW Department of Primary Industry.

## Course details on a weekly basis

	MODULE	DESCRIPTION	LOCATION
WEEK 1	Why climate change adaptation? (Understanding drivers of action)	<ul style="list-style-type: none"> <li>Opening ceremony, course overview and orientation</li> <li>Making sense of local context What are some of the challenges, opportunities and contexts of local participants, their knowledge and understanding in Africa?</li> <li>Case Study Urban - Making more sense of challenges in local, urban contexts. African cities are undergoing rapid change. What are the challenges being experienced?</li> <li>Case Study Rural - Deepening the sense making in local rural contexts. Exploring the water, agriculture and related sector(s) nexus issues</li> <li>What issues and contexts impact the African context – global, regional and local stocktaking</li> <li>Field trip - Seeing issues previously identified in context with marginalized communities living in complex contexts: Rural and city experiences</li> <li>Group Activity regarding current stresses and climate change and climate variability - reflecting on sites visited and how to better include marginalized groups in policy</li> <li>Introduction to climate change and climate variability – how do we link what we have seen and what we experience on a day-day basis to climate stresses</li> <li>Reintegration Action Plan (RAP) development session</li> </ul>	University of Witwatersrand, South Africa

	MODULE	DESCRIPTION	LOCATION
WEEK 2	Moving from science to action	<ul style="list-style-type: none"> <li>Lecture- What is climate change and variability in the African context?</li> <li>Lecture- What does this all mean for effective decision making? Climate change and decision making: challenges, tensions and opportunities.</li> <li>Interactive session - Moving from science to practice – implications for action in this session participants will work on visioning exercises (past, current and future) to begin to think about adaptation (incremental and transformative) in 'real' world contexts</li> <li>Shared co-engaged panel session - Panel of community members on what they experience, what they need from science and what they can offer to science – 'user inputs and reflections'</li> <li>Lecture - Moving to action – what will it take? Probing missing elements e.g. health, data challenges, youth leadership and entrepreneurship</li> <li>Group Activity – Data gaps, consistencies/ inconsistencies and tensions in complex African contexts</li> <li>Lecture - Climate change adaptation is more than data? Working with big and 'small' data</li> <li>Lecture and interactive session - Climate change governance – implications for action.</li> <li>Challenges and options across scales: international, regional and local scales.</li> <li>Lecture - Complexity science – implications for action/ Climate change is more than one scientific area, requiring complexity thinking – presentation and short exercise</li> <li>Leadership expo - Shared experiences of young, mid-career people engaged in leadership on climate change in South Africa and elsewhere.</li> <li>Final wrap up - Reflections and next steps (Australian meetings)</li> </ul>	University of Witwatersrand, South Africa
WEEK 3	Climate change and adaptation science	<ul style="list-style-type: none"> <li>ANU opening ceremony and ANU induction</li> <li>Participant introductions, exploration of prior knowledge and course aspirations for RAPs</li> <li>Weather and climate - What are the differences and how are they measured?</li> <li>Practical climate modelling exercises using home country climate data with ANUCLIM and ANUSPLIN (modelling packages for PCs that will be accessible for participants post course)</li> <li>Space/time modelling of climate and global climate change models and issues for downscaling</li> <li>Uncertainties and certainties in forecasts at global and regional scales; how useful are global climate change scenarios and how reliable are regional scale forecasts?</li> <li>An introduction to systems thinking; systems analysis and climate change vulnerability assessment, including understanding influence diagrams, coastal systems thinking and adaptation exercise</li> <li>Climate change adaptation pathways. Lecture and adaptation pathway planning exercise</li> </ul>	ANU - Canberra

	MODULE	DESCRIPTION	LOCATION
		<ul style="list-style-type: none"> <li>RAP development session</li> </ul>	
WEEK 4	Stakeholders and social inclusion	<ul style="list-style-type: none"> <li>Analytical skills on participatory planning, lecture group discussion and practical participatory planning activity</li> <li>Social network theory lecture and practical activity using social network analysis</li> <li>Case Study - Managing water and water use, stakeholder engagement, industry and marginalised groups (Murray Darling Basin)</li> <li>Water industry panel (Government regulator-ACT; Utility- Icon Water; Australian Water Partnership; Former minister (Simon Corbell); Independent Competition and Regulatory Commission, water scientist)</li> <li>Industry networking event</li> <li>Gender and the climate? How does gender affect people's ability to respond to climate change? How should gender be approached in climate change adaptation plans?</li> <li>Leadership skills - How being a better group member can make you a more effective leader</li> <li>Psychology of adapting to climate change</li> <li>RAP sessions</li> </ul>	ANU - Canberra
WEEK 5	Sectoral adaptation responses	<ul style="list-style-type: none"> <li>Field trip – Cotter Dam, Canberra water supply, watershed rehabilitation, urban development and water, wetland biodiversity conservation</li> <li>Agriculture and climate change, agricultural adaptation options assessment</li> <li>Health methodology; climate change and health in high and low-income countries;</li> <li>using GIS to map out exposure/respiratory effects; identifying and monitoring impacts in the health sector (practical exercise)</li> <li>Identifying complexities in decision making (group exercise)</li> <li>Case Study- Adaptation and health developing country strategy role play</li> <li>RAP sessions</li> </ul>	ANU - Canberra
WEEK 6	Integrated adaptation policy responses	<ul style="list-style-type: none"> <li>Defining 'adaptation policy' and role of institutions.</li> <li>Role of governments at different scales for adaptation, including a practical exercise – adaptation in the City of Queanbeyan</li> <li>Natural disasters and disaster risk reduction exercise</li> <li>Case Study - Fire management and fire risk modelling</li> <li>International institutions theory and praxis of adaptation</li> <li>Analysing national climate adaptation policies lectures and practical activity</li> <li>Case Study - Coastal adaptation and island jurisdictions</li> <li>Different approaches to adaptation, ecosystem-based adaptation and maladaptation</li> <li>RAP sessions</li> </ul>	ANU - Canberra

	MODULE	DESCRIPTION	LOCATION
Week 7	Field Trip	<ul style="list-style-type: none"> <li>• Canberra region - An exploration of how Canberra has already faced several climate change challenges and the processes put in place to consider response options.</li> <li>• Murrumbidgee Field Trip - explore the existing climate change effects on several industries in south east Australia, the options examined, interventions made, and plans to deal with a hotter and drier climate.</li> <li>• Further sectors examined include energy generation, water access, water management, tourism and biodiversity conservation.</li> </ul>	ANU - Canberra
Week 8	Integration and RAP finalisation	<ul style="list-style-type: none"> <li>• Exercise - comparison of participants' assessment of their national adaptation strategies.</li> <li>• RAPs final development</li> <li>• RAP presentations</li> <li>• Closing ceremony and graduation</li> </ul>	ANU - Canberra