

Environmental Futures Forums (30 Mar. – 7 Apr. 04) – Summary Report

Background

This document is an input to the current review of Environmental Research and Education (R&E) at the Australian National University. It reports on outcomes from a series of Environmental Futures Search Forums that were held to seek broad input to the review on goals, barriers and opportunities for environmental R&E. The forums followed processes that are detailed in *Helping Groups to be Effective* (Dick, B. 1991. pp. 79-85).

Four sessions were of one-hour duration, and included two open forums, and two for students only. A further two were held over two hours, and targeted the Centre for Resource and Environmental Studies (CRES), the School of Resources, Environment and Society (SRES), the Board of the National Institute for Environment and others by invitation. Approximately 140 people took part in the Futures Search Forums. The following table summarises the characteristics of participants (those who left their details only). Representation was highest for SRES and CRES, and for academic staff. Stakeholder groups that were most under-represented include undergraduates generally, and scholars from other areas.

	SRES	CRES	Geol	RSPAS	APSEG	ICAM	RSSS	FEIT	SSocSci	SArchAnth	CBIS	RSPHysSE	BoZo	RSBS	SBusIntMngt	CAPER	F&S	NITA	FLAW	NCEPH	NEC	FEconComm	NIE	NCDS	RO	Unknown	total
Staff	23	15	4	5	1	2	1	3	1	1	1	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	73
P/grad	9	19	1							0.5									0.5					1			31
U/grad	14		0.5						0.5	0.5												0.5			1	7	
Total	46	34	5.5	5	1	2	1	3	1.5	2	1	2	2	1	1	1	2	1	1.5	1	1	0.5	1	2	1	0	121

Findings are reported in three ways. Below on this page is a summary of the key themes emerging across all forums, ranked according to the priorities assigned by forum participants. Over the page are verbatim reports on the highest priority issues emerging from each session. The attached Appendix includes the full results from all sessions.

Key themes

Being integrated and relevant to policy, business and public communities. The location of the ANU in Canberra gives great access to many central Environmental agencies. These give potential opportunities for funding, research and collaborative opportunities as well as providing a pool of potential students. Barriers include the time and effort needed to establish relationships, and a lack of incentives for doing so. Students and staff would like strong links to ANU's local communities for relevance and topicality in Environmental R&E.

Working together within the ANU. Barriers exist to collaboration between Environmental specialists at the ANU. Students express the need for co-ordinated assistance in course selection and smooth transitions across the university. There is support for co-location of many within a centre for Environmental excellence, although many Environmental specialists would remain elsewhere. Such a centre would be housed in buildings with small ecological footprints, demonstrating sustainability principles in practice. Greater involvement of undergraduate students in research projects, and better coordination of research projects would remove barriers, overlaps and wasted efforts in the 'current chaos' of Environmental R&E.

Proper resourcing. Seamless, university-wide administrative systems are needed to support, rather than punish collaboration between areas. These would include equitable and transparent systems for redistributing DEST funding. Opportunities exist for new resources in pursuing collaboration with external bodies locally, nationally and internationally. Skills development in teaching, research and administrative support should be pursued at all levels across ANU.

Excellence. We need to be a leading example of Environmental excellence, with real sustainability in campus infrastructure and practise, and strong Environmental collaboration across and beyond the ANU. We must lift our Environmental profile by leading key Environmental debates and providing innovative solutions. We must communicate our excellence by both traditional and novel means, including multi-media, visual and performing arts, and other devices. Continual improvements in teaching must be a matter of ANU culture, with opportunities for meaningful feedback from students to be heard and acted upon.

A breadth and depth of skills. The Environment is an integrating context for collaboration but there is a need to raise the status of Environmental R&E within and outside the ANU. Goals include attracting, cultivating and retaining a critical mass of experts and well-skilled students. Participants expressed support for both a strong skill base and an integrative capacity at all levels. Flexible and readily formed multidisciplinary teams for specific projects could be a means to interdisciplinary excellence. Within this, the role of generalists must be recognised and fostered.

Diversity and accessibility. We envisage strong links with international Environmental issues and communities, and a diversity of students and staff. We need to establish effective and respectful links with those outside Western Academia – developing nation scholars and students, international agencies and organisations, national entities and the local community. Undergraduate scholarships, mentoring programs and other targeted resources are needed to achieve this.

Verbatim reports of highest priorities from Forums

(Votes indicate priority (6 votes/person). Numbers in brackets indicate attendance; voting unreported for Student Special 1).

Most important goals for improving Environmental Research and Education at the ANU.

SRES and CRES (~80)	Votes	National Institute for Environment Board + invited guests (~20)	Votes
Strong links with policy, industry and management practices, including international	26	Intimate integration between research and learning	13
ANU a respected, leading authority, setting agendas	24	Recognised importance of integration across disciplines and sectors; ANU recognised for linking knowledge domains nationally and internationally	11
Co-location of environmental researchers and students, in buildings that promote interaction	15	Rigorous environmental teaching and research and citizenship involving relevant ANU programs	11
Adequate resources	14	ANU has policy influence and environmentally sustainable commercial outcomes	9
University practices and leads in what it preaches (100% sustainable in energy, waste and knowledge construction)	13	ANU a world leader in the generation and dissemination of sustainable development	9
ANU-wide incentives to collaboration	12	Openness to all views about environment	8
Critical mass of specialists	12	Research and teaching brokered by co-ordinating body (eg. NIE)	6
Excellence in staff and student body, maintaining an effective skill base	12		

Key opportunities and barriers to improved Environmental Research and Education

Opportunities	Votes	Barriers
First Open Session – (9)		
Change to cooperative structure	12	ANU institutional structure; strong personalities and egos
Remove the barriers between research and teaching	7	Research and teaching divide
Broaden resource base externally – sponsorship	7	Insufficient resources
Joint appointments (within and external to ANU) to develop opportunities	4	Lack of time to develop opportunities
Facilitated process to assist - the Review	4	Local areas too entrenched
SRES-CRES Special – (~80)		
University-wide systems and processes recognising and supporting collaboration	25	No rewards or incentives for collaboration in teaching and research
Obvious community concern for environmental and global change	16	Community inclination to discount the future - environmental studies - low status leading to low student numbers
Partnerships for funding and employ facilitating staff	16	Academics with ideas and networks are overburdened/ have no time
VC's acknowledgement needed to strengthen environmental research and teaching	15	History of this institution - high ambitions but poor resources
ANU develops its own equitable and transparent redistribution model	13	DEST funding mechanisms have a negative effect on collaboration
Provide top-down incentives	12	Little willingness to interact interdisciplinarity
Appropriate levels of environmental teaching for all ANU students	12	Trying to integrate too early for young researchers
Faculty for Environment	12	Current chaos
Second Open Forum – (14)		
Greater integration and information flows about who is doing what	10	Arts-humanities-social science / hard sciences divide
-	9	Lack of interdisciplinary approaches to teaching and research
Diversity of expertise	7	Monoculturalism
Become competitive	7	We don't understand competition
Involve the wider research and public communities in funding projects	6	Lack of resources for environmental work
Academic exchange between units	5	Geographical and organisational dislocation of resources
Board of National Institute for Environment plus other invited specialists – (~20)		
Grow resources through promoting public good benefits	16	Time and money
Consolidating teaching across ANU Honours and Majors	13	Lack of institutional structures for interdisciplinary teaching
Enlighten and vote	11	Fuzzy signals from the top, within and outside the ANU
BRING IT ON - increase engagement to make use of academic mechanisms for cross-disciplinary discussion	10	Environment not seen as part of the core academic agenda
Give incentives for interdisciplinary work	9	All incentives are disciplinary and unit-based
Greater emphasis on environmental outcomes	8	Not enough focus on environmental outcomes
More funds for early career academics	7	Insufficient funds for young academics
Fill new vacancies with high calibre people	7	Lack of enough strong champions and strong leaders
Student Special 2 – (12)		
ANU needs a radical restructure - a revolution rather than an evolution	12	Historically fragmented school structure we have today
"Focusing projects" for interdisciplinary research; Promoting and training (for staff and students) for systems-view/holistic approaches to topic areas	9	Departments can be stuck in own perspectives, limiting collaboration; Systemic reductionism dominates over holism
Continual improvement: Instigate a culture of continual refinement and betterment in teaching and learning; Provide institutionally supported opportunities for feedback - serious evaluations by students taken seriously and acted upon	8	Not enough opportunities for feedback from students

Appendix 1 – Full Outcomes of All Environmental Futures Forums

Background and methods

The Terms of Reference for the Environment Working Party require that “*the review encompass the widest possible view of how best to move into the future with a strong academic basis for environmental research and education.*” At its first meeting, the Working Party agreed to proceed with a series of Environmental Futures Search Forums as an input to this process.

Futures Search is a planning technique originally developed by Fred Emery from the ANU. It has been adapted by Bob Dick (an Australian expert in participatory consultation methods) for different settings, including large groups with short time-frames¹. We used the methods developed by Dick. These also include processes for setting priorities, thereby producing manageable outputs.

Futures Search Forums work backwards from ultimate to intermediate or immediate goals. These are robust techniques that often allow for consensus to emerge where other goals setting techniques would founder over lack of general agreement. There are four major stages in any Futures Search Forum.

- Describe an ideal future for the group, perhaps 10 years ahead.
- Define some of the important changes that seem likely to take place in the wider community over the same time span.
- Add to or modify the future to take account of the changes.
- Move back to the present to plan what can be done by the group to bring about the desired future.

One of the committee members, Su Wild River, has learned to use Search and related techniques during post graduate studies with Bob Dick. She has also run these types of forums with success in many different settings. Another committee member, Ben Gilna, has an interest in these techniques. These two worked together (with other committee members as scribes) to run six forums.

Four sessions were of one-hour duration, and included two open forums, and two for students only. A further two were held over two hours, and targeted the Centre for Resource and Environmental Studies (CRES), the School of Resources, Environment and Society (SRES), the Board of the National Institute for Environment and others by invitation. Approximately 140 people took part in the Futures Search Forums. The following table summarises the characteristics of participants (those who left their details only). Representation was highest for SRES and CRES, and for academic staff. Stakeholder groups that were most under-represented include undergraduates generally, and scholars from other areas.

¹ See Dick, B. 1991. Helping groups to be effective. Interchange, Brisbane. Pp 79-85)

Joint appts. as 0.5 each - 10 indiv. attended >1 Forum	SRES	CRES	Geol	RSPAS	APSEG	ICAM	RSSS	FEIT	SSocSci	SarchAnth	CBIS	RSPhysSE	BoZo	RSBS	SBusinMng	CAPEP	F&S	NITA	FLaw	NCEPH	NEC	FEconCom	m	NIE	NCDS	RC	Unknown	Total
Staff	23	15	4	5	1	2	1	3	1	1	1	2	2	1	1	1	2	1	1	1	1		1	1	1	1	73	
P/grad	9	19	1						0.	0.								0.	0.			0.			1		31	
U/grad	14		0.						0.	0.												0.				1	7	
Total	36	34	5	5	1	2	1	3	1	2	1	2	2	1	1	1	2	1	1	1	1	0.	1	2	1	0	112	

Findings are reported in three ways. An attached summary shows key themes emerging across all forums along with verbatim reports on the highest priority issues emerging from each session. This Appendix includes the full results from all sessions.

A note on Voting

Priorities were assigned using a voting method. Every participant had six votes. Natural cut-offs of the votes determined which issues were carried into the summary. All issues are included here in the full report, regardless of how many votes they received.

Some issues are expressed across many sessions, but are not included in the highest priority issues. Others were considered highly important to just a limited group of people. Individual participants often considered these issues to be important despite their apparent low priority. An attempt was made to reflect these issues in the key themes summary. However *any further actions taken as a result of this work should recognise that the summary report covers complex issues. It would be wise to continue involving all stakeholders in further actions relating to the Review.*

Student Special 1 - Tuesday 30 March

10 Students: ~90% SRES Honours students, 1 Forestry student.

Ideal Futures

- Support structures and resources;
- Student recruitment and retention of resources;
- Small, friendly communities;
- Green buildings in teaching and research;
- Interdisciplinary work
- Putting green office and sustainability principles into practice
- Good structures and practices of cooperation
- Environment treated equally – attention, resources, prestige (with status faculties?)
- Good student to staff ratio
- Wide subject choices

Future Developments

- Increasing fees leading to a more homogenous student body
- Budget restrictions leading to a decrease in a range of courses
- Overall less money for universities
- Sustainability education becomes a risky option/investment for fee paying students
- Increases in the cost of living leads to a decrease in the time for studies
- Increased prominence of environmental problems
- New, unsustainable buildings
- Uncertain budgets for individual faculties
- Increases in the University Admissions Index lead to difficulties in getting into environmental courses – all of this creates an extra barrier
- Increased vocationalism of courses,
- Environmental education losing funding to information technology, commerce and others

Barriers and Opportunities

n.b. – Voting not reported for this session.

Opportunities	Barriers
Engage with industry, NGOs and the community for curriculum, work experience, scholarships and relevance.	
Be proactive in drawing more students into SRES programs, from Australian and overseas.	<ul style="list-style-type: none"> • SRES student numbers have dwindled and are small in comparison to other departments in Div. Science. Hard to compete, contributes to environmental education being marginalised. • Not enough overseas students – too much of the same mindset.
We have good existing infrastructure at ANU, but we need to maintain it and build upon it to keep quality high.	<ul style="list-style-type: none"> • There are <u>resource constraints</u> on teaching good environmental degrees – eroding quality of the courses offered. • Competition between universities overshadows the substantive content of the courses themselves.
<p>Increase a broad understanding of what an environmental degree is (and why its valuable).</p> <p>Build on SRES's existing reputation, and promote ANU's environment education.</p>	<ul style="list-style-type: none"> • Lack of environmental content in other degrees and courses. • Poor understanding of the nature of an environmental degree – “what is it?” • Environmental degrees poorly valued – “why is it worth anything?”; “Environment” = stigma • Generalist degrees (like broad environmental degrees) are not appreciated by employers. • The term “environmental” badges both generalist and specialist degrees: graduates with specialist skill-sets may not be recognised as having such. • Lack of co-ordinated counsel on degree structure – eg., which units best complement a Law degree?
	<ul style="list-style-type: none"> • Prestigious high salaries are not associated with environmental degrees. This makes environmental degrees less competitive to things like law, finance, etc. to the school leaver making tertiary choices. • There is the perception of less chances of employment in the environment sector than other areas. • Lead to conservatism in course choices.

Open Forum 1 - Wednesday 31 March

9 Participants: all staff, one pt-PhD/ft-staff; 4 SRES, 3 Geol (EMS), 1 RO, 1 RSPAS.

Ideal Futures

- Increased time for creativity for staff facilitated by an increase in resources and support
- The environment at the ANU should be a single group with one budget, one director and one structure/ or seamless budget cross-overs
- Research and teaching should be melded
- ANU is nationally and internationally recognised as a centre for excellence in environment
- Strong disciplinary base and a facility for useful collaborations across disciplines
- Strong links to external entities – intellectual and financial
- Extensive coordination between varied areas on campus - links, collaboration and unified presentation to the outside world
- Truly interdisciplinary research
- A geographically central place
- Refocus on general undergraduate environmental education
- Greater numbers and diversity of students and modes of interaction with students
- Post graduate course in environmental science supported by strong undergraduate science disciplines
- Unified identify visible externally
- Strong field work opportunities for all students and staff – teaching and research

Barriers and Opportunities

Opportunities	Vote	Barriers
Change to cooperative structure	12	ANU institutional structure; strong personalities and egos
Remove the barrier	7	Research and teaching divide
Broaden resource base externally – sponsorship	7	Insufficient resources
Joint appointments (within and external to ANU) to develop opportunities	4	Lack of time to develop opportunities
Facilitated process to assist - the Review	4	Local areas too entrenched
?	3	Myth: technology = staff
Change government	2	Unreliable and insecure government funding
	2	Competing for students and student numbers
Funding - external	2	Narrowing of academic agendas - too close to industry funding
Group to facilitate	1	Weakness of current curriculum
Strengthen links and market ANU	1	Lack of market for graduates
	0	Too limited concept of breadth of environmental domain - parallel and un-united discussions
Colocation envnmtl agencies in Canberra	0	
Create stronger links to secondary schools	0	Weak backgrounds of incoming students

SRES-CRES Special – Thursday 1 April (2h)

Estimated ~80 Participants, so ~30% unreported. As reported on contact sheets:
33 Staff: 16 SRES Staff (Ac. + Gen. + V.Fel.), 12 CRES Staff (Ac. + Gen. + V.Fel.),
2 ICAM Staff, 2 CRES-SRES joint Staff, 1 APSEG
23 Students: 5 SRES students, 18 CRES students

Ideal Futures

- 26 Strong links with policy, industry and management practices, including international
- 24 ANU a respected, leading authority, setting agendas
- 15 Co-location of environmental researchers and students, in buildings that promote interaction
- 14 Adequate resources
- 13 University practices and leads in what it teaches (100% sustainable in energy, waste and knowledge construction)
- 12 ANU-wide incentives to collaboration
- 12 Critical mass of specialists
- 12 Excellence in staff and student body, maintaining an effective skill base
- 11 Green building and work practices for environmental research and teaching
- 10 ANU is accessible and affordable
- 10 Critical centre of excellence for key environmental issues
- 9 Multi-disciplinary and multi-cultural project teams
- 8 ANU Centre for excellence for issues of global environmental change
- 8 University -wide systems and processes that recognise and support collaboration - effective, efficient administration that facilitates this
- 8 Diversity among staff and students and the time and resources required to support this.
- 7 No institutional barriers to collaboration
- 7 Environmental research is problem and theme focused
- 6 Excellent research collaboration
- 6 Humanising work spaces (bbq, window, jacuzzi)
- 4 Divide between teaching and research not an issue
- 4 No obvious duplication of lecture courses or research
- 3 Excellent contact between staff-staff and staff-students
- 3 International collaboration in teaching and research
- 3 SRES/CRES plays an integrative role with scholars from different backgrounds and areas
- 2 Increased undergraduates in research projects
- 2 Facilities for staff and teaching
- 2 Co-supervision of students across centres is supported
- 1 Excellent profile in multi-media and publications
- 1 Remember ANU is only one point in a vast system
- 1 Lecture courses available at all appropriate levels
- 0 Barriers between disciplines are permeable
- 0 Effective, sustainable technology - not at the expense of human interaction
- 0 Flexible management and work practices
- 0 Continual learning cycle between theory and practice

- 0 Adequate status of building partnerships outside and working inside
- 0 Coordination of information for new and prospective students

Barriers and Opportunities

Opportunity	#	Barriers
University-wide systems and processes recognising and supporting collaboration	25	No rewards or incentives for collaboration in teaching and research
Obvious community concern for environmental and global change	16	Community inclination to discount the future - environmental studies - low status leading to low student numbers
Partnerships for funding and employ facilitating staff	16	Academics with ideas and networks are overburdened/ have no time
VC's acknowledgement needed to strengthen environmental research and teaching	15	History of this institution - high ambitions but poor resources
ANU develops its own equitable and transparent redistribution model	13	DEST funding mechanisms have a negative effect on collaboration
Provide top-down incentives	12	Little willingness to interact interdisciplinarity
Appropriate levels of environmental teaching for all ANU students	12	Trying to integrate too early for young researchers
Faculty for Environment	12	Current chaos
Facilitate effective communications through conducive atmosphere and technology overcoming territoriality and fragmentation of synergistic areas	11	Poor communication / information management and dissemination at all levels
	8	Lack of money / resources / staff and time
Research opportunities in methodologies for integrating knowledge in disciplines	7	Lack of understanding of how to integrate knowledge
Investment in IT / Admin systems	6	Current IT and admin inadequate
Broad spectrum of people to do work	5	Imbalance between demand and resources
Working on a young and growing field of research	4	Inflexible thinking and unwillingness to change
Transformation of culture through buildings / institutions. Shared agenda setting	4	Institutional culture
ANU location in Canberra gives access to CSIRO and other government / research agencies	3	
Lots of bridging opportunities	2	Lack of involvement of academics with practitioners
New, well-marketed specialist-taught masters courses	2	Fragmentation within the ANU
Achieve critical mass amongst CRES/SRES and more of ANU	1	
	1	Competing priorities amongst ANU
Define specialist and generalist streams in induction and define skill-level requirements	1	Lack of appropriate skills for students entering
Support	0	Hidden administrative and transaction costs
Increase thought into how PhD projects can be interdisciplinary - both within and between projects		

Open Forum 2 – Friday 2 April

14 Participants. As reported on contact sheets:

12 Staff: 2 RSPAS, 1 RSSS, 1 FEIT (CSES), 1 S.Soc.Sci., 1 CRES, S.Arch. & Anth.,
1 CBiS, 1 RSPHysE, 2 BoZo

2 Students: 1 Geol (EMS) p/grad., 1 Science u/grad.

Ideal Futures

- No barriers to collaboration
- Integration of paleo- and short-term environmental model
- Sustainable and environmentally-friendly campus – a leading example at all levels
- Good representation across ANU in future working parties
- Strong links between research and community
- Art “natural” incorporated into campus
- Recognised as one of the world’s leaders in environmental research and education
- Campus environment is a residual meeting place – much work undertaken digitally
- Big picture – better understanding of environmental issues – framework for research
- Minimal ecological footprint including greenhouse gas emissions
- Kids on campus
- ANU revises and increases compliance to heritage legislation
- Nice, quality, relaxed research environment
- ANU environment works in intimate contact with key environmental groups, NGOs, government agencies etc in the Asia-pacific region
- Promote non-western approaches to research
- Links with ANU and external – other research institutions in Canberra
- Strong communication and information – who is doing what where?

Barriers and Opportunities

Opportunities	#	Barriers
Greater integration and information flows about who is doing what	10	Arts-humanities-social science / hard sciences divide
	9	Lack of interdisciplinary approaches to teaching and research
Diversity of expertise	7	Monoculturalism
Become competitive	7	We don't understand competition
Involve the wider research and public communities in funding projects	6	Lack of resources for environmental work
Academic exchange between units	5	Geographical and organisational dislocation of resources
Leadership amongst ANU	4	Lack of willpower - too much following and not enough leading
Aspiration to lead in sustainability knowledge	4	Leadership required in building knowledge for sustainability
Critical / expert mass, co-located	3	It isn't
	3	Institute / Faculties divide
New teaching and learning opportunities	3	Economic need to fill classes
Huge range of existing resources	1	
Sustainable building options	1	Short term, stagnant mindset - people

NIE + Other Invited Specialists Forum – Tuesday 6 April (2h)

20 Participants

As reported on contact sheets:

19 Staff: 1 CRES, 1 NIE, 1 RSBS, 2 SRES, 1 Geol. (EMS), 1 S. Bus. Info. Mngmt., 2 FEIT (CSES), 1 RSPHysSE, 2 RSPAS, 1 CAPER, 2 F&S (1 ANUgreen), 1 NITA, 1 F.Law (ACEL), 1 NCEPH, 1 N.Euro.C.

1 Student: SRES

Ideal Futures

- 13 Intimate integration between research and learning
- 11 Recognised importance of integration across disciplines and sectors; ANU recognised for linking knowledge domains nationally and internationally
- 11 Rigorous environmental teaching and research and citizenship involving relevant ANU programs
- 9 ANU has policy influence and environmentally sustainable commercial outcomes
- 9 ANU a world leader in the generation and dissemination of sustainable development
- 8 Openness to all views about environment
- 6 Research and teaching brokered by co-ordinating body (eg. NIE)
- 5 Adequately funded environmental research
- 5 ANU has decided to be big in environment, with the requisite allocation of resources
- 4 Links- shared buildings and precincts, more important than amorphous singular institution
- 4 provide route for students of strong disciplinary expertise into environmental research
- 4 Cross campus interdisciplinary collaboration
- 4 Reputation for integrating environmental values into education
- 4 Strong links to external organisations
- 3 Large internationally recognised projects
- 3 Well funded doctoral programs
- 3 Respecting and interacting with research in developing countries
- 3 ANU training environmental policy makers
- 3 Understand the dynamics of competition
- 2 Effective communication of research capabilities across campus - not just CRES and SRES
- 2 Acces and participation in global networks
- 2 Strong public profile, international and national
- 2 Excellent field facilities
- 1 every graduate (and staff member) is environmentally literate
- 1 Scientific knowledge and visual & performing arts working together to inform and motivate
- 1 Well funded, internationally respected research as a banner for Australia
- 1 Flexible and accessible structures
- 1 Outreach of environmental activities

- 0 Good technical support for developing learning materials
- 0 Equitable resource allocations reflecting importance of significant issues.
- 0 Drawing on research centres in undergraduate teaching

Barriers and Opportunities

Opportunities	#	Barriers
Grow resources through promoting public good benefits	16	Time and money
Consolidating teaching across ANU Honours and Majors	13	Lack of institutional structures for interdisciplinary teaching
Enlighten and vote	11	Fuzzy signals from the top, within and outside the ANU
BRING IT ON - increase engagement to make use of academic mechanisms fro cross-disciplinary discussion	10	Environment not seen as part of the core academic agenda
Give incentives for interdisciplinary work	9	All incentives are disciplinary and unit-based
Greater emphasis on environmental outcomes	8	Not enough focus on environmental outcomes
More funds for early career academics	7	Insufficient funds for young academics
Fill new vacancies with high calibre people	7	Lack of enough strong champions and strong leaders
Understand the dynamics of sustainable development	6	Individualism and old paradigms of institutions versus public good of sustainable outcomes
Inspirational colleagues	5	Lack of mentoring for staff
	4	Lack of understanding and communication across disciplines
Add or enhance physical centres	3	Lack of physical centres from environment research and learning
Stronger links to schools' programs	3	Lack of strong academic background in under- and postgraduates
Emphasise that we have this already	3	Failure to understand the principle of comparative advantage
Change social/political/institutional environment	2	Current social/political/institutional environment
	2	Invisible hierarchies among disciplines
	2	Lack of appropriate facilities and resources (eg. space)
ANU next to policy makers	1	Government misconceptions of environment
Consolidating teaching across ANU Honours and Majors	1	Difficult for undergraduates to get breadth and disciplinary depth
Get cross-disciplinarity to work more effectively	1	Lack of focus on the global environment goal
	0	Competition from other sectors
Improved co-ordination for seminars	0	
Grow resources through promoting public good benefits	0	Balance wrong between commercialisation and public good

Student Special 2 – Wednesday 7 April

12 Participants:

7 Undergrad (1 Hons), 2 Grad.Dip./Masters, 2 Masters, 1 PhD; 1 CRES, 1 NCDS, 5 SRES, 1 SRES/Sociology, 1 SRES/Anth.&Arch., 1 SRES/Geol., 1 SRES/Econ., Pub.Pol./ACEL

Ideal Futures

- Integration of content in teaching with a focus on value-adding when dealing with environmental issues
- Proactive assistance for students
- Student interests placed before departmental interests (remove internal departmental competition)
- Intensive delivery of courses, including contributions from professionals
- ANU has rigorous foundational studies available for both post- and undergraduates
- ANU maximises collaboration with the community for applied learning and practical assessment
- Integrated one-stop-shop for new students choosing courses
- ANU invites more overseas students
- ANU has significant international prestige in environmental education
- ANU leads by example in environmental practice
- More fieldwork opportunities to apply the concepts taught in courses
- Move away from exam-based assessment to opportunities for experiential learning
- Masters of Sustainable Systems to replace “management” paradigm of current Environmental and Natural Resource Management courses.

Barriers and Opportunities

Opportunity	Votes	Barriers
ANU needs a radical restructure - a revolution rather than an evolution	12	Historically fragmented school structure we have today
<ul style="list-style-type: none"> • "Focusing projects" for interdisciplinary research; • Promoting and training (for staff and students) for systems-view/holistic approaches to topic areas 	9	<ul style="list-style-type: none"> • Departments can be stuck in own perspectives, limiting collaboration; • Systemic reductionism dominates over holism
Continual improvement: <ul style="list-style-type: none"> • Instigate a culture of continual refinement and betterment in teaching and learning; • Provide institutionally supported opportunities for feedback - serious evaluations by students taken seriously and acted upon 	8	Not enough opportunities for feedback from students
	4	Outside pressure from external funding bodies influencing academic outcomes
	4	Lack of leadership from the top on environment teaching and learning at ANU
Flexible "reach-out" community program	3	Lack of collaboration between ANU and the community
	2	Competitive funding reduces incentives for collaboration across schools/faculties
Well educated population combined with a government attempting to address sustainability issues	2	"Eco-hypocrisy" of Canberra population - comfortable large environmental-footprint lifestyles
Respected and resourced Administrative partners	1	
Lectures specify what the course contributes to an understanding of environmental issues at the start and at the end of course to assist focus by the lecturers	1	
Fresh blood is available in new students - use this to effect change, don't just solely rely on staff	1	
	0	Slow rate of change is likely in this institution - intergenerational
	0	Closed minds of academics
Consistency of training, assessment and high benchmarking for all teaching staff	0	
	0	Going where the funds are at the expense of academic interests