



ENV 300

Environmental Decision Making

S1 Day 2014

Dept of Environment & Geography

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General Information

Unit convenor and teaching staff

Unit Convenor

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E7A 711

By appointment

Lecturer

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Credit points

3

Prerequisites

39cp including (ENV267(P) or GEOS265(P) or GEOS267(P))

Corequisites

Co-badged status

Unit description

This unit analyses the societal context in which decisions on environmental issues are made, and scientific and technological knowledge applied. Students are required to gain an appreciation of the importance of the economic, legal and policy aspects of environmental debate, of the role of governments and their agencies, and of the ethical and philosophical background against which decisions are made. Specific current, and possibly highly controversial, environmental issues are used to illustrate more general points made and to engender classroom discussion.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

Develop the ability to write cogent and clearly structured reports.

Capacity to identify relevant findings and other information.

Develop creative and innovative thinking.

Develop skills in analysis, synthesis and critical thinking.

Develop cross cultural understanding.

Develop the capacity for independent learning and inquiry.

Develop their sense of social, ethical and professional responsibility.

Assessment Tasks

| Name | Weighting | Due |
|--|-----------|-------------------------------|
| <u>Short Report</u> | 10% | Friday 28 March |
| <u>Case Study 1</u> | 30% | Friday 2nd April |
| <u>Case Study 2</u> | 40% | Friday 23 May |
| <u>Class Participation</u> | 20% | Tutorials 2-13 Lectures 10-13 |

Short Report

Due: **Friday 28 March**

Weighting: **10%**

Task 1: Short Report - 500 words

Your first task is to write a 500 word report on something to do with environmental decision making that interests you.

Your report must be:

- concise
- include links to high quality resources available online, including some peer reviewed journal articles (use links for these that you used to find them through the Macquarie University Library website, so that your fellow students can get to them easily)
- written in the light of the Assessment Standards.

Topics you could write about include:

- Definitions of key terms
- Outlines of important decision making theories
- Reviews of important peer reviewed journal articles
- Descriptions of important formal decision-making processes
- Descriptions of key tools and methods developed to support decision makers
- Explanations of prominent decision making failure

On successful completion you will be able to:

- Develop the ability to write cogent and clearly structured reports.
- Capacity to identify relevant findings and other information.
- Develop skills in analysis, synthesis and critical thinking.

Case Study 1

Due: **Friday 2nd April**

Weighting: **30%**

Write an 1800 word essay analysing an environmental decision

Your task is to write an 1800 word essay to analyse an existing environmental decision situation with the objective of discussing the successes and/or failures of the decision.

Choose a substantial, interesting environmental planning or environmental management decision (one that has already been made) and analyse it from one or more of three perspectives:

social justice, ecological sustainability, or economic efficiency.

Some examples of substantial environmental decisions are:

- a major development proposal, e.g. a uranium mining proposal, or a desalination plant proposal
- a major land use plan, e.g. a Local Environmental Plan, a biodiversity conservation strategy, a metropolitan strategy, a coastline management plan
- a major natural resource management plan, e.g. a strategic plan for the Murray Darling Basin, a strategic plan for the Great Barrier Reef, a fisheries management plan
- a risk management strategy for a major issue, e.g. management of risk of fire in rural Victoria;
- development of policy for a sector, e.g. a metropolitan transport strategy, or a renewable energy strategy; or
- development of a policy position for an international negotiation, e.g. development of an Australian position on climate change to take to the negotiations of the UNFCCC Conference of the Parties (COP).

On successful completion you will be able to:

- Develop the ability to write cogent and clearly structured reports.
- Capacity to identify relevant findings and other information.
- Develop skills in analysis, synthesis and critical thinking.
- Develop the capacity for independent learning and inquiry.

- Develop their sense of social, ethical and professional responsibility.

Case Study 2

Due: **Friday 23 May**

Weighting: **40%**

This is a combination of an individual project and a group project and you will be randomly allocated into groups of 4-5 people to prepare this assignment. Each group will select a recent or forthcoming environmental decision that will be the focus of individuals assignments and a group poster. Groups will be selected prior to the mid-semester break. The two tasks are:

Task 1 - Conduct individual research and write a research report that is the basis of your contribution to the poster in the form of an 1800 word research essay - due Wednesday 23 May - 30%

The first task of this assignment requires each student to submit a research essay that demonstrates your capacity to identify and summarise the *academic* literature relevant to a specific topic. Your task is to take an allocated element of the decision your team is analyzing and to undertake a library search of the academic literature and write a research report that summarises your conclusions about that aspect of the case. You will undertake a literature search on the topic area (thinking of the topic in empirical, thematic and conceptual terms) using the database resources of the Macquarie University Library, and appropriate web-based search engines and write a report that describes (i) the importance of the issue you are investigating for an evaluation the decision, (ii) your conclusions re this issue, and (iii) your reasons for reaching these conclusions.

Task 2 – Contribute to Case Study Decision Analysis Group Poster - presentations in weeks 12 and 13 - 10%

In groups of 4 - 5 people, prepare an academic poster (specific guidelines will be provided in class) that provides a coherent analysis of a major environmental decision-making situation. Your analysis should clearly identify the decision and its context(s), establish what relevant perceived, real and ideal drivers influenced the decision-making process, and link your analysis to the relevant academic literature.

Separate detailed presentation guidelines will be provided. You may be innovative in your presentation, so long as the final product conforms to the guidelines and can be displayed on a wall or display board. It is up to each team to determine how tasks are divided or shared, and all contributors to the poster should be clearly listed below the title as joint authors.

Posters will be marked on a pass / fail basis. Individual marks will depend on the mark earned individually for task 1 (the written assignment). Thus, if the group fails the poster, each member will earn zero; if it passes, then the mark each individual receives will depend on the quality of their individual contribution, as measured by their grade for task 1.

You should ensure that communication is the key principle used in designing and developing your poster. You should use maps, tables and other illustrative material to effectively describe the scenario under consideration and to summarize key information. The text of your poster should be legible and all sources should be accurately cited and referenced. The final format of

the poster is a decision for the team.

On successful completion you will be able to:

- Develop the ability to write cogent and clearly structured reports.
- Capacity to identify relevant findings and other information.
- Develop creative and innovative thinking.
- Develop skills in analysis, synthesis and critical thinking.
- Develop the capacity for independent learning and inquiry.
- Develop their sense of social, ethical and professional responsibility.

Class Participation

Due: **Tutorials 2-13 Lectures 10-13**

Weighting: **20%**

In ENV300, 20% of your overall grade for the unit is assigned to your participation in tutorials, and attendance at workshops based on guest speakers' case studies.

Task 1 – Attend all tutorials, and the compulsory guest speaker sessions (weeks 10 to 13)

Attendance will be recorded for all tutorial sessions. If you attend less than 80% of the tutorial sessions marks will be deducted. If you fail to attend a guest speaker session and do not get approval from the unit convenor, marks will be deducted.

Task 2 – Read the two assigned readings, and present one of them if requested

For each week's tutorial read the two assigned readings, and be prepared to present each of them to the class. In each week's tutorial, two people will be selected randomly to present a brief (5 minute) summary of one of the assigned readings and to facilitate a class discussion. You will not be allowed to use Microsoft Powerpoint or any other electronic presentation tools but you will be allowed to use the whiteboard if you wish. Your performance will be assessed using a simple marking sheet that indicates the strength of your contributions. Further details on marking criteria will be provided in class.

Task 3 - Provide feedback on your own and your team members' contributions to the Case Study 2 group work

Give yourself and your colleagues a rating for (i) each individual's overall contribution to the group's understanding of the case, (ii) the level of effort you have each put into the group work, and (iii) the helpfulness of each individual's contributions to the group's process, including listening, respect, negotiation, etc. A page to use when assessing each other's contributions will be provided in class.

On successful completion you will be able to:

- Capacity to identify relevant findings and other information.

- Develop creative and innovative thinking.
- Develop skills in analysis, synthesis and critical thinking.
- Develop the capacity for independent learning and inquiry.
- Develop their sense of social, ethical and professional responsibility.

Delivery and Resources

EXPECTATIONS

Teaching and Learning Strategy

The teaching process has four main elements:

1. Lectures that introduce basic concepts.
2. Talks from guest lecturers that convey the complexities of environmental and sustainability decision-making, in practice, in diverse settings.
3. Tutorials in which students explore the research literature around environmental decision making.
4. Assignments that require students to understand key skills, including systems thinking, stakeholder analysis, management system analysis, and integrative thinking.

Lectures, tutorials and assignments introduce students to:

- identifying social, economic and ecological interdependencies
- identifying political, institutional and managerial issues
- identifying scientific, legal, engineering, planning, and other technical information relevant to decisions
- appreciating complexity and uncertainty in environmental and sustainable development decisions
- appreciating the variety of formal and informal decision making processes that shape sustainability outcomes at local, regional, national and international levels, and
- appreciating the wide range of tools and methods that can support environmental decision-making, through a mixture of theory and case studies.

Students are expected to:

- read set readings in advance for tutorials;
- participate in tutorial discussions; and
- follow current developments with regard to environmental decision-making,

environmental policy and sustainable development in the media.

What has changed?

For 2014, we are increasing the number of case studies with guest speakers, using an approach inspired by the Harvard Case Study method, in which students follow a decision making process and put themselves in the decision makers shoes during a workshop session. The goal is to increase the learning re integration and complexity in environmental decision making in practice.

In line with this, attendance at the four workshops with guest speakers in weeks 10 to 13 is now compulsory.

We have also increased the emphasis on practices for integrating different perspectives and insights in environmental decision making. Required readings have been altered as necessary to support these shifts in emphasis.

Tecnologies used and required

ENV300 uses a wide variety of online resources, including an iLearn page to make slides and audio from lectures available, the Macquarie University Library for access to peer reviewed journal articles, and the web generally for news about, and discussions of, environmental decision making.

Workload expectation

It is generally expected that students will commit 3 hours per week per credit point in their studies. Thus, in addition to attending weekly lectures and tutorials for three hours, students in ENV300 are expected to complete appropriate reading, research and other activities equivalent to at least 6 hours per week. Thus the total workload for this unit should be considered as a minimum of 9 hours per week throughout the semester. If you are unable to make this commitment to your study, then you should reconsider your decision to enrol – or reassess your priorities. For virtually each student in the class, this unit is a core element of your final year studies and you should be aiming to secure as high a grade as possible. If you consider you face impediments in committing to this unit, please discuss your situation with Dr Greg Walkerden.

Requirements to complete the unit satisfactorily

- attend at least 80% of scheduled tutorials
- participate in class discussions, workshops and activities
- complete all assessment tasks

ASSESSMENT

Assessment Standards

Many specific aspects of your work are important (as identified in the following standards), but it is the overall quality of the completed work that is important. Assignments will be assessed holistically. The following bands are 'ideal types': lists of the features of typical examples of

assignments at each level.

The standard of each assignment is obviously important - good grades demonstrate that your work is competent, proficient or excellent. But from a learning perspective, it is equally important to look at your own work developmentally: to look for gradual improvement, deepening insight, and broadening competency. Grades for assignments assess the standard of your work. Comments on assignments are intended to be helpful developmentally: indicating what you have achieved, and how you could improve your work.

For a grade of High Distinction (>= 85%)

- use and synthesis of a variety of high quality sources not mentioned in class or on reading lists;
- considered use of dictionary and technical terms, diagrams and/or other sources to define and set the topic in context;
- incisive and decisive specification of the key issues;
- prioritisation and exposition of the key issues in a clear and logical sequence;
- relevant contrary arguments are identified and effectively dealt with;
- discussion forms a sound basis for clear, justified and comprehensive recommendations and conclusions;
- independence of thought and obvious originality;
- demonstrated ability to weigh arguments and form clear, considered personal viewpoints;
- proficient use of the English language;
- references presented at 'publishable' standard.

Overall, your work demonstrates, in an interesting or challenging way, originality based on proficiency in all the learning objectives.

For a grade of Distinction (75-84%)

- use and synthesis of some high quality sources not mentioned in class or on reading lists, and reference to some others;
- adequate use of dictionary and technical terms, diagrams and/or other sources to define and set the topic in context;
- clear specification of the key issues;
- key issues generally presented in a logical sequence;
- relevant contrary arguments raised but might not be fully resolved;
- discussion leads to clear and justified recommendations and conclusions;
- independence of thought and significant originality;
- general ability to weigh arguments and form personal viewpoints;

- clear use of the English language;
- references largely error free.

Overall, your work demonstrates a comprehensive awareness and understanding of the topic of the assignment.

For a grade of Credit (65-74%)

- use and synthesis of some high quality sources, and reference to some additional good quality material;
- use of dictionary and technical terms to define and contextualise the topic;
- overall awareness of the key issues;
- the selected key issues generally presented in a logical sequence;
- some contrary arguments raised with inadequate appreciation of their significance;
- a clear statement of conclusions and recommendations;
- some independent thought but limited originality;
- difficulties in weighing arguments and presenting personal viewpoints;
- sometimes proficient and always passable use of the English language;
- some errors of omission or detail in presentation of references.

Overall, your work demonstrates the ability to use and apply fundamental concepts and skills.

For a grade of Pass (50-64%)

- limited use and synthesis of good quality sources;
- use of dictionary or vernacular definitions in an attempt to identify and set the topic in context;
- some awareness of the key issues;
- some attempt to order the argument, but flaws in logical discipline;
- few contrary arguments raised and little appreciation of their significance or resolution;
- a generally clear statement of conclusions and recommendations;
- little independent thought and minimal originality;
- little weighing of argument and lack of clarity in personal viewpoints;
- passable use of the English language;
- some errors of omission or detail in presentation of references.

Overall, your work satisfies the basic learning requirements of the assignment.

For a grade of Fail (45-49%)

- at the lower end of the acceptable range for most criteria for a grade of Pass.

For a lower grade of Fail (26-44%)

- lack of awareness of sources or what the question is about;
- confused definitions;
- general inability to identify the key issues;
- inability to order the argument;
- few, if any, contrary arguments raised and no appreciation of their significance or resolution;
- inadequate statement of conclusions or recommendations;
- no independent thought or originality;
- no ability to weigh arguments or form personal viewpoints.

For a grade of Serious Fail (< 26%)

- no reference to suggested sources, generally inappropriate use of materials
- no attempt at definitions;
- no awareness of key issues, such that the paper fails to address or answer the question;
- arguments unformulated, many errors, unsupported assertions, unjustified generalisations;
- contrary arguments impugned or ignored;
- inconclusive outcome to the paper;
- no independent thought, any originality likely to be illogical;
- inability to weigh arguments, personal viewpoints absent or inadequate.

Source: Neil DT, Wadley DA, and Phinn SR 1999, 'A generic framework for criterion-referenced assessment of undergraduate essays', *Journal of Geography in Higher Education*, 23(3) pp. 303-325. See also: Neil DT, Wadley DA, and Phinn SR 1998, *Assessment Guidelines*, School of Geography, Planning and Environmental Management, The University of Queensland. Online: <http://www.gpem.uq.edu.au/assess-guidelines> Used with permission. This text is a very minor adaptation of an excerpt from Neil, Wadley and Phinn (1998). See the full text in either version for further very useful background on these standards, and the criteria they reflect.

Writing Guide

All written work should follow the conventions laid out in the GSE Writing Guide - <http://envirogeo.g.mq.edu.au/files/file/GSEWritingGuide.pdf>. This covers details of how to reference different kinds of source, amongst other things.

Acknowledging others' contributions

Acknowledging your debts to other people's work - your use of their exact words or their ideas - is fundamental to good scholarship. We recommend reviewing Georgetown University's very helpful guide to honest, transparent acknowledgment of your sources: <http://honorcouncil.georgetown.edu/system/what-is-plagiarism>.

Submission of Assignments

Assignments 1, 2 and 3 are to be handed in to the Science Student Centre in E7A101.

There is an after hours box located on the southern door of E7A (on Wally's Walk - the main pathway through campus).

A Cover Sheet is essential. Cover Sheets are available here: http://web.science.mq.edu.au/new_and_current_students/undergrad/assignments_and_coversheets/

Assignments 1, 2, and 3 are also to be submitted through the university's anti-plagiarism detection software, Turnitin, via the links provided in [iLearn](#).

Late submissions

Extensions must be requested by email from the unit convener, Dr Greg Walkerden, (greg.walkerden@mq.edu.au) prior to the assignment's due date (except in exceptional circumstances), and supported by appropriate documentation (e.g. a medical certificate).

An extension has only been granted if it is provided in writing (by email). Otherwise automatic penalties will apply. Assignments that are handed in late without an extension or exceptional circumstances will not be marked if they are submitted more than 7 days after the due date. If submitted within 7 days, marks will be deducted for lateness at the rate of 5% of the possible mark per day late.

READING

Unit Web Page

The unit is available at : ilearn.mq.edu.au

Required readings

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|--------|--|
| Week 1 | No tutorials |
| Week 2 | Global environmental history & dynamics Clark, W. C., Crutzen, P. J., & Schellnhuber, H. J. 2004. Science for global sustainability: Towards a new paradigm. In H. J. Schellnhuber, P. J. Crutzen, W. C. Clark, M. Claussen, & H. Held (Eds.), <i>Earth system analysis for sustainability</i> (pp.1-28). Cambridge, Mass: MIT Press. Available here: https://groups.nceas.ucsb.edu/sustainability-science/documents/sustainability-science-reader/session-2-20-sept/Clark_and_Crutzen_and_Schellnhuber_2004.pdf Steffen, W., P.J. Crutzen and J.R. McNeill 2007. 'The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?'. <i>Ambio</i> 36(8):614-621. |

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| Week 3 | <p>Systems thinking</p> <p>Meadows, D. 1999. <i>Leverage points: places to intervene in a system</i>. The Sustainability Institute, Hartland, USA. http://www.fraw.org.uk/files/limits/meadows_1999.pdf</p> <p>Turner, G. 2008. A comparison of The Limits to Growth with 30 years of reality. <i>Global Environmental Change</i> 18:397–411.</p> |
| Week 4 | <p>Systems thinking</p> <p>Chapin III, F.S., S.R. Carpenter, G.P. Kofinas, C. Folke, N. Abel, W.C. Clark, P. Olsson, D.M. Stafford Smith, B. Walker, O.R. Young, F. Berkes, R. Biggs, J.M. Grove, R.L. Naylor, E. Pinkerton, W. Steffen and F.J. Swanson 2009. 'Ecosystem stewardship: sustainability strategies for a rapidly changing planet', <i>Trends in Ecology and Evolution</i> 25(4): 241-249</p> <p>Berkes, F. 2007. "Understanding uncertainty and reducing vulnerability: lessons from resilience thinking." <i>Natural Hazards</i> 41: 283-295.</p> |
| Week 5 | <p>Stakeholders, knowledges, power & negotiation</p> <p>Forester J. 2006. Making Participation Work When Interests Conflict: Moving from Facilitating Dialogue and Moderating Debate to Mediating Negotiations. <i>Journal of the American Planning Association</i>, 72(4):447-456.</p> <p>Reed M. et al 2009. Who's in and why? A typology of stakeholder analysis methods for natural resource management. <i>Journal of Environmental Management</i> 90:1933–1949.</p> |
| Week 6 | <p>Stakeholders, knowledges, power & negotiation</p> <p>Sarewitz, D. 2004. "How science makes environmental controversies worse." <i>Environmental Science & Policy</i> 7: 385-403.</p> <p>Davis, D. K. 2005. "Indigenous knowledge and the desertification debate: problematising expert knowledge in North Africa." <i>Geoforum</i> 36(4): 509-524.</p> |
| Week 7 | <p>Environmental governance and management</p> <p>Bulkeley, H. 2005. "Reconfiguring environmental governance: Towards a politics of scales and networks." <i>Political Geography</i> 24(8): 875-902.</p> <p>Scott, James C. 1998. 'Nature and Space', <i>Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed</i>. New Haven, Yale University Press, 11-33 (note this is roughly half the chapter, not the whole chapter)</p> |
| Week 8 | <p>Environmental governance and management</p> <p>Kapoor, I. 2001. "Towards participatory environmental management?" <i>Journal of Environmental Management</i> 63: 268-279.</p> <p>Natcher, D. C., S. Davis, and C.G. Hickey 2005. Co-Management: Managing Relationships, Not Resources. <i>Human Organization</i> 64(3): 240-250.</p> |
| Week 9 | <p>Integration in decision making</p> <p>Biggs, R., F. R. Westley, and S. R. Carpenter. 2010. Navigating the back loop: fostering social innovation and transformation in ecosystem management. <i>Ecology and Society</i> 15(2): 9. [online] URL: http://www.ecologyandsociety.org/vol15/iss2/art9/</p> <p>Walkerden G 2005. Felt knowing: a foundation for Local Government practice. In: Keen M., Brown V. and Dyball R. 2005, <i>Social Learning in Environmental Management</i>, pages 170-187. Earthscan, London. Provided via email.</p> |

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| Week 10 | <p>Professional practice</p> <p>Oreskes N 2004. 'Science and public policy: what's proof got to do with it?'. <i>Environmental Science & Policy</i> 7(5):369–383.</p> <p>Steele W 2009, 'Australian Urban Planners: Hybrid Roles and Professional Dilemmas?', <i>Urban Policy and Research</i>, 27(2):189–203.</p> |
| Week 11 | <p>Professional practice</p> <p>Brunner, RD and Clark TW 1997. A practice-based approach to ecosystem management. <i>Conservation Biology</i> 11(1):48-58.</p> <p>Hohl A and Clark SG 2010. 'Best Practices: The Concept, An Assessment, and Recommendations'. Pp151-170 in: <i>Large Scale Conservation - Integrating Science, Management, and Policy in the Common Interest</i>, Clark SG, Hohl A, Picard C, and Newsome D, Eds. New Haven CT:Yale School of Forestry & Environmental Studies. online: http://environment.research.yale.edu/documents/downloads/o-u/Report-24.pdf#page=159</p> |
| Week 12 | <p>Assignment 4 – poster presentation (I)</p> |
| Week 13 | <p>Assignment 4 – poster presentation (II)</p> |

Additional journal articles

In addition to the required reading for ENV300, you should also be developing your program of professional reading – identifying journals that you regularly browse and may subscribe to as a professional; making a list of key authors and institutions whose work you look out for; and building up a set of key words that you regularly use for searching websites and journal databases.

Google Scholar (http://scholar.google.com.au/advanced_scholar_search) is an excellent startingpoint for finding interesting journal articles. The University Library (http://www.mq.edu.au/on_campus/library/) lets students download PDFs of a very large number of peer reviewed journal articles, and includes an excellent keyword and phrase search facility (MultiSearch).

Some recommended journals

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| <ul style="list-style-type: none"> • Action Research • Administrative Science Quarterly • Alternatives • Ambio • Australasian Journal of Environmental Management • Australian Geographer • Climatic Change • Coastal Management • Conservation Biology • Ecological Economics • Ecology and Society • Environment • Environment and Planning Law Journal • Environment, development & sustainability • Environmental and Planning Law Journal • Environmental Conservation • Environmental Ethics • Environmental History • Environmental Impact Assessment Review • Environmental Law Reporter (NSW) • Environmental Management • Environmental Politics • Environmental science & policy | <ul style="list-style-type: none"> • Environmental Values • Ethics, Place and Environment • Forest Ecology and Management • Global Environmental Change • Habitat • Industrial and Corporate Change • International Journal of Environmental Studies • Journal of Environmental Management • Journal of Environmental Planning and Management • Journal of Management Inquiry • Journal of Management Studies • Landscape and Urban Planning • Local Environment • Management Learning • Natural Resources Journal • Organization • Organization Studies • Organizational Dynamics • Policy Sciences • Public Administration Review • Society and Natural Resources • Strategic Management Journal |
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Recommended Texts

The following are recommended background reading:

- Harding R, CM Hendriks & M Faruqi 2009 Environmental Decision-making: Exploring Complexity and Context, The Federation Press, Sydney
- Walker B & D Salt 2006 Resilience thinking: sustaining ecosystems and people in a changing world, Island Press, Washington.
- Forester J 1989 Planning in the Face of Power, University of California Press, Berkeley.

Some useful websites

| Organisation/Subject | Web Address |
|--|---|
| International | |
| World Bank | http://www.worldbank.org/ |
| US Environment Protection Agency | http://www.epa.gov/epahome/ |
| IISD Linkages | http://www.iisd.ca/ |
| World Resources Institute | http://www.wri.org/ |
| World Business Council for Sustainable Development | http://www.wbcsd.org |
| UNEP | http://www.unep.org |

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| Greenpeace International | http://www.greenpeace.org/ |
| World Wide Fund for Nature | http://www.panda.org/ |
| IUCN World Commission on Protected Areas | http://www.iucn.org/themes/wcpa/ |
| Mineral Policy Institute | http://www.mpi.org.au/ |
| National | |
| Environment Protection and Heritage Council | http://www.ephc.gov.au/ |
| Department of the Environment, Water, Heritage and the Arts | http://www.environment.gov.au/ |
| Caring for our Country | http://www.nrm.gov.au/ |
| Department of Climate Change | http://www.climatechange.gov.au/ |
| Dept of Agriculture, Fisheries and Forestry | http://www.daff.gov.au/ |
| Dept of Innovation, Industry, Science and Research | http://www.industry.gov.au/ |
| Dept of Resources, Energy and Tourism | http://www.ret.gov.au/Pages/default.aspx |
| Australian Conservation Foundation | http://www.acfonline.org.au/ |
| Greenpeace Australia Pacific | http://www.greenpeace.org.au/ |
| State | |
| NSW Government Departments | http://www.nsw.gov.au |
| NSW Legislation | http://www.austlii.edu.au/au/legis/nsw/consol_act/ |
| EPA (Victoria) | http://www.epa.vic.gov.au/ |
| Environmental Protection Agency (Queensland) | http://www.epa.qld.gov.au/ |
| EPA (SA) | http://www.epa.sa.gov.au/ |
| Department of Environment and Conservation (WA) | http://www.dec.wa.gov.au |
| Nature Conservation Council of NSW | http://www.nccnsw.org.au/ |
| Total Environment Centre | http://www.tec.org.au/ |
| Local | |
| Hornsby Shire Council | http://www.hornsby.nsw.gov.au |
| Newcastle City Council | http://www.ncc.nsw.gov.au |
| The Watershed | http://www.cityofsydney.nsw.gov.au/environment/TheWatershed/Default.asp |
| Local Government and Shires Association of NSW | http://www.lgsa.org.au |
| Others | |
| Environment News Service | http://www.ens-newswire.com/ |

Environmental News Sites

Students are expected to follow current developments with regard to environmental decision-making, environmental policy and sustainable development in the media.

The Conversation - <http://theconversation.com/au/environment>

Reneweconomy - <http://reneweconomy.com.au>

Sydney Morning Herald - <http://www.smh.com.au/environment>

ABC News - <http://www.abc.net.au/environment/>

Nature - <http://www.nature.com/news/>

Science - <http://news.sciencemag.org>

Ecos (CSIRO) - <http://www.ecosmagazine.com>

National Geographic - <http://news.nationalgeographic.com/news/archives/environment/>

Sustainable Business Australia - <http://www.sba.asn.au/sba/>

Planet Ark - <http://planetark.org/enviro-news/>

BBC News (UK) - http://www.bbc.co.uk/news/science_and_environment/

National Public Radio (USA) - <http://www.npr.org/sections/environment/>

The Guardian (UK) - <http://www.theguardian.com/environment>

Salon (USA) - <http://www.salon.com/category/sustainability/>

Deutsch Vella (Germany) - <http://www.dw.de/top-stories/environment/s-11798>

Unit Schedule

13 weeks of Lectures and 12 weeks of Tutorials. There are **no tutorials in week 1**.

Please check the University Timetable - <https://timetables.mq.edu.au> - to confirm the classrooms for tutorials and lectures, as sometimes these change at the beginning of Session (to adjust to numbers of students enrolling).

Week 1 - Introduction, and Global Environmental History (GW, EOG)

Week 2 - Systems Thinking I (GW)

Week 3 - Systems Thinking II (GW)

Week 4 - Stakeholders, knowledges, power & negotiation I (EOG)

Week 5 - Stakeholders, knowledges, power & negotiation II (EOG)

Week 6 - Environmental governance & management I (EOG)

Week 7 - Environmental governance & management II (EOG)

Week 8 - Integration in decision making I (GW)

Week 9 - Integration in decision making II (GW)

Week 10 - Guest workshop: putting yourself in a decision-maker's shoes I (GW) **Attendance compulsory**

Week 11 - Guest workshop: putting yourself in a decision-maker's shoes II (GW) **Attendance compulsory**

Week 12 - Guest workshop: putting yourself in a decision-maker's shoes III (EOG) **Attendance compulsory**

Week 13 - Guest workshop: putting yourself in a decision-maker's shoes IV (EOG) **Attendance compulsory**

GW = Greg Walkerden, **EOG** = Emily O'Gorman.

Further details of the unit can be found on iLearn - <https://ilearn.mq.edu.au>.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://stu>

dents.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- Develop creative and innovative thinking.
- Develop skills in analysis, synthesis and critical thinking.
- Develop cross cultural understanding.
- Develop the capacity for independent learning and inquiry.
- Develop their sense of social, ethical and professional responsibility.

Assessment tasks

- Case Study 1
- Case Study 2
- Class Participation

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcomes

- Develop creative and innovative thinking.
- Develop the capacity for independent learning and inquiry.

Assessment task

- Class Participation

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcome

- Develop skills in analysis, synthesis and critical thinking.

Assessment tasks

- Short Report
- Case Study 1
- Case Study 2
- Class Participation

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Develop the ability to write cogent and clearly structured reports.
- Develop creative and innovative thinking.
- Develop skills in analysis, synthesis and critical thinking.
- Develop cross cultural understanding.
- Develop their sense of social, ethical and professional responsibility.

Assessment tasks

- Short Report
- Case Study 1
- Case Study 2
- Class Participation

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Develop the ability to write cogent and clearly structured reports.
- Capacity to identify relevant findings and other information.
- Develop creative and innovative thinking.
- Develop skills in analysis, synthesis and critical thinking.
- Develop cross cultural understanding.
- Develop the capacity for independent learning and inquiry.
- Develop their sense of social, ethical and professional responsibility.

Assessment tasks

- Short Report
- Case Study 1
- Case Study 2
- Class Participation

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- Develop creative and innovative thinking.
- Develop the capacity for independent learning and inquiry.

Assessment tasks

- Case Study 2
- Class Participation

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Develop the ability to write cogent and clearly structured reports.
- Develop cross cultural understanding.

Assessment tasks

- Short Report
- Case Study 1
- Case Study 2
- Class Participation

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcomes

- Develop cross cultural understanding.
- Develop their sense of social, ethical and professional responsibility.

Assessment tasks

- Case Study 1
- Case Study 2
- Class Participation

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcomes

- Develop cross cultural understanding.
- Develop their sense of social, ethical and professional responsibility.

Assessment task

- Case Study 1