

SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING

THE UNIVERSITY OF NEW SOUTH WALES

SESSION 1, 2013



CVEN3701 ENVIRONMENTAL FRAMEWORKS, LAW AND ECONOMICS

COURSE DETAILS

Units of Credit	6
Contact hours	5 hours per week
Class	See schedule below
Course Convenor	Tommy Wiedmann (TW) email: t.wiedmann@unsw.edu.au http://www.civeng.unsw.edu.au/staff/tommy_wiedmann CE205
Additional Lecturers	Dr Gerry Bates (GB), email: gerry@gerrybates.com.au Amy Cheung (AC), email: CVEN3701.AC@gmail.com

Week no. / lecturer	Date	Class room / time	Tutorial room / time
1 / TW	6 Mar	Red Centre West M010 / Weds 9am–11am	Mathews 102 / Weds 12pm–3pm
2 / TW	13 Mar	Red Centre West M010 / Weds 9am–11am	Mathews 102 / Weds 12pm–3pm
3 / TW	20 Mar	Red Centre West M010 / Weds 9am–11am	Mathews 102 / Weds 12pm–3pm
4 / GB	27 Mar	Red Centre West M010 / Weds 9am–11am	Red Centre West M010 / Weds 11am–2pm
EASTER			
5 / GB	10 Apr	Red Centre West M010 / Weds 10am–11am	Red Centre West M010 / Weds 11am–2pm
6 / GB	17 Apr	Red Centre West M010 / Weds 10am–11am	Red Centre West M010 / Weds 11am–2pm
7 / GB	24 Apr	Red Centre West M010 / Weds 10am–11am	Red Centre West M010 / Weds 11am–2pm
8 / AC	1 May	Red Centre West M010 / Weds 9am–11am	Red Centre West M010 / Weds 11am–2pm
9 / AC	8 May	Red Centre West M010 / Weds 9am–11am	Red Centre West M010 / Weds 11am–2pm
10 / AC	15 May	Red Centre West M010 / Weds 9am–11am	Red Centre West M010 / Weds 11am–2pm
11 / AC	22 May	Red Centre West M010 / Weds 9am–11am	Red Centre West M010 / Weds 11am–2pm
12 / AC	29 May	Red Centre West M010 / Weds 9am–11am	Red Centre West M010 / Weds 11am–2pm

TW: Tommy Wiedmann on environmental frameworks

GB: Gerry Bates on environmental law

AC: Amy Cheung on environmental economics

INFORMATION ABOUT THE COURSE

This course builds on the broad multidisciplinary introduction to sustainability provided in the ENGG1000 Engineering Design and Innovation projects, and the range of environmental material accounting, environmental risk assessment, and operations research tools introduced to be able to quantifiably define sustainable economies at the corporate and regional scale in CVEN1701 Environmental Principles and Systems. The course will introduce Environmental Impact Statements (EISs), Environmental Management Systems (EMSs) and corporate and regional environmental reporting, each of which uses the tools covered in CVEN1701. The course then goes on to cover environmental law and economics, which can be used to implement sustainable strategies for corporations and regions. The course provides background material for application in the following courses in Year 3 and 4:

- CVEN3402 Transport engineering and environmental sustainability
- CVEN3701 Environmental frameworks, law and economics
- CVEN3702 Solid wastes and contaminant transport
- CVEN3502 Water and wastewater engineering
- CVEN4701 Planning sustainable infrastructure

HANDBOOK DESCRIPTION

The URL of your course online handbook is:

<http://www.handbook.unsw.edu.au/undergraduate/courses/2013/CVEN3701.html>

This course builds on the introduction to EISs in CVEN1701 to provide details of EIS methods, and the ISO14001 Environmental Management System framework. It then provides an introduction to engineers on environmental law in Australia and NSW, focusing on planning law, and pollution laws. Environmental economics methods to account for environmental impacts in monetary terms, and the use of market mechanisms to achieve preferred environmental outcomes is covered at a level suitable for engineers.

OBJECTIVES

The aim of this course is to enable students to undertake the preparation of EISs, EMSs and environmental reports, and to be able to have sufficient understanding of environmental law and economics to be able to work with professionals in these areas in order to implement sustainable strategies at corporate and regional levels.

The objectives of the course are to:

- know the standard formats for EISs, EMSs and environmental reports, and to be able to use environmental analytical tools to critically analyse these documents, and be able to manage their preparation.
- acquaint you with the fundamental principles of Australian environmental law; and to explain how these principles are applied to important areas of environmental management and regulation relevant to you in your studies and future career. The course assumes that participants have little or no background in the law, and so the course also provides some basic instruction about important legal concepts and structures. Although NSW is the 'default' jurisdiction for this course, the concepts and principles that are discussed are referable to all jurisdictions throughout Australia.
- introduce students in Engineering to the economic way of thinking about environmental issues. This section will begin with some elementary economic tools, and proceed to apply these tools to examine environmental issues. There is no attempt here to justify the economic method. If you like, it is a course in how to communicate with economists.

TEACHING STRATEGIES

Lectures will provide an explanation of procedures to follow to prepare EISs, EMSs and environmental reports, and to implement sustainability strategies in these documents by way of environmental law and economics. Examples will be given in these lectures. Students then need to learn these procedures by applying to real world problems that they have some familiarity with, by way of assignments.

The approaches to learning are:

Private Study	Review lecture material, reference books, and resources on WEbCT vista. Do set problems and preparation so that you can participate in tutorials Work in groups on class assignments Reflect on class problems and assignments
Lectures	Take notes on skeleton overheads provided to get a full set of reference notes for the course. Learn developing environmental laws and economic tools for use in environmental problems; many of these are not well documented in reference books Participate in working out example problems in class Ask questions on how the content of lectures applies to assignment questions.
Tutorials	Work actively in small ad hoc groups on problems set in class Ask questions on assignment problems
Assessment	Formative and summative assessment of knowledge and skills in assignments, with students encouraged to seek formative informal assessment via consultation with the lecturer during preparation of assignments. Demonstrate higher understanding and problem solving on real world problems in hypothetical, but realistic problem settings. Exams are summative assessments on knowledge gained in the course, particularly as indicated by the ability to quickly undertake exercises set in the Tutorial problems.

EXPECTED LEARNING OUTCOMES

At the completion of the course, you will be able to:

- Describe the typical structure and format of an EIS, EMS and environmental report.
- Be able to use environmental analytical tools to develop an EIS, EMS and environmental report for a project, an organisation and a region.
- Be familiar with the laws that apply to environmental impacts of projects in NSW and Australia, and be able to brief and collaborate with environmental lawyers in the preparation of EISs, EMSs and environmental reports.
- Be able to describe environmental economic analytical methods, and be able to critique their application in EISs, EMSs and environmental reports. Be able to brief an environmental economist to work with you in a multidisciplinary team to prepare EISs, EMSs and environmental reports for a range of projects, corporations and regions.

For each hour of contact it is expected that you will put in **at least** 1.5 hours of private study.

ASSESSMENT

The final grade for this course will normally be based on the sum of the scores from each of the assessment tasks. The Final Examination is worth **30%** of the Final Mark if class work is included and **100%** if class work is not included. The class work is worth **70%** of the Final Mark if included. **A mark of at least 40% in the final examination is required before the class work is included in the final mark.** The formal exam scripts will not be returned.

There will be tutorial problems set and quick quizzes given in some tutorials. You need to prepare for these prior to the tutorial. They do not count directly to your final assessment mark, but are intended to give you formative assessment, and assist with preparation of the formal assignments and the end of session exam. Students who perform poorly in the quick quizzes and tutorials are recommended to discuss progress with the lecturer during the semester.

The Course coordinator reserves the right to adjust the final scores by scaling if agreed to by the Head of School.

ASSESSMENTS

Assignment	Assignment Details	Value	Due Date
Assignment 1	Critique of an EIS	20%	2:00pm Weds 17 Apr 2013 (week 6)
Assignment 2	Environmental Law	30%	2:00pm Weds 8 May 2013 (week 9)
Assignment 3	Environmental Economics	20%	2:00pm Weds 29 May 2013 (week 12)
Exam	Frameworks and economics components only	30%	Exam period 10 – 28 June 2013

Students must submit their assignments as prescribed by each lecturer. Generally this will be by hard copy in the lecture on the due date; or in a box described by the lecturer if it is late. In some cases, for instance if the lecturer is involved in an overseas posting, emailed attachments may be accepted. This will only be the case if the lecturer allows this. Please ensure all the details on the Assignment cover sheet at the end of this Course Profile are included in your assignment.

Each lecturer will specify late penalties and submission procedures for on time and late assignments at the beginning of their component.

Exam

The exam will be a 2 hour open book exam (plus fifteen minutes reading time) during the normal exam period. There will be 3 questions to be completed; one from a choice of two on environmental frameworks; two on economics. There will not be any law questions in the exam.

LECTURERS

Dr Thomas (Tommy) Wiedmann is an Associate Professor and leader of the Sustainability Assessment Program in the School of Civil and Environmental Engineering at UNSW. He has long-standing expertise in integrated sustainability assessment and environmental footprint analysis. His main research question is how to achieve human wellbeing without increasing environmental impacts. Tommy develops and applies environmental input-output analysis as part of a holistic concept to life cycle assessment, industrial ecology and sustainable consumption and production research. In his

previous affiliations with the Stockholm Environment Institute and CSIRO Ecosystem Sciences Tommy coordinated a number of research projects funded by the European Commission and Australian and UK Governments. He led a research project that produced the first time series of the UK's national carbon footprint.

Professor Gerry Bates has been devising and teaching courses in environmental law for over 30 years. He is the author of *Environmental Law in Australia*, the standard text on the subject; and the founder and Editor in Chief of the *Environmental and Planning Law Journal*. Dr Bates was formerly a 'stagiaire' or trainee of the European Union; and an independent green member of parliament in Tasmania for more than 9 years, returning to the law in 1996. He now works independently as a specialist in environmental law and policy. Professor Bates was a member of the Board of the NSW Environment Protection Authority for more than 12 years; and a Director of Kimbriki Environmental Enterprises, a regional waste recovery centre and landfill site on Sydney's Northern Beaches for nearly 5 years. In 1994 he was honoured with the National Environmental Law Association's special award for "Outstanding Contribution to Environmental Law". In 2006 he was nominated for a Vice-Chancellor's Award for Excellence in Teaching at the ANU; and a Carrick Institute Citation for Outstanding Contributions to Student Learning.

Amy Cheung was an economist for the Office of Environment and Heritage, New South Wales. Her doctoral thesis research was focused on developing a framework in economic theory to analyse the problem of salinity in Australia, and the use of possible market based policies for its alleviation. Her other principal research interests include the economics of climate change, waste management and water trading.

COURSE PROGRAM

Week	Date	Topic	Lecturer	Assessments due
1	6 Mar	Course overview and background, Assignment 1 briefing, review material accounting from CVEN1701, EIS	Wiedmann	
2	13 Mar	EIS, EMS, tutorial	Wiedmann	
3	20 Mar	Environmental reports, Assignment 1 tutorial	Wiedmann	
4	27 Mar	Common law, legislation, state/federal responsibilities, property rights, Land and Environment Court of NSW	Bates	
		EASTER BREAK		
5	10 Apr	Environmental assessment of development; EIS; Major Projects; Commonwealth EIA; protection of biodiversity	Bates	
6	17 Apr	Pollution control, waste, contaminated sites, climate change, energy, water	Bates	Asst 1 due
7	24 Apr	Civil, criminal and administrative remedies for breaches of environmental laws; merits appeals	Bates	
8	1 May	Economics as a tools to manage environmental issues	Cheung	
9	8 May	Economic instruments of pollution control	Cheung	Asst 2 due
10	15 May	Global externalities and mitigation techniques	Cheung	
11	22 May	Environmental policies, cost benefit analysis (A)	Cheung	
12	29 May	Cost benefit analysis (B)	Cheung	Asst 3 due

RELEVANT RESOURCES

- Textbook details, including title, author(s), publisher, edition, year of publication, ISBN and availability (in bookshop, UNSW Library, Open Reserve).
- List of required and suggested additional readings and availability (in bookshop, UNSW Library, Open Reserve).
- Additional materials provided on WebCT.
- Recommended Internet sites.

DATES TO NOTE

Refer to MyUNSW for Important Dates available at:

<https://my.unsw.edu.au/student/resources/KeyDates.html>

PLAGIARISM

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<http://www.lc.unsw.edu.au/onlib/plag.html>

ACADEMIC ADVICE

(Formerly known as Common School Information)

For information about:

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- School policy on Supplementary exams,
- Special Considerations,
- Solutions to Problems,
- Year Managers and Grievance Officer of Teaching and Learning Committee, and
- CEVSOC.

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<http://www.civeng.unsw.edu.au/info-about/our-school/policies-procedures-guidelines/academic-advice>

DETAILS OF COURSE PROGRAM

Environmental frameworks component:

- Course overview and briefing on frameworks assignment; a comprehensive review of environmental material accounting tools undertaken in CVEN1701; students who have not taken this first year elective will be offered additional assistance.
- An outline of the required content and conventional methods for completing an EIS, with illustration from a case study EIS that will be used in the frameworks assignment.
- An outline of ISO14001 EMS, and credibility issues associated with undertaking an EMS.
- An outline of suggested contents of environmental reports for corporations and regions, with critical examination of case studies.

Environmental Law component:

Course Synopsis & Aims

Welcome to *CVEN 3701 – Environmental Law*. I sincerely hope that your study of this course will prove to be not only useful, but also enjoyable, insightful and rewarding. The law part of this Unit is designed to introduce to students from a non-legal background, key principles of environmental law and policy that may be of use to you in your future careers as environmental engineers.

Objectives

The purpose of this course is to acquaint you with the fundamental principles of Australian environmental law; and to explain how these principles are applied to important areas of environmental management and regulation relevant to you in your studies and future career. The course assumes that participants have little or no background in the law, and so the course also provides some basic instruction about important legal concepts and structures. Although NSW is the 'default' jurisdiction for this course, the concepts and principles that are discussed are referable to all jurisdictions throughout Australia.

The course is divided basically into three parts

Part A Creation of Environmental Laws

- (1) Background to the Australian and NSW legal systems; sources of domestic law; the importance of the concept of 'property'; the doctrine of the separation of powers; the Land and Environment Court of NSW and roles of judges and commissioners; interpretation of statutes;
- (2) The influence of the common law; common law remedies for property damage, economic harm and personal injury;
- (3) The influence of international law; the concept of sovereignty; application of international rules to Australian territory and natural resources;
- (4) The legal and political relationship between state and federal governments in the development and implementation of environmental policy;
- (5) Principles of sustainable development.

Part B Application of Environmental Laws

- (1) Environmental planning; obtaining development consent; requirements for environmental assessment of projects and activities;
- (2) Protecting and managing impacts on biodiversity from development
- (3) Catering for climate change through planning processes
- (4) Managing pollution and waste;
- (5) Contaminated sites

Part C Resolving Disputes in Environmental Law

- (1) Civil and criminal enforcement powers of regulators; principles of criminal liability; liability of corporations and directors of corporations; principles of sentencing
- (2) Citizen enforcement; judicial review; merits appeals; costs; remedies.

Environmental economics component:

- Economics and the environment – applying basic economic tools to environmental management
- An economic view on “sustainable development”; Externalities, optimal pollution, cost benefit analysis and environmental valuation
- Economic instrument of pollution control - “Internalising externalities”
- Application of Cost-Benefit Analysis into environmental policy decisions
- Global externalities: ozone, climate change. Concept of carbon trading.

RESOURCES

BB9 Discussion forum

Discussion and intra-group coordination can be done via a Discussions/HELP forum topic in BB9 for this course. The email discussion lists available in previous years are no longer accessible by students.

Textbook

There is no required textbook. (Please check with Gerry Bates on the law component)

Additional Readings

Environmental Frameworks:

Brunner PH and Rechberger H, 2004; Practical Handbook of Material Flow Analysis, CRC Press Ltd, ISBN 1-5667-0604-1

Environmental Law:

The text recommended for this course is Bates, G *Environment Law in Australia*. (2010), 7th. Ed. LexisNexis.

Accessing the Law – www.austlii.edu.au

Environmental Economics:

Perman, R., Yue, M., McGilvray, J., and Common, M., 2003, *Natural Resource and Environmental Economics*, 3rd edition, Pearson Education Limited, Essex.

This is available from the open reserve section at the UNSW library (S 333.7/381).

UNSW Blackboard (BB9)

A UNSW Blackboard site has been established for the course, and it will be used to provide all information (lecture overheads, readings, exercises etc) for the course. There will not be any hard copy photocopies provided for the course. Assess this via the TELT Gateway at:

<http://telt.unsw.edu.au/>.

UNSW Library

To obtain materials external students may request books from the UNSW Library by post and also obtain books and articles from non UNSW Library collections through interlibrary loan.

This is the preferred method for external students.

<http://info.library.unsw.edu.au/external/services/externals.html>

First time users need to register on-line at <http://libraryinfounsw.altarama.com/ref100.aspx?key=OffCampus>

After initial registration, you simply make requests through the Library's Catalogue (LRD) by logging into [Your Borrower Record](#) and selecting the ILL Request tab.

The library pays the forward mailing charges for materials sent to you. Return costs must be paid by you. To ensure that the items are not damaged in transit a padded postage bag should be used.

Off campus access to online library resources

For information on usernames/passwords and hardware and software requirements necessary to remotely access online library resources please see the web page:

<http://info.library.unsw.edu.au/web/using/require.html>

Library online resources

To learn how to use library resources to locate texts and journal articles please refer to the online tutorial ELISE (postgraduate) located on: <http://pgelise.library.unsw.edu.au/>

Subject Guides

Developed by discipline specialists these guides identify major print and electronic resources in specific subject areas. The Engineering guide is <http://subjectguides.library.unsw.edu.au/content.php?pid=7632>

To locate an electronic journal/article and databases via UNSW Library Sirius

Please go to the Electronic Resources page: <http://sirius.library.unsw.edu.au/>

Click on **Find e-Journals**

Then login (**top right hand** of screen) with your z1234567 student number and Unipass. This will allow you free access to many e-journals and articles.

Find out what databases are available in your subject area in Sirius by selecting **Find Resources** and then **Category**. For further help with databases see our helpsheets

<http://info.library.unsw.edu.au/skills/helpsheets.html>

For further information on how to use the library catalogue (LRD) to locate texts and journal articles please see the How to use library web page: <http://info.library.unsw.edu.au/skills/howto/howto.html> As the UNSW Library online environment is constantly changing, it is of benefit for students to use these online How To Use guides for the step by step mechanics. Students can then use these in their own time and/or in conjunction with the Library service in person or by phone 9385 2650 or via an online form

<http://info.library.unsw.edu.au/web/help/help.html>

Referencing your work

Use the how to guide <http://info.library.unsw.edu.au/skills/howto/referencing/lrefcr.html>

Links to reference management software Endnote & web-based Refworks
<http://info.library.unsw.edu.au/skills/endnote.html>

Local Academic Library Access

Users may join the University Libraries Australia (ULA) [Reciprocal Borrowing Scheme](#), to borrow books from more geographically convenient local academic libraries where access is possible.

See <http://info.library.unsw.edu.au/usd/services/off/reciprocalunsw.html>

New Search Engine for scientific journals

SCIRUS is an Elsevier's Science search engine covering over 26 million scientific journal articles. It searches over 167 million science-specific Web pages, enabling you to pinpoint scientific, scholarly, technical and medical data on the Web; find the latest reports, peer-reviewed articles and journals that other search engines miss. Among the other subject areas, SCIRUS covers Engineering, energy and technology and environmental sciences.

Access is via Sirius: <http://www.scirus.com>

Similar to the Google Scholar library links, we are pleased to announce that the 'Library Partner links' feature has been enabled in SCIRUS). It means that you can now link back to full-text journal content where UNSW Library has a subscription. Search results retrieved for journal items will now have a "Find it@UNSW" link if you set up UNSW Library as your default library in SCIRUS Preferences. This feature also works from off-campus.

Instructions for setting up the links:

Go to SCIRUS <http://www.scirus.com>

1. Click on "Search Preferences"
2. Next to "Library partner links" select the "enable" radio button
3. Click on the letter "U" under "Choose from Institutes"
4. Select "University of New South Wales" from the drop-down menu
5. Click on the "Save Preferences" button. You are automatically taken back to the search page.
6. Enter a search string e.g. "diabetes and children"
7. Next to the number of records found, click on "journal results"
8. The results list shows articles with "Find it@UNSW" as a hyperlink
9. Click on Find it@UNSW to open "SFX Services for this record" window

UNSW Library also has a 'Library Partner links' to Google Scholar: see <http://www.library.unsw.edu.au/ubb5.45z/Forum2/HTML/000617.html>

COURSE EVALUATION AND DEVELOPMENT

The School of Civil and Environmental Engineering evaluates each course each time it is run through (i) the UNSW Course and Teaching Evaluation and Improvement (CATEI) process, and (ii) Focus Group Meetings.

As part of the CATEI process, your student evaluations on various aspects of the course are graded; the Course Coordinator prepares a summary report for the Head of School. Any problem areas are identified for remedial action, and ideas for making improvements to the course are noted for action the next time that the course is run.

Focus Group Meetings are conducted by the four Year Managers (academic staff) for any students who wish to attend, in each year of the civil and/or environmental engineering programs. Student comments on each course are collected and disseminated to the Lecturers concerned, noting any points which can help improve the course.

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APPENDIX – Further information on Environmental Law

The recommended textbook

The text recommended for this course is Bates, G *Environment Law in Australia*. (2010), 7th. Ed. LexisNexis.

Accessing the Law

www.austlii.edu.au

Common References

EPLJ Environment and Planning Law Journal

LGERA Local Government and Environmental Reports of Australia

HCA High Court of Australia

LEC Land and Environment Court of NSW

NSWCA New South Wales Court of Appeal

NSWCCA NSW Court of Criminal Appeal

FCA Federal Court of Australia

FCAFC Federal Court of Australia Full Court

Course Outline

Part A Creation of Environmental Laws

1. Sources of domestic law – common law and legislation, regulations, planning policies
Environmental Planning and Assessment Act 1979 (NSW) (EPAA)
2. Common law remedies for environmental harm: nuisance and negligence
Van Son v Forestry Commission (1995) 86 LGERA 108
Puntoriero v Water Administration Ministerial Corp. (1999) 104 LGERA 419
Armidale City Council v Alec Finlayson P/L (1999) 104 LGERA 9
3. The purpose of environmental legislation; to prohibit harmful activities unless a government licence is obtained
4. Legislation may need to override or modify common law rules in order to protect and manage environmental values;
Water Management Act 2000 (NSW) ss 52, 393
Environmental Planning and Assessment Act 1979 (NSW)
Protection of the Environment Operations Act 1997 (NSW) s 322
5. The Land and Environment Court of NSW
Merits appeals and legal enforcement
www.lawlink.nsw.gov.au/lec
6. The role of judges is to interpret and apply the law not make environmental policy
Interpretation Act 1987 (NSW)

7. Merits appeals allow for more flexibility in decision-making but are still constrained by planning and other strategic instruments and policies
Taralga Landscape Guardians Inc v Minister for Planning [2007] NSWLEC 59 (alternative sources of energy; greenhouse effect)
Hub Action Group Inc v Minister for Planning [2008] NSWLEC 116 (landfill on prime agricultural land)
8. The legal and political relationship between state and federal governments in the development and implementation of environmental policy
Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBCA)
 ‘Matters of National Environmental Significance’
Booth v Bosworth [2001] FCA 145 (the ‘barbecued bats’ case)
Minister for Environment, Heritage and the Arts v Lamattina [2009] FCA 753 (penalty of \$220,000 for unlawfully clearing habitat of an endangered cockatoo)
9. Principles of sustainable development (ESD).
Protection of the Environment Administration Act 1991 (NSW) s.6(2)
EPBCA 1999 (Cth) s.3A
10. Using ESD in decision-making
EPAA 1979 (NSW) s.5 (object to encourage ESD)
EPBCA 1999 (Cth) s.3 (promote ESD)
Water Management Act 2000 (NSW) (object of Act is to apply principles of ESD)
National Parks and Wildlife Act 1974 (NSW) s.2A (“the objects of this Act are to be achieved by applying the **principles of ecologically sustainable development**”)
 Instructions to consider the ‘public interest’ in decision-making may also enliven consideration of principles of ESD; *Kennedy v NSW Minister for Planning [2010] NSWLEC 129*
11. Precautionary principle
Telstra Corporation Limited v Hornsby Shire Council [2006] NSWLEC 133
Ulan Coal Mines Inc v Minister for Planning [2008] NSWLEC 185 (precautionary approach enlivens adaptive management)
Lawyers for Forests v Minister for Environment Heritage and the Arts [2009] FCA 114 (conditions on the operation of a pulp mill *inter alia* requiring the mill to stop operating if maximum effluent standards were likely to be exceeded and response strategies were unlikely to prevent this occurring)

Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council and Stoneco Pty Limited [2010] NSWLEC 48 (“Adaptive management is a concept which is frequently invoked but less often implemented in practice. Adaptive management is not a “suck it and see”, trial and error approach to management, but it is an iterative approach involving explicit testing of the achievement of defined goals. Through feedback to the management process, the management procedures are changed in steps until monitoring shows that the desired outcome is obtained. The monitoring program has to be designed so that there is statistical confidence in the outcome. In adaptive management the goal to be achieved is set, so there is no uncertainty as to the outcome and conditions requiring adaptive management do not lack certainty, but rather they establish a regime which would permit changes, within defined parameters, to the way the outcome is achieved”)
12. Intergenerational equity
Taralga Landscape Guardians Inc v Minister for Planning [2007] NSWLEC 59 (alternative sources of energy; greenhouse effect)
Hub Action Group Inc v Minister for Planning [2008] NSWLEC 116 (prime agricultural land)
Anderson v Director-General, Department of Environment and Climate Change (2008) 163 LGERA 400 (aboriginal cultural heritage)
13. Improved valuation, pricing and incentive mechanisms as principles of policy setting; tradeable permits, biodiversity offsets and other market-based instruments

Part B Application of Environmental Laws

We will look at environmental assessment through a particular project chosen by the class; for example a coal mine, wind farm or other relevant project

1. 'Fast-tracking' projects of major economic and environmental significance (state significant projects and infrastructure); *EPAA Pt.4 Div 4.1 and Pt 5.1* (Director-General assesses environmental impacts; Minister is consent authority)
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
2. Environmental assessment of applications for development under *EPAA Pt.4* (local council is consent authority) *EPAA Regulation 2000 sch.1*
'Designated development' requires an environmental impact statement (EIS): *EPAA Regulation 2000 sch.3*; *EPAA s 78A(8)(i)*
3. *EPAA s 79C* (evaluation of applications). Decision-maker must consider environmental impacts and the public interest
4. Protection of biodiversity, particularly threatened species and ecosystems: requirement for concurrence of Director, NPWS; species impact statements
EPAA s 78A(8)(ii); *Threatened Species Conservation Act 1995 (NSW) ss.109-113*
Biodiversity offsets
EPAA ss 93F, 94 (planning agreements and developer contributions)
Biobanking (where concurrence required)
5. Environmental assessment of 'activities' (*EPAA Pt.5 ss 111, 112-112B*); *EPAA Regulation 2000 regs 228-231*
6. Environmental assessment under the *EPBCA Ch.4*
Assessment and approval bilaterals; *EPBCA Ch.3*
Activities likely to impact significantly on matters of national environmental significance
Booth v Bosworth (2001) 114 FCR 39
Minister for the Environment and Heritage v Queensland Conservation Council (2004) 134 LGERA 272
Choice of process for assessment; *EPBCA s.87*
7. Catering for climate change through planning processes
Taralga Landscape Guardians Inc v Minister for Planning [2007] NSWLEC 59
Byron Shire Council v Vaughan, Vaughan v Byron Shire Council [2009] NSWLEC 88
Note: the Coastal Protection Act 1979 (NSW) has recently been amended as a result of the *Vaughn* litigation to introduce *inter alia* the following provisions:
 - landowners in specific locations will now be able to place sand or sandbags on the beach under strict conditions in order to reduce the impact of coastal erosion on their properties. If the bags cause erosion they are to be removed. Draft Minister's Requirements for these works have been released for consultation.
 - consent authorities assessing development applications for long term coastal protection works such as seawalls must be satisfied that appropriate arrangements are in place to restore beaches if they are eroded by the works.
 - councils may levy a coastal protection service charge on land where the current or past landowners have voluntarily constructed coastal protection works. This charge covers council's costs of maintaining the works and restoring the beach if the works cause erosion.

- A NSW Coastal Panel has been established to provide expert advice to the Minister and councils on coastal management issues. It is proposed that the Panel will also be the consent authority for long term coastal protection works where the council does not have a coastal zone management plan in place.
 - Enhancing statutory exemptions from liability for councils and State agencies when their coastal management activities are carried out in good faith.
8. Managing pollution and waste
- *Protection of the Environment Operations Act 1997 (NSW)*
Prohibitions on polluting activities and the licensing regime
Environment protection notices
Voluntary and compulsory audits; pollution reduction plans
Criminal enforcement (see resolving disputes below)
 - Product stewardship and extended producer responsibility
Product Stewardship Act 2011 (Cth)
 - Landfills and alternative waste treatment facilities (AWTs)
Principles of waste management; avoid, reduce, re-use, recycle, dispose
quality standards for application of compost derived from AWTs to land
9. Contaminated sites
- *State Environmental Planning Policy 55 – Remediation of Land*
EPAA ss 145A-C (exemptions from liability)
 - *Contaminated Land Management Act 1997 (NSW)*
Obligation to report
Powers of EPA to order investigation and clean-up
Choice of person to be held legally responsible for clean-up

Part C Resolving Disputes in Environmental Law

1. Administrative remedies for regulators
- Environment protection and other notices and orders
PEOA 1997 (NSW) Ch.4 (clean-up, prevention, prohibition);
Native Vegetation Act 2003 (NSW) ss 37, 38 (stop work and remedial)
2. Civil remedies for regulators
- Enforceable Undertakings
EPBCA ss.486DA, 486DB
- Undertakings given under these provisions include two NSW mining companies agreeing to pay \$1.450,000 in an enforceable undertaking after damaging three endangered swamps; and \$305,000 committed by a plantation timber company to repair damage done to a critically endangered grassland
- PEOA s.253A
- Several undertakings have been negotiated; including \$100,000 to help improve land and water quality in the Hunter River catchment following releases of pollution from a coal mine; \$120,000 for environmental rehabilitation for unauthorized emissions of sewage; and \$100,000 for rehabilitation work along the Thredbo river following pollution caused by an escape of diesel oil.

3. Criminal prosecution

Environment Protection Authority NSW *Prosecution Guidelines*,

<http://www.environment.nsw.gov.au/resources/legislation/20120110EPAProsGuide.pdf>

These guidelines outline the attitude of the EPA to prosecuting offenders. They make the point that criminal prosecution is not automatic, and although various parties may be potentially liable, the EPA will be searching for those who are really 'at fault'

- General principles of criminal liability: mens rea and actus reus
- Strict liability crime

PEOA s.120

EPA v Tyco Water P/L (2005) 142 LGERA 241 (purpose of strict liability not to punish 'luckless victims')

NVA s.12

DGDLWC v Greentree (2003) 131 LGERA 234

EPBCA s.12

- Wilful and negligent conduct

PEOA s.116

EPA v Coggins [2003] NSWLEC 111

EPA v Warringah Golf Club Ltd (No.2) [2003] NSWLEC 222

- Vicarious liability of employers for actions of employees and agents;

EPA v Rethmann Australia Environmental Services P/L [2003] NSWLEC 351

EPA v TransGrid [2003] NSWLEC 18 (contractors; test of 'control')

PEOA s.257 (occupiers of land responsible for emissions)

- Liability of corporations for directors, employees and agents

EPBCA s 498B

PEOA ss.169, 257

Garrett v Port Macquarie Hastings Council [2009] NSWLEC 1 (easier to apply state of mind to corporation where corporate body is alter ego of a particular individual *ie* sole director)

- Liability of directors and managers

PEOA s.169

EPA v Fernando (2003) 129 LGERA 416

DGDLWC v Greentree (2003) 131 LGERA 234

EPA v Perry [2004] NSWLEC 715

Garrett v Freeman (No.4) [2007] NSWLEC 389

- Defence of honest and reasonable mistake of fact (not law)

Ostrowski v Palmer (2004) HCA 30

EPA v Hardt (2006) 148 LGERA 61

EPA v Milpharma P/L (1991) 74 LGRA 351

- Defence of due diligence

PEOA ss.119, 169

- Principles of Sentencing

PEOA s.241;

Hardt v EPA [2007] NSWCCA 338 (intention and appreciation of offence relevant, even in strict liability and non-intentional proceedings, to determine level of seriousness of offence)

Resourceco P/L v Harvey (2007) 154 LGERA 37 (repeatedly ignoring orders and enhancing profitability without due regard to licence conditions demanded substantial penalty)

- Court orders for restoration, remediation and other orders

PEOA s.245

Environment Protection Authority v Centennial Newstan Pty Ltd [2010] NSWLEC 211 (award of \$105,000 to Lake Macquarie City Council, for its Ecosystem Enhancement Operations Program, in lieu of a fine for an offence of unlawful pollution).

Environment Protection Authority v Chillana Pty Ltd [2010] NSWLEC 255 (penalty of \$60,000 to contribute towards a program of restoring the banks of the Castlereagh river)

- Failure to carry out court orders: contempt of court

Booth v Yardley (2008) 160 LGERA 352 ('barbecued bats' case)

Environment Protection Authority v Ramsey Food Processing Pty Ltd (No 4) [2011] NSWLEC 246 (fine 3x that imposed at sentencing would be appropriate)

Chief Executive Officer, Department of Environment and Conservation v SZULC (No.2) [2011] WASC 315 (15 months imprisonment)

4. Citizen enforcement

- EPAA s 123 (and all other environmental legislation in NSW)

Note: this provision enables challenges to be brought not only against individuals or corporations carrying out unlawful activities, but against decision-makers, including ministers, who have breached procedural and substantive standards for making decisions. In general the legal standard for making a decision is that the decision-maker should take into account all relevant considerations and come to a conclusion that is objectively reasonable on the evidence.

The role of the Environmental Defenders Office (EDO) www.edo.org.au

- Costs

Land and Environment Court Rules 2007 r.4.2 (The Court may decide not to make an order for the payment of costs against an unsuccessful applicant in any proceedings if it is satisfied that the proceedings have been brought in the public interest)

The LEC has adopted a three step approach to costs in public interest litigation: first, was the litigation truly brought in the public interest; second, were there any countervailing circumstances, such as disentitling conduct

by the applicant or matters contrary to the public interest; third, is there ‘something more’ that would entitle a party to relief from the usual costs order?

Caroona Coal Action Group Inc v Coal Mines Australia P/L (No.3) [2010] NSWLEC 59

Snowy River Alliance Inc v Water Administration Ministerial Corporation [2011] NSWSC 652

- Protective costs orders in public interest litigation

Uniform Civil Procedure Rules 2005 (NSW) rule 42.4; *Land and Environment Court Rules 2007 (NSW)* rule 4.2. (Acting in accordance with the dictates of justice is the primary consideration for exercising such a discretion; *Civil Procedure Act 2005 (NSW)* ss.58 and 60).

Blue Mountains Conservation Society Inc v Delta Electricity (No 2) [2009] NSWLEC 193

Caroona Coal Action Group Inc v Coal Mines Australia Pty Limited and Minister for Mineral Resources [2009] NSWLEC 165

5. Merits appeals

A decision-maker hearing a merits appeal cannot simply put aside and substitute a standard set by a planning instrument for one the decision-maker considers more reasonable. This may lead the decision-maker to fail to comply with a statutory obligation to ‘consider’ the relevant planning instrument; *Botany Bay City Council v Premier Customs Services P/L* [2009] NSWCA 226.

- Costs in merits appeals; parties usually pay their own costs unless there has been some ‘disentitling’ conduct.

In *Meriton Apartments P/L v Council of the City of Sydney (No.2)* [2010] NSWLEC 63 the Court said that so long as a party raises issues of merit that are at least ‘arguable’ then costs are unlikely to be awarded against an unsuccessful party.