GEOP300

Environmental Decision Making

S1 Day 2016

Department of Geography and Planning

Contents

General Information

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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 the capacity for independent learning and inquiry.

Develop their sense of social, ethical and professional responsibility.

Assessment Tasks

Name	Weighting	Due
Short Report	10%	Midnight Monday 28 March
Case Study 1	30%	Midnight Monday 25th April
Case Study 2	40%	Midnight Monday 16 May
Class Participation	20%	Lectorials, Tutorials 2-11

Short Report

Due: **Midnight Monday 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: **Midnight Monday 25th April**
Weighting: **30%**

Your task is to write an 1800 word essay that analyses a major environmental decision made by influential stakeholder(s) and discusses its strengths and weaknesses from the perspectives of (i) socio-ecological dynamics and (ii) effects on stakeholders (both human and non-human).

To do this, (i) consider the decision from a systems perspective: how has it and will it affect the socio-ecological systems it is occurring within?; and (ii) consider who wins, who loses, in what ways, by what uses of power?

Choose a substantial, interesting environmental planning or environmental management decision. 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 UNFCC Conference of the Parties (COP).

On successful completion you will be able to:

- Develop the ability to write cogent and clearly structured reports.
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- 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: **Midnight Monday 16 May**
Weighting: **40%**

Case Study 2 is a combination of (i) a small group project (Task 2, a poster about an environmental decision), and (ii) an individual project (Task 1, a report that contributes to the group's understanding of the environmental decision).

You will be allocated into groups of 4-5 people in your tutorial. Each group will select a recent or forthcoming environmental decision that will be the focus of the group's poster, and its members' individual assignments. Groups should discuss what aspects and/or parts of the decision they wish to research for the poster, and each group member should focus their Task 1 work on one or more of these topics, in a way that supports the group's efforts.

Task I - Research aspect(s) and/or part(s) of the decision, and write a research report that is the basis of your contribution to the poster in the form of an 1800 word research essay - 30%

Start with the Macquarie University Library website (http://www.mq.edu.au/about/campus-services-and-facilities/library) and search Google Scholar and/or article databases available (the second tab), looking for academic research that relates to your topic. Supplement this with standard Google searches (or the search engine of your choice), looking for other high quality sources of information about your topic.

Analyse the information available, developing a view about your topic that will inform your group's assessment of the case. Demonstrate (i) use and synthesis of many high quality sources not mentioned in class or on reading lists; (ii) astute use of technical terms and sources to define the topic and set it in context, and incisive specification of the key issues; (iii) that you can lay key issues out in a clear, logical sequence, identify and address relevant contrary

arguments, and draw clear, justified and comprehensive conclusions; and (iv) that have the ability to form a clear, considered personal viewpoint, that provides evidence of independence of thought and originality.

To provide a clear, focused argument describe (i) the importance of the topic you are investigating for an evaluation the decision, (ii) your conclusions re your topic, and (iii) your reasons for reaching these conclusions.

For decisions, the key academic literature is relevant to, but not specifically about, the case you are studying. To find this literature, consider: what research has been done on kinds of place like those that come up in your case study? what research has been done on the issues that come up in your case study? what research provides helpful background for considering decisions of this kind (e.g. re decision making methods, key concepts, ethical stances)?

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

In groups of 4 - 5 people, prepare an academic poster (following the guidelines provided on iLearn) that provides a coherent analysis of a major environmental decision-making situation. Your analysis should clearly consider (i) the decision in the light of the socio-ecological systems it is occurring within, (ii) its socio-political character, and (iii) management and governance perspectives on the decision. Develop clear conclusions about the major issues, and make recommendations where appropriate. Make sure your analysis is linked to, and grounded in, the relevant academic literature.

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: **Lectorials, Tutorials 2-11**
Weighting: **20%**

In GEOP300, 20% of your overall grade for the unit is assigned to your class participation - 5% for lectorial attendance, and 15% for tutorial participation.

Task 1 – Attend all lectorials

In GEOP300, the lecture content and class exercises are interspersed. You can't get the benefit of the learning by listening on iLearn - that's passive rather than active - so attendance is required. Attendance will be recorded for all lectures.

To add to the incentive, 5 marks can be earned simply by attending and participating. 5 marks: attending 11-12 weeks. 4 marks: attending 9-10 weeks. 3 marks: 7-8 weeks. 2.5 marks: attending 6 weeks. 0 marks: attending less than 6 weeks. (NB there are only 12 weeks in GEOP300 in 2016, as we miss one day for Good Friday.)

(If you have special circumstances that you think warrant an exemption from this lecture attendance requirement, contact the unit convener. If, during session, you are ill or are facing other difficulties, advise that through ask.mq.edu.au.)

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

There are no tutorials in week 1. Participation in tutorials in weeks 2 to 10 will be assessed. (Weeks 11 and 12 are devoted to presentation and discussion of posters.)

For each week's tutorial, in weeks 2 to 10, 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 jointly facilitate a class discussion. You can't 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.

This arrangement - being asked based on a random number generator to introduce a reading, and then the whole tutorial's participation being assessed - may seem tough. It arose from earlier experience of few tutorial members being prepared to discuss the readings. Following this change, students have reported getting much more out of tutorials, and finding them more enjoyable. It ensures you will have carefully considered a number of noteworthy papers re environmental decision making.

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. In GEOP300 the lectures are all lectorials: they intermingle lecture content, discussion, and workshop exercises. This is why attendance is compulsory: you need to be in the room to participate to learn by participating.

2. Talks from guest lecturers that convey the complexities of environmental and sustainability decision-making, in practice, in diverse settings. These workshops used an approach inspired by the Harvard Business School's case study method: the guests introduce a decision situation, then we discuss what you would do in their shoes, then they tell us what they actually did, and we all discuss that.

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.

Technologies used and required

GEOP300 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 GEOP300 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 that you may have difficulty making this commitment, please discuss your situation with the Unit Convenor.

Requirements to complete the unit satisfactorily

- attend at least 80% of scheduled tutorials and lectures
- 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, available on iLearn. 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/whatisplagiarism.

Submission of Assignments

Assignments 1, 2 and 3 are to be submitted electronically via iLearn by midnight on the due date.

Assignments 1, 2, and 3 will be reviewed by Turnitin, which helps us check whether sources are properly acknowledged, and whether assignments submitted are each student's own work.

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. If you are having difficulties, please get in touch with the Unit Convenor.

READING

Unit Web Page

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

Required readings

Week 1 - **NO TUTORIALS IN WEEK 1**

Week 2 - **Systems thinking**

Steffen W and others 2015. Planetary boundaries: Guiding human development on a changing planet. *Science* 347, 1259855. Full article: http://dx.doi.org/10.1126/science.1259855 (11 pages).

Turner, G. 2008. A comparison of The Limits to Growth with 30 years of reality. Global Environmental Change 18:397–411.

Week 3 - **Systems thinking**

Meadows, D. 1999. *Leverage points: places to intervene in a system*. The Sustainability Institute, Hartland, USA. http://www.fraw.org.uk/files/limits/meadows_1999.pdf

Walters C (n.d.) *The Resilience of Systems*, included in workshop materials at a 1988 AEAM workshop at Macquarie University, available on iLearn.

Week 4 - NO CLASSES THIS WEEK - Good Friday Public Holiday

Week 5 - **Stakeholders, knowledges, power & negotiation**

Forester J. 2006. Making Participation Work When Interests Conflict: Moving from Facilitating Dialogue and Moderating Debate to Mediating Negotiations. *Journal of the American Planning Association*, 72(4):447-456.

Richardson T 2005. Environmental assessment and planning theory: four short stories about power, multiple rationality, and ethics. *Environmental Impact Assessment Review* 25:341–365.

Week 6 - **Stakeholders, knowledges, power & negotiation**

Sarewitz, D. 2004. "How science makes environmental controversies worse." *Environmental Science & Policy* 7: 385-403.

Cundall G, Cumming GS, Biggs D and Fabricius C 2011. Soft Systems Thinking and Social Learning for Adaptive Management. *Conservation Biology* 26(1):13–20.

Week 7 - **Environmental governance and management**

Bulkeley, H. 2005. "Reconfiguring environmental governance: Towards a politics of scales and networks." *Political Geography* 24(8): 875-902.

Wilson, R. M. (2002). Directing the flow: migratory waterfowl, scale, and mobility in western North America. *Environmental History*, 247-266.

Week 8 - **Environmental governance and management**

Kapoor, I. 2001. "Towards participatory environmental management?" *Journal of Environmental Management* 63: 268-279.

Natcher, D. C., S. Davis, and C.G. Hickey 2005. Co-Management: Managing Relationships, Not Resources. *Human Organization* 64(3): 240-250.

Week 9 - **Integration in decision making**

Excerpts from Aldo Leopold 1949 *A Sand County Almanac*, available on iLearn.

Walkerden G 2005. Felt knowing: a foundation for Local Government practice. In: Keen M., Brown V. and Dyball R. 2005, *Social Learning in Environmental Management*, pages 170-187. Earthscan, London. Provided via email.

Week 10 - **Professional practice**

Brunner, RD and Clark TW 1997. A practice-based approach to ecosystem management. *Conservation Biology* 11(1):48-58.

Oreskes N 2004. 'Science and public policy: what's proof got to do with it?'. *Environmental Science & Policy* 7(5):369–383.

Week 11 - **Towards transformation**

Biggs, R., F. R. Westley, and S. R. Carpenter. 2010. Navigating the back loop: fostering social innovation and transformation in ecosystem management. *Ecology and Society* 15(2): 9. [online] URL: http://www.ecologyandsociety.org/vol15/iss2/art9/

Brunner RD 2010. Adaptive governance as a reform strategy. *Policy Sciences* (2010) 43:301–341

Week 12 - **Assignment 4 – poster presentation (I)**

Week 13 - **Assignment 4 – poster presentation (II)**

Additional journal articles

In addition to the required reading for GEOP300, 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

- 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
- 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

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
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	
Department of the Environment	https://www.environment.gov.au
National Landcare Program	http://www.nrm.gov.au/
Dept of Agriculture, Fisheries and Forestry	http://www.daff.gov.au/
Dept of Innovation, Industry, and Science	http://www.industry.gov.au/
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/
Environment and Heritage Protection (Queensland)	http://www.ehp.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
City of Sydney	http://www.cityofsydney.nsw.gov.au
Local Government and Shires Association of NSW	http://www.lgsa.org.au
Others	
Environmental Defender's Office Network	http://www.edo.org.au/

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) - https://blogs.csiro.au/ecos

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/

Environment News Service - http://www.ens-newswire.com/

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

12 weeks of Lectures and 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 begining of Session (to adjust to numbers of students enrolling).

Week 1 - Introduction, and Global Environmental History

Week 2 - Systems Thinking I

Week 3 - Systems Thinking II

Week 4 - Stakeholders, knowledges, power & negotiation I

Week 5 - Stakeholders, knowledges, power & negotiation II

Week 6 - Environmental governance & management I

Week 7 - Environmental governance & management II

Week 8 - Integration in decision making I

Week 9 - Integration in decision making II

Week 10 - Guest workshop: putting yourself in a decision-maker's shoes I

Week 11 - Guest workshop: putting yourself in a decision-maker's shoes II

Week 12 - Guest workshop: putting yourself in a decision-maker's shoes III

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

New Assessment Policy in effect from Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy_2016.html. For more information visit http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/

Assessment Policy prior to Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy prior to Session 2 2016 http://mq.edu.au/policy/docs/grading/policy.html

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

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.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/

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.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://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

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

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 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 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 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

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 outcome

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

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 outcome

- 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 outcome

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

Assessment task

- Case Study 1

Changes since First Published

Date	Description
22/02/2016	Added "Week 4 - No classes" to explicitly include the Good Friday public holiday within the class schedule.
18/02/2016	Corrected assignment 2 due date to midnight Monday 25th April (not 26th).

Changes since First Published