

EDUCATION FOR SUSTAINABLE DEVELOPMENT

Higher Education Academy Subject Centres: History, Classics & Archaeology Sociology, Anthropology & Politics

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OVERVIEW & AIMS:

Following the initial brief and funding allocation from HEFCE via the Higher Education Academy in 2005, the Subject Centres for Sociology, Anthropology & Politics (C-SAP) and History, Classics and Archaeology (HCA) have carried out a joint investigation of 'Education for Sustainable Development'¹ in their disciplines. The findings from the project are summarised here and proposals are made to develop this agenda in relation to the contribution of our disciplines to understanding 'sustainable development'.

The expression of interest in this project, submitted jointly by HCA & C-SAP, outlined two main intentions for the investigation:

- Analysis of UG and PG programme and module level provision in relation to ESD
- Engaging academics by telephone and via group events to map ESD practice

Therefore the specific aims of the project were to explore current understandings of sustainability within each discipline and in thematic terms across the disciplines, to identify existing expertise among academics and to locate relevant teaching and learning resources, research projects and publications, plus examples of existing good practice in pedagogical initiatives, at both UG and PG levels and across the UK. Just as policy changes, so do academic disciplines, in response to external influences and to their own internal logic, as well as the pressures and opportunities provided by the resources available to academics. It is important that the vitality of engagement with issues which come under the capacious umbrella of 'sustainable development' derives in considerable measure from the realization of developments latent within the mother disciplines.

This project has resulted in a networking directory and email group of specialists across the HCA and C-SAP disciplines with research and teaching interests in sustainability, plus an extensive and varied list of relevant modules and programmes. A list of significant publications has also been created, which fills the apparent gap noted for the social and historical sciences in the first HEA consultation (Dawe et al 2005 – see Appendix 3). This report presents the findings from our survey of provision and our consultation with academic staff (in interviews and at a multi-disciplinary discussion day), as well as our own reflections on teaching and research activity and the central structural and professional issues involved.

Following the outline of the methodology and research process (Section 1), the orientations within our two Subject Centres are outlined together with profiles of current work within the individual disciplines (Section 2). Section 3 moves into discussion of inter-disciplinarity and the analytical reconfigurations around sustainability, with discussion of the areas ripe for further developments between the subject centres. In Section 4, problematic and supportive factors within the sector are explored around research funding, the organisation of teaching and learning, student engagement, professional boundaries and pedagogy. The report concludes in Section 5 with a reiteration of key findings, critical issues and the prognosis for future activity around 'ESD' within and beyond HCA and C-SAP.

We wish to thank Prof. Anthony Rosie (former Director of C-SAP) for his work in the early stages of this project, preparing the initial bid and giving an overview of C-SAP contributions.

¹ In this report, 'ESD' is used to refer to the developing agenda around the HEFCE consultation and strategy (see reports section of Appendix 3), plus all related initiatives from the HEA and its Subject Centres. The terms 'sustainable development' and 'sustainability' are used in a broad sense when referring to the diverse field of academic debate and activity in this area across all disciplines. A full list of acronyms can be found in Appendix 2.

1. PROJECT METHODOLOGY

C-SAP and HCA disciplines often engage with sustainability debates tangentially or implicitly and across disciplinary boundaries, with relevant research and teaching emerging in networks and specialist centres (often issue rather than discipline focused). Therefore a qualitative Action Research methodology was considered to be the most appropriate approach for this investigation². The rationale for this decision was that 'sustainable development' is a growth area of intellectual debate and is not easily defined in strict terms. At the same time, the 'ESD' agenda involves issues of professional practice within academia, since there are organisational, policy and business contexts to take into consideration. Since Action Research involves cyclical stages of planning, action and reflection, it is particularly useful where research has dual concerns in terms of academic investigation and professional practice. A further benefit of the Action Research approach is the developmental effect such projects can have on participants in terms of stimulating their own thinking and action.

ANALYSIS OF COURSE PROVISION:

The first stage of the project involved a survey of the 6 HCA & C-SAP disciplines to identify relevant staff and teaching provision. This work was carried out using networking and web searches for the HCA disciplines, plus recent survey findings on provision within the C-SAP disciplines³. The C-SAP survey data was searched using relevant keywords for 'environment', 'development', 'globalisation', 'conservation', 'citizenship' and 'urban studies'. Supplementary searches were conducted for HCA within the UCAS 2005 and Postgraduate Prospects databases, using the terms 'environment' and 'conservation'. Our initial understanding of the breadth of potential subject terrain warranted the use of keywords that would expose 'sustainable development' materials in broad, inclusive and thematic terms.

Having located a number of relevant programmes at PG level and a smaller amount at UG level, the research proceeded with provision at modular level, both within the programmes initially identified as relevant and within standard Single Honours programmes. Relevant programme and module outlines were downloaded for content analysis and to identify academic expertise for consultation. Modules dealing with this topic were often found to be implicit; their relevance was often only brought to the surface by investigation of module outlines or personal discussions with faculty. The examples given here should therefore be considered indicative, rather than definitive; there is far more implicit engagement with these issues than could be captured within the constraints of this project.

ENGAGING ACADEMICS:

An initial series of emails was sent during summer 2005 to invite participation from 60 academics across the 6 disciplines; a positive response produced an early list of 30 interested parties. During autumn 2005, this list expanded via snowballing among our contacts, ongoing survey work, plus calls for participation on Subject Centre email bulletins and websites. At this stage, the project was expanded to include staff in Development Studies, since there is a significant element of crossover here and an issue with Subject Centre representation (see Section 3.1). This project revealed the need for considerable interchange between the subject centres designated by the HEA – designations which do not easily fit onto the map of academic activity. 65 interested participants from these 7 disciplines are now listed on our networking directory and many more have been located for future engagement.

The second step was the organisation of a multi-disciplinary discussion day for academics, to provide space to reflect on the intellectual and practical challenges of developing the ESD agenda within the disciplines. Initial conversations with participants had confirmed our assumption that among HCA and C-SAP academics, definitions of sustainable development

² See Robson, C. (1993) *Real World Research: a resource guide for practitioner-researchers* (Oxford: Blackwell).

³ C-SAP commissioned research 2004/5: report available on request from Dr. Alex Ryan/C-SAP.

are complex and varied, rather than normative. Since our disciplines analyse these issues from the widest possible range of global and historical perspectives, an intervention aimed at debate and reflection was considered to be a valuable part of the research process. The discussion day was held at St Anthony's College (University of Oxford) in late November 2005, with 12 academics from History, Archaeology, Classics, Development Studies, Anthropology and Sociology, representing 12 different UK universities. The day involved an initial exploration of individual academic trajectories, followed by consideration of the relationship between teaching and research, the obstacles and opportunities for curriculum initiatives and the diverse dispersal of sustainability issues across the disciplines (Appendix 1 contains the agenda for this event).

The third stage was to carry out informal telephone interviews with some of those who were unable to attend the Oxford event. A semi-structured interview schedule was conducted with 13 academics from our list of participants. Respondents were questioned about the opportunities for teaching sustainability within and outside their departments, developments in their disciplines, gaps between research and teaching, issues around inter-disciplinarity, and the barriers to further development at different levels: policy, institutional, disciplinary, student and public/political. In total, 25 academics have been actively consulted during this project, through participation in the discussion day or interviews, with distribution as follows across the disciplines: History (6); Archaeology (4); Anthropology (4); Politics (4); Sociology (3); Classics (2); Development Studies (2).

2. THE 'ENVIRONMENTAL PLATFORM' & SUSTAINABLE DEVELOPMENT

Identifying the present trajectory for sustainability within C-SAP and HCA subjects requires an appreciation of the forerunners of debate and activity in the disciplinary histories concerned. First, Section 2.1 gives a brief overview of the terrain and the orientations particular to HCA and C-SAP. Section 2.2 then provides brief profiles of the emergence of sub-fields relating to 'environmental' issues in each discipline and the legacy of these platforms in terms of existing teaching and current developments around sustainability.

2.1 GENERAL ORIENTATION

The C-SAP survey project (2005) on trends in the socio-political sciences found that one of the significant drivers of change across the subject terrain stems from globalisation theory. This is also a major factor in the way sustainability issues are harnessed across C-SAP disciplines; the analytical matrix of global/local processes has formed a key prompt for research and curriculum developments that relate to the 'ESD' agenda. This is less true of the HCA disciplines, where the notion of globalization has had less impact; investigation is time and place specific, and the structures and rhetorics of power and resistance are interpreted in such contexts. On the other hand, these disciplines have a long tradition of attending to the use made in the past of such concepts as 'progress' and 'nature'. In these respects, work in HCA subjects on human-environmental interactions (and on both sustainable and unsustainable developments) is in line with the underlying approach of the disciplines as a whole, not least in being less susceptible to theory. Our discovery of relevant but implicit modular content was especially true in HCA; C-SAP is perhaps more likely, with the systematizing missions of its disciplines, to put such matters up front.

Within C-SAP disciplines, issues of cultural relativism and diverse understandings of concepts such as 'nature' arise with varying degrees of explicitness. In these subjects, where a comparative approach to analysis has driven theory development and disciplinary evolution, the concern with variation in human values and practices means that the approach taken to 'ESD' cannot be prescriptive⁴. By necessity, this means a distinct focus on 'minority'

⁴ Findings from the ESD projects in the Subject Centres for Area Studies and Philosophy/Religion (LLAS & PRS) were similar in this respect, highlighting the non-prescriptive approach to cultural values and practices.

dimensions of culture is in evidence: the manifestation of global forces in smaller local contexts and less economically powerful societies, bringing plural perspectives within societies and issues of survival and power imbalance to the fore.

This range of analytical perspectives results in a shared critical approach to the use of definitions of 'sustainable development' in both C-SAP and HCA disciplines. Staff across the disciplines and evidence from module outlines highlighted that one of the essential teaching techniques is to unpack definitions of sustainability (and related concepts) at policy and academic levels. Analysis of concepts as they are applied to different uses, agendas and settings, and by a range of organisations or social groupings, remains an essential strategy for the discussion of human values and the development of definitional challenges (for example the 'triple bottom line' model on economic growth). Overall we found a strong sense of ownership of the intellectual terrain around 'sustainable development' among the C-SAP and HCA staff consulted. These academics were enthusiastic about their ability to handle the necessary debates over power and resources, often pointing out that their various disciplinary tactics require them to raise exactly these kinds of critical issues. This sense of ownership has led to various innovations and developments of the kind summarised below in Section 2.2.

2.2 DISCIPLINE PROFILES

ANTHROPOLOGY:

'Ecological Anthropology', the study of human interaction with the environment, has been a topic of analysis for many decades, with this label being applied more consistently from the 1950s onwards. Both the biological and cultural aspects of the discipline have been involved in such investigations and a sub-field of 'ethno-ecology' developed around human perceptions of animal and plant species. Anthropology was slower than Sociology to engage with Western environmentalism and to analyse this as another way of perceiving human interaction with the non-human world. Developments in the 1990s hastened the engagement and the field of 'Environmental Anthropology' emerged, with a conference organised by the Association of Social Anthropologists conference in 1992 and related publications emerging in its wake.

Modules dealing with human-environment relations, livelihoods, resource use and cultural diversity (for example in concepts of pollution and waste) are now quite common at UG level, but they are usually optional⁵; no specialised named UG programmes were located. At PG level, a number of relevant named programmes exist in two strands of Anthropology with particular significance for sustainability: Environmental Anthropology and Development Anthropology. In these courses, 'sustainable development' figures either explicitly and is labelled as such⁶, or as is more often the case, it occurs implicitly in materials around human-environment perceptions, indigenous technologies, development interventions and agricultural practices⁷.

The emphasis in Environmental Anthropology has tended towards socio-cultural analysis of human/nature interactions, while biological anthropology itself seems to have focused more on issues around disease and medicine, so at present the links between cultural and biological anthropology seem to be stronger in relation to health. Some inter-disciplinary expertise exists in relation to environment and sustainability, with cultural and biological perspectives deployed together and varying emphases in terms of topics⁸. The research group on Human Ecology at University College London and the Durrell Institute of Conservation and Ecology at the University of Kent are prominent examples where curriculum

⁵ Pertinent examples include the named *Environmental Anthropology* UG modules offered at Lampeter and Durham.

⁶ For example in the *MA/MSc Environmental Anthropology* at Kent, where the programme outline is explicit about the engagement with sustainability issues.

⁷ As found in the *MA Anthropology of Development and Social Transformation* at Sussex, or the *MA Social Anthropology: (Environment and Culture)* at Queens, Belfast.

⁸ For example the *MSc Biological Anthropology: Ecological Anthropology* at Durham (which emphasises populations, evolution and disease) or the *MSc Anthropology and Ecology of Development* at UCL (with its strong orientation to social ecology, resource use and conservation).

developments are linked to research expertise on this fundamental context for sustainability: human evolution and the sustainability or unsustainability of human cultures.

ARCHAEOLOGY:

'Environmental Archaeology' came into being around the 1960s in relation to the 'new archaeology' and increased attention to scientific methods for interpreting artefacts and sites. Originally dominated by deterministic perspectives (the constraining effects of environmental conditions on human societies), since the 1980s and 1990s it has seen renewed emphasis on human responses, ritual and symbolic analysis and post-modern notions of plurality. Environmental Archaeology forms an umbrella term, within which various sub-specialisms have matured, such as zooarchaeology and archaeobotany (analysing geoarchaeological data sets for bones, insects, pollen and soils). However, it has been argued that an unhelpful dissociation and marginalisation exists in relation to mainline Archaeology, which is prolonged by unresolved issues around the scientific content of the discipline and increasing commercialisation pressures⁹. The practical concern in Archaeology with the preservation of human artefacts means that a number of programmes are oriented towards vocational requirements and many of these intersect with History and the Social Sciences¹⁰.

Four named UG programmes in Environmental Archaeology were located during the project¹¹, plus PG programmes at these institutions and others¹². In these programmes, the orientation towards sustainable development is not usually obvious; rather it is implicit in the general orientation of Archaeology to explore 'human ecology' or human evolution. Archaeology programmes deal with human ecology as a fundamental analytical agenda (intersecting here with Anthropology and attempting to resolve persistent divisions between 'nature' and 'culture' in the discipline). The differences arise in the degree to which explicit links are made between past and present issues, and in the attention given to contemporary responses to environmental and resource problems¹³. In recognition of such issues, the 2006 Association for Environmental Archaeology conference¹⁴ specified a theme promoting integrated research both within and outside the sub-discipline. Industrial Archaeology has also generated related specialists and PG programmes exist in a number of institutions; the interplay between urban/industrial and landscape/rural heritage is another significant dimension (see further comments in Section 3.2).

HISTORY & CLASSICS:

Ecology came to greater public attention with the rise of environmentalism in the 1960s and the sub-field of 'Environmental History' evolved in this climate¹⁵. Environmental History has been the focus for various developments around sustainability and resource use, with the AHRC funded centre at Stirling and St Andrews being a particular hub of activity. Researchers in this field have explored the ways concepts of nature have been treated as a-historical and analysed the power dynamics in past human-environment interactions. The approaches taken include those typical of Economic History (with the environmental/developmental theme made manifest rather than lying implicit), through co-operative studies with archaeologists, to more purely linguistic and cultural investigations. The length of the story of man's impact on the environment is given particular emphasis: what now appears natural is very often the consequence of ancient attacks on previous environments. Significant research activity has

⁹ See further discussion in Albarella, U. (2001) *Environmental Archaeology: Meaning and Purpose* (Dordrecht: Kluwer Academic Publishers).

¹⁰ For example at Birmingham, Sheffield, Lampeter and Leicester.

¹¹ At Lampeter, Royal Holloway, Edinburgh & Queens, Belfast: these degrees cover standard Environmental Archaeology curriculum elements, often with core modules exploring resource use and past environments.

¹² For example, in Sheffield's *MSC Environmental Archaeology & Palaeoeconomy* or Birmingham's *MPhil Environmental Archaeology* (a mixed taught/research degree designed as a preliminary to higher research).

¹³ The links are made explicit, for example, in Lampeter's *BA Archaeology (Environmental)* module '*Tropical Rainforest peoples & environments, past & present*' or in the core module '*The Palaeoecology of Human Societies*' in UCL's *MSc Palaeoecology of Human Societies*.

¹⁴ Exeter University, March 2006 – see: <http://www.envarch.net/>.

¹⁵ The European Society for Environmental History has further information at: <http://eseh.ruc.dk/>.

dealt with the successes and failures of particular human practices, policies and power struggles, such as the balance of population and resources in high and late medieval agriculture. Environmental history is often closely related to regional and local history, to landscape history (of the kind practiced by W.G. Hoskins, H.P.R. Finberg and their school), and to rural and urban history (see further comments on these spheres in Section 3.2 and on the History of Medicine in the Sociology profile below). Such approaches often characterize historical work in Continuing Education units and a number of specialists with related interests have been located.

At UG level within History degrees, the relevant modules located were 2nd or 3rd year options with differing points of focus¹⁶ and nothing was identified at programme level (although Stirling is developing a new UG programme). Named Environmental History programmes were identified at PG level at 3 institutions, with varying degrees of explicitness in relation to 'sustainability' and signs of what may be a growing trend to collaboration with scientific disciplines¹⁷.

Areas studied have included the European heartlands and their peripheries (with much attention paid to Scotland), the Americas (with considerable attention to early native-European interaction) and sub-saharan Africa (with attention paid to the impact of imperialism). Global sites for analysing sustainability issues are gradually becoming more evident within History, for example at the Centre for World Environmental History (Sussex); in addition, a number of historians were identified with global expertise in sustainability in particular countries or regions, such as South Africa (Oxford) or Eastern Europe (Durham). The value of local studies cannot be underestimated; History has a great deal to offer in this respect, for example in the Centre for North West Regional Studies at Lancaster, which involves a multi-disciplinary approach¹⁸, or in various examples of modular provision organised around research expertise in Scotland, Wales and Ireland. A review of the origin and development of environmental history, emphasising the need for a global scale approach, is forthcoming from Richard Grove and Vinita Damodaran at University of Sussex.

The area where we found the least engagement with 'sustainable development' is within Classics and Ancient History, where there is little teaching with either implicit or explicit connections. However, there are pioneers and relevant expertise was discovered, for example in the decline of the Roman Empire and the operations of waste and recycling in the classical era. Specialists such as these are managing to introduce modular elements or at least to introduce the relevant debates within their modules¹⁹.

POLITICS:

Analysis of environmental activism and political pressure was largely a peripheral topic within Politics and International Relations until recent years, although the development of inquiry in this area has been strengthened by activity elsewhere, particularly in the sub-field of Political Sociology. A significant focus for activity in the UK was at Keele during the 1990s, with a group of academics and research students interested in 'Environmental Politics' as an explicit sub-field. Politics and International Relations share a focus on policy, so developments in policy at both national and international levels during the past two decades have stimulated further attention to sustainability. However, in general, Politics focuses on mechanisms or

¹⁶ For example on different eras, such as the industrial/Romantic period (Reading), on particular dimensions, such as war and disease (Stirling), particular regions, such as Africa (Oxford), or combinations of particular aspects and eras, as in a module on the medieval Spanish wool trade and its impact on the environment at St Andrews.

¹⁷ Nottingham's MSc has a global remit and is co-taught with Geography, while the MRes jointly operated by Dundee and Stirling includes an inter-disciplinary complexity perspective and aims to make concrete links to present day problems. The MLitt programme at St Andrews is also multi-disciplinary, with input from Geosciences, International Relations and Economics. Another noteworthy collaboration with the natural sciences is the *'Environmental History'* module offered as a component in various degree schemes by the School of Biological Sciences at Manchester.

¹⁸ For example the module *'The Human Impact'*, taught by a historical geographer as part of the inter-disciplinary PG *Diploma in Lake District Landscape and Environment* and *MA Lake District Studies*.

¹⁹ The 2nd year module *'History of Ancient Technology and Engineering'* at Swansea is an example which deals with Greek and Roman materials and technologies.

ideologies, rather than issues, so a broad concept like 'sustainability' does not fit easily into the UG curriculum. In addition, International Relations operates at trans-national level and has not utilised the literature on social movements to the same degree as Politics and Sociology, which may have hampered its engagement with environment and development issues (see further notes in Section 3.1).

Keele's named *BA Environmental Politics* was the only directly relevant UG programme located, but it has not been in operation for 3 or 4 years due to low recruitment. However, its *MA Environmental Politics* has been running successfully for 9 years and is being redesigned with a stronger orientation towards the vocational agenda and the needs of overseas students. Academic migrations from Keele have prompted initiatives elsewhere²⁰, but in general, modular level provision with specific attention to sustainability and the environment is not common in Politics or International Relations²¹. However, there are signs of development in inter-disciplinary contexts involving, for example, Politics with Geography²² and International Relations with Development Studies²³.

While the sub-field of Environmental Politics has perhaps been limited in size and impact, globalisation and post-colonial theories have prompted resonant innovations and more direct engagement with global scales of analysis²⁴. However these are often at PG level only, and many of the existing globalisation programmes explored for this project did not have an obvious relationship to sustainability. Citizenship is another area of relevance, reconfiguring issues of environment, development, human rights and social justice around concepts of Global Citizenship and Corporate Social Responsibility²⁵. The degree to which sustainability is engaged as an explicit concept and organising point varies; in some cases the emphasis is more on human capital, exclusion, migration, human traffic and slavery, without clear links to resource and development debates. Yet the Citizenship subject terrain is nascent and still in formation, so the question remains as to whether sustainability is discussed in the classroom, but not made explicit in module outlines (see similar comments on Development Studies in Section 3.1).

SOCIOLOGY:

'Environmental Sociology' has been a sub-topic within the field since the emergence of Western environmental activism during the 1960s and 1970s and various areas have been analysed in terms of research activity, from energy and resource use to leisure and recreation²⁶. Theoretical framing for the political movement has been drawn from globalisation theory, Urban Studies and the post-war 'social movements' literature on non-conventional political and religious groups. Later 20th century developments in the 'sociology of knowledge' (following social constructionist thought and the philosophy of science) formed another prompt for the analysis of scientific and ecological knowledge and policy.

A number of modules exist at UG level in Environmental Sociology, with reference to sustainable development in either explicit or implicit terms, usually as 2nd or 3rd year

²⁰ One example is the '*Environmental Politics*' UG module at Queens, Belfast, which focuses on sustainability issues.

²¹ Though there are exceptions, for example in the UG modules '*Global Politics and the Environment*' (level 1) and '*Global Political Theory and the Environment*' (level 3) at Leeds.

²² Kings College London has a range of relevant programmes covering politics, policy and resource use, housed in the Geography department and taught across the disciplines, for example in its modules on '*Environmental Policy and Politics*' and '*Environmental Politics as Cultural Politics*'.

²³ Leeds has a range of modules organised around International Politics, resources, environment and sustainability, with a particular emphasis on Africa, for example in the *MA Politics of International Resources and Development* and *MA Africa: Human and Sustainable Development*.

²⁴ Newport's new *BA Globalisation and Development* has an optional module on '*Sustainable Development*', while the *MSc in Globalisation: Origins, Development and Contemporary Impact* at Dundee includes a specific module on '*International Environmental Politics*'.

²⁵ For example the new *MSC Global Movements, Social Justice & Sustainability* at Glasgow, which combines global ethnographies with issues of justice/injustice and sustainability, utilising political and anthropological approaches.

²⁶ The International Sociological Association organised a themed conference in September 2005 on Environment and Society – see: <http://www.bath.ac.uk/esml/conferences/index.htm>.

options²⁷. One institution with a thriving UG programme is the *BA Environmental Social Science* programme at Kent, which features direct engagement with sustainability debates in a number of modules, including 1st year level. At PG level, Kent has a successful MSc programme in operation, with a pathway in Sociology that includes many modules relevant to sustainable development²⁸. PG modules with sustainability content are quite common within mainline Sociology²⁹ and Political Sociology³⁰ MA programmes, often drawing on input from other disciplines.

One subject area within Sociology where we expected to find more material relevant to sustainable development, and did not, was in the sociology of science and knowledge (with the obvious connection here to both the history and philosophy of science). PG programmes in these fields depend on the particular expertise of staff; the physical and biological sciences appear to have stronger representation and few modules were found with a direct bearing on the ecological sciences³¹. The emergence of 'risk' theory in relation to public perceptions and policy formation was also expected to generate relevant innovations. However, a number of programmes on 'risk' were explored and this was not found to be the case³². The question remains as to whether such investigations have 'migrated' elsewhere as the terrain around sustainability has developed, or whether these connections have yet to come to fruition. It is clear that attention is increasingly on the socio-political analysis of biotechnology and genetics, so perhaps issues around ecology and resources have been somewhat marginalised by comparison. In terms of formal taught provision in the history of science, it is striking that more institutions offer explicit modules on medicine and health than on the environment; while there is considerable overlap between these areas, this may be a consequence of a considerable tradition of research funding from the Wellcome Institute (also see comments in Section 3.2 in relation to Urban Studies).

3. SUSTAINABLE DEVELOPMENT & MULTI-DISCIPLINARITY

The point has been made by commentators across our disciplines that world events, climate activity, public debate and political protest have been changing the academic agenda in this area during recent years. While the existing 'environmental' sub-fields provided a platform for sustainability debates, the conceptual territory has since widened as a result of these various prompts, combined with the impulses from within particular disciplines. Increasing focus on ideas of sustainable development means the adoption of a global perspective and the reconfiguration of number of issues previously seen in more separate terms (such as conflict and war, justice and human rights, resources and development, conservation and heritage, health and food). As a result, 'sustainability' is a new point of multi-disciplinary focus, with a complex, fertile and expanding remit. In Section 3.1, the reconfiguration of sites and issues for analysis around 'sustainable development' is discussed in relation to concepts of 'human ecology' and the role of Development Studies. The concomitant increase of inter-disciplinary

²⁷ Examples of *'Environmental Sociology'* UG modules currently in operation include those at London Metropolitan, Essex, Imperial College London and Queens, Belfast.

²⁸ Kent's UG and PG programmes share a number of modules and cover issues such as biodiversity and conservation, climate events, planning, transport and urbanisation, animals, trade and livelihoods. The range of disciplinary expertise spans input from the natural sciences plus Sociology, Anthropology, Law, Policy and Economics.

²⁹ At Lancaster, the *MA Sociology* programme includes relevant modules housed in three different departments: *'Environment & Culture: Issues'* (Institute of Environment, Philosophy & Public Policy), *'Environmental Management'* (Geography) and *'Global Governance, Environment and Development'* (Politics). Another example is the Essex *MA Sociology*, which includes modules with sustainability content in the *'Sociology of Development'* and *'Society and the Environment'*, both of which take a critical approach to development ideology and environmental policy.

³⁰ For example the module *'Politics and sociology of the environment'* in the *MA Political Sociology* at Kent, or the modules within Lancaster's *MA Sociology* programme on *'Global Governance, Environment and Development'* and *'International Politics and the Environment'*.

³¹ Notable exceptions include Lancaster's UG and PG modules in the *BA Science, Technology and Society* and *MA Science Studies*, or the module *'Sociological Perspectives on Science, Technology and Sustainability'* in the Sussex *MSc Science and Technology for Sustainability*.

³² Only one relevant module was identified: *'Risk, uncertainty, ignorance and trust'* in the *MA Sustainable Development* at Leeds, although the role of the Centre for Environmental Risk in developments at East Anglia is another useful connection in this respect.

and collaborative work is considered in Section 3.2, highlighting growth areas with strong connections to HCA and C-SAP disciplines.

3.1 CONCEPTUAL & ANALYTICAL REMIT

The issue of including sites of analysis in the 'global South' was raised by many academics; the integration of a coherent global perspective was emphasised as a necessity in bringing sustainable development issues into the curriculum. The example of Politics and International Relations is salutary; these disciplines have often focused on '1st world' and Western countries, with an orientation towards analysing the centres of global economic and military power. Similarly, staff in Sociology and Urban Studies identified a tendency to focus on European and UK sites of analysis in their disciplines and in current teaching provision. The same issue arises with History; Environmental History has most often covered sites in the UK, Western Europe and the USA. Again with Ancient History and Classics, there is a comparative paucity of materials relating to sustainability in ancient empires outside the Mediterranean Basin: the notion of 'ancient history' with which Europeans are familiar and, to a degree, comfortable, is not appropriate in non-European contexts. As anticipated, consistent engagement with the global South was only found in Anthropology and Development Studies (which mirrors the findings of a recent Royal Geographical Society project on global perspectives in Higher Education – see Appendix 3).

Another aspect of this reconfiguration relates to the coverage of issues within and across our disciplines. An interesting example was highlighted by staff teaching International Relations, who noted a relative lack of focus on sustainability in the discipline, compared with the attention lavished on war and conflict. They stated that issues around the 'environment' are only given token acknowledgement in most programmes (as with other 'gentle' topics such as health and gender), often featuring as a 'wind down' session towards the end of modules³³. Development Studies was considered to have the reverse emphasis, with more explicit focus on issues of environment, gender and health. The current political climate was seen as significant; a number of participants commented that this has strengthened the case for making closer links between the 'heavy' topics around conflict and power and the 'gentle' topics around the environment and resources. The need for this resolution of issues was a significant theme in our consultation with academics and a focus for their strong sense of ownership of these materials: there is concern that academics in HCA and C-SAP disciplines must guard their freedom to ask certain questions that are perhaps less easy to ask in disciplines where issues of technology transfer and business interests are more prominent. Our disciplines are necessarily and inherently critical, and subject grand claims about 'nature' to rigorous scrutiny.

This reconfiguration towards a more comprehensive coverage of sustainability issues points to the fundamental theme behind 'ESD' – the question of the sustainability or survival of human cultures and the species in general. As indicated in our discipline profiles in Section 2, this underlying theme is quite obvious in the agenda of the historical and anthropological subjects. The need to fully explore this terrain around 'human ecology' has been recognised in a number of quarters, for example in the activist-oriented Centre for Human Ecology³⁴, or in the research strand at Oxford's Environmental Change Institute, with a base in the natural sciences but recognition of the cultural dimensions. It was noted in the discipline profiles that the 'human ecology' theme surfaces explicitly in Anthropology and Archaeology and fruitful developments seem to occur in universities where these two disciplines interact, for example at University College London, where a significant research group exists. Intellectual

³³ This issue of the weighting of modular content and the distribution of issues within modules is beyond the scope of this project, but further explorations might uncover some useful pointers to imbalances that need to be addressed in each discipline, and in the connections between disciplines.

³⁴ An organisation with a strong activist base and ethos which runs its inter-disciplinary *MSC Human Ecology* along these lines and in partnership with Glasgow University - see <http://www.che.ac.uk/mambo/>.

excavations in relation to earlier strands of inter-disciplinary scholarship may also provide a stimulus to link human ecology or human evolution themes with sustainability³⁵.

The need to achieve full coverage of global sites, to integrate 'hard' and 'soft' topics, and to honour the 'human ecology' subtext, underlines the other significant analytical issue (flagged in the History and Archaeology profiles): the need for historical connections. The question remains as to whether ancient and medieval historical and archaeological findings have been fully drawn out and connected to contemporary questions of survival. Indeed this impulse to create fluid linkage and synthesis brings another set of questions into play, in the understanding that 'sustainable development', when viewed historically, is not simply about development, preservation and addition – it also involves the purification and eradication of different species and human practices (and indeed perhaps the human species). Issues of evidence survival are crucial in relation to all archaeological/historical investigations of cultural practices, since it requires considerable talent and patience to reconstruct the experience of earlier societies.

Creating this depth and breadth of coverage in relation to sustainability – historically, globally and conceptually – is the vast intellectual challenge behind the ESD agenda as the HCA and C-SAP disciplines understand it. This requires a good deal of inter-disciplinary collaboration across the academy and interaction between the biological, ecological and cultural sciences. It is quite clear from the activity around C-SAP and HCA that this must be grounded in an understanding of global power dynamics and the plurality of cultural interests, which is also affirmed in Development Studies, adding strength to the agenda of reconfiguring sites and issues for analysis around sustainability, particularly in relation to less powerful cultural groups. Our commentators from International Relations, for example, argued that their subject area has been largely disconnected from Development Studies, and that this needs to change for intellectual progress on sustainable development matters.

While Development Studies was not in the official remit for this project, it is inter-disciplinary and intersects with C-SAP and HCA disciplines, contributing many programmes and modules of relevance to 'sustainable development'. Programmes organised around the environment and development form an obvious point of contact³⁶, although in some cases the coverage of terrain in terms of sustainability debates and issues is rather complex. For example conversations with staff at Manchester revealed that many debates around sustainability feature in modules outside the more obvious PG courses such as the *MSc International Development: Environment & Development* – once again, this underlines the role of individual enthusiasts, the 'hidden' classroom and the lack of formal embedding for these materials. The place and role of Development Studies in relation to the development of 'ESD' is clearly marked, yet this raises a structural issue in relation to the HEA Subject Centres. While Development Studies has been developing as a 'discipline', working on benchmarks and gaining a panel for the RAE 2008, it still lacks formal representation among the HEA Subject Network. The revised HEFCE consultation on ESD has acknowledged similar points to those presented here in relation to the sites and issues for analysis; given the significant role played by Development Studies in this territory, its applied emphasis and continuing student interest, the case for explicit Subject Centre representation becomes even more critical.

3.2 INTER-DISCIPLINARY GROWTH AREAS

This project has uncovered various inter-disciplinary areas where there is innovative work under way involving HCA and C-SAP disciplines; two areas in particular show significant potential for expansion in terms of both further research and teaching developments. In

³⁵ For example Ole Grøn cites a tradition of inter-disciplinary research on indigenous Siberian populations which has survived despite political changes impacting on Russian research during the 20th century (Grøn, O. [2005] 'Archaeology and the study of indigenous people in Siberia', *Public Archaeology* 4; 103-107).

³⁶ For example the *BSc Environmental Geography and International Development* and *MSc Environment and Development* at University of East Anglia, or the *MA Social Development and Sustainable Livelihoods* at Reading.

addition, each area involves the vocational dimension and different modes of engagement with the natural sciences; these ought to be deepened and extended.

1. Inter-disciplinary Sustainability Provision

A range of multi-disciplinary programmes exist with a direct focus on sustainability, using C-SAP and HCA expertise alongside the analysis of environmental problems from within the natural and ecological sciences. Many of these programmes are housed within Geography or Environmental Science departments (but draw on a wide range of disciplines) and are vocational in orientation, geared to the development of professional skills for environmental planning and management. Three UG programmes were identified with titles explicitly geared to sustainable development³⁷ and a number of programmes were located at PG level, again with an explicit sustainability agenda and a range of disciplinary expertise in operation³⁸.

As well as these explicit 'sustainable development' courses, influential research centres have generated important curriculum innovations that recognise the critical role of the human and social sciences in exposing the defining influence of power on the environment, development and resource use. *CSERGE: Centre for Social and Economic Research on the Global Environment*³⁹ at East Anglia and *CES: Centre for Environment and Society*⁴⁰ at Essex are two prominent examples of such centres. At East Anglia, strong links exist between the School of Environmental Sciences, CSERGE and Development Studies⁴¹, while relevant staff expertise can be found in History and American Studies; its flagship *MSc Climate Change* is an example of multi-disciplinary programme with relevance to sustainable development. At Essex, the *MEnv Environment, Science & Society* has a trans-disciplinary agenda covering physical, social and economic dimensions.

2. Heritage/Conservation & Urban Studies

Another significant multi-disciplinary theme for sustainability relates to Heritage, Conservation and the intersections between these areas and the field of Urban Studies⁴². This terrain involves both HCA and C-SAP disciplines plus direct engagement with the natural sciences and vocational subjects: connections form here between Heritage Studies, Urban and Industrial Archaeology, Urban Studies, Leisure and Tourism, plus Engineering, Planning, Architecture and Design⁴³. Research and teaching initiatives from within C-SAP and HCA address questions around the ownership of cultural heritage, providing a parallel set of questions to those concerning the ownership of land and resources. Teaching issues in this

³⁷ The *BSc/MA Sustainable Development* at St Andrews has a core module with input from 8 disciplines including International Relations, and Modern History; Bangor's *BA/BSc Sustainable Development* has core modules on 'Society and Community', and 'Rural Sociology'; Kingston's *BA Development for Sustainability* includes modules on 'Culture, Place & Society' and 'Sustainable Cities'.

³⁸ Aberdeen's *MSC Sustainable Rural Development* includes policy and tourism, while Edinburgh's *MSC Environmental Sustainability* includes perspectives from anthropology, sociology and politics. Exeter's *MSC Sustainable Development* incorporates learning, citizenship, identity and media input and the De Montfort *MSC Climate Change & Sustainable Development* includes analysis at psychological, societal, organisational & policy levels.

³⁹ CSERGE co-ordinates the ESRC £2.15 million Programme on Environmental Decision Making (2001-2006) and represents a significant ESRC investment in environmental social science, following its commitment to Global Environmental Change at Sussex (1991-2000).

⁴⁰ CES is located in the Department of Biological Sciences, linked to Writtle Agricultural College, and interacts with Accounting, Finance and Management, Economics, Government, Law, Mathematics, and Sociology, plus the Pan European Institute, Health and Social Services Institute, Human Rights Centre and the Institute for Social and Economic Research.

⁴¹ Plus other research centres related to the School of Environmental Sciences, for example the Climatic Research Unit, Tyndall Centre for Climate Change Research, Centre for Environmental Risk, Centre for Ecology, Evolution and Conservation and the Centre for Economic and Behavioural Analysis of Risk and Decision.

⁴² Terminological usage does not appear to be standardised at present in relation to 'heritage' and 'conservation', since the terms are used in multiple disciplinary contexts (although there is perhaps a tendency to use 'heritage' in relation to 'human' artefacts and 'conservation' in relation to natural resources).

⁴³ A variety of courses with vocational orientations were identified, for example at Aberystwyth, Chester, Derby, Nottingham Trent and Portsmouth, among others. Due to time constraints, we did not explore this dimension in detail during this project, but we imagine these will contain the same variety of both explicit and implicit engagement with sustainability as found in our explorations elsewhere.

area therefore include cultural and indigenous rights, restitution and repatriation of cultural property, museums and galleries, cultural memory and ethnicity, class and social exclusion. A number of UG and PG courses were located that deal directly with issues around heritage and/or conservation, connecting in interesting ways with HCA and C-SAP disciplines⁴⁴ and varying in degrees of explicitness in relation to 'sustainability'⁴⁵.

The field of Urban Studies has also proved to be fruitful terrain for sustainable development materials, in relation to heritage and conservation, town planning and urban regeneration, city growth and environmental impacts⁴⁶. Inter-disciplinary engagement is clearly evident between social scientists, historians, legal and policy specialists, engineers and planners, with opportunities to integrate vocational purposes in very pragmatic ways. For example, links between planning and the social and historical sciences are being harnessed with greater clarity and in terms of departmental level strategy at the Centre for Town & Regional Planning at Sheffield⁴⁷. The relationship between urban and rural contexts is another important dimension here; connecting these two spheres of activity is important to the socio-cultural and historical sciences, for example when exploring issues around rural-urban migration, poverty and resource depletion. A number of comments were made during the consultation along the lines that rural history/planning is the neglected aspect and that analytical links need to be strengthened, for example in relation to topics such as river systems and urban animals. The territory around health is also significant, both in relation to the history of health and medicine (and links with environmental history and the history of engineering)⁴⁸ and the socio-anthropological analysis of medical systems, public health, social exclusion and urban regeneration⁴⁹.

4. OPPORTUNITIES & OBSTACLES

In this section we summarise the key sectoral issues arising in relation to 'ESD'; these are grouped in relation to research and teaching, student and professional matters, and pedagogical tactics. These comments are the product of our interviews and material from the discussion day, together with our reflections on the project findings as a whole. The previous sections have exposed the need for further 'ESD' developments that are both discipline-driven and conducive to inter-disciplinary innovation, and the comments below reflect this duality.

1. RESEARCH FUNDING CLIMATE

Participants frequently mentioned difficulties related to the funding and status of innovative inter-disciplinary research, the majority being in agreement that far more needs to be achieved in terms of changing attitudes at sectoral level. Comments were made that despite a discourse of encouragement to engage in interdisciplinary research, serious obstacles arise in relation to the disciplinary panel focus of the RAE, the perceived emphasis (outwith the scientific disciplines) on sole-authored publications rather than team collaborations, and the value attributed to journals representing more traditional disciplinary configurations. A glance at the list of journals cited as relevant (Appendix 2) shows many potential avenues for publications on sustainability, but participants noted that 'implicit conservatism' and the low

⁴⁴ Two modules at UCL deal with 'heritage'; the first, entitled '*Anthropology of Cultural Heritage*' (taught by the Archaeology department) deals with these issues around cultural memory, cultural property, indigenous rights, multiculturalism and justice, and the second, '*Public Archaeology*' (taught in Archaeology) also attends to issues of cultural property and values, in relation to land, artefacts and monuments.

⁴⁵ For example sustainability themes are deployed quite consciously in the *MSc Historic Environment Conservation* at Birmingham, which draws on long established strengths in Industrial Archaeology.

⁴⁶ An example being the module '*Planning for Sustainable Cities*' which features as an option for 3 MSc programmes at Kings College, London: *Cities, Space and Society, City Design & Social Science and Urbanisation & Development*.

⁴⁷ The compulsory 2nd year module '*Rural Planning*' is explicit about sustainable development, as is the treatment of planning issues in the 3rd year option '*Environmental Policy and Nature Conservation*'.

⁴⁸ Historical specialists were located for example in heritage, leisure and public history (Nottingham) and the history of health, sanitation and urban development (Bolton; Anglia Ruskin).

⁴⁹ Sunderland's *MSc Sustainable Regeneration* is an interesting example of a programme connecting environmental regeneration to public health, with a particular focus on Health Impact Assessment and health inequalities.

status of newer journals hampers this type of research output. These issues around the RAE process were highlighted as barriers to successful development in ESD and this was considered to be an area where the HEA and HEFCE might assist in pressing for change (the persistent lack of status for pedagogical research was also noted as an unhelpful factor here).

On the positive side, the introduction of the AHRC research programme around *Landscape and Environment* (2005-2010) shows potential for synergy with sustainability issues across the humanities disciplines. The ESRC has its priority theme for funding research around *Environmental & Human Behaviour* (including inter-disciplinary work) and has recently announced the preliminary phase for a 3 year inter-disciplinary capacity-building programme on *Environment and Human Health*⁵⁰. Schemes available for postgraduate research include the ESRC/NERC Inter-disciplinary Studentships for research on environmental matters and the UK Energy Research Centre Studentships (linked to UK energy strategy goals) for research addressing the concerns of more than one of the ESRC, NERC and EPSRC Funding Councils. October 2005 saw the launch of the English Heritage Research Strategy *"Discovering the Past, Shaping the Future"*, which presents opportunities for building inter-disciplinary research communities with partnerships involving AHRC, ESRC, EPSRC and NERC⁵¹. However, it was noted during our consultation that initiatives by the Research Funding Councils can be hampered by guidelines blocking the development and dissemination of teaching outputs from research activity and there is a clear need for support in this respect (for example in the AHRC move to incorporate dissemination plans in project proposals).

2. ORGANISATION OF TEACHING & LEARNING

It has become clear that Single Honours programmes are not sufficient for effective learning around ESD; difficulties with programme innovation and over-crowded curricula (within a three-level UG programme) were mentioned repeatedly across the disciplines consulted. Some staff viewed modularisation as a destructive factor, seeing 'boxed' teaching and assessment as not helping students to think systematically or to build knowledge in progressive layers (examples were given of the unsuccessful introduction of synoptic modules due to a culture of separation); difficulties with summative assessment and its weighting within programme accreditation also require attention. The regulation and audit of teaching was also presented as a hindrance to further developments in ESD, in that quality assessment processes and the resulting administrative burdens experienced by academics are a serious disincentive to the introduction of inter-disciplinary teaching. It remains to be seen whether the cognitive processes involved in natural sciences and in 'sequential' sciences render innovation between the various subject centres difficult intellectually as well as structurally.

Structural problems were identified around the creation of curriculum innovations at institutional level, particularly where management strategies are not conducive to inter-departmental interaction. Internal accounting procedures were also highlighted as restricting teaching collaboration between departments, with Full Economic Costing being cited as a particular concern. Much depends upon the departmental/faculty configuration favoured by individual institutions, configurations which are not always resonant with emergent academic considerations. Considerable faculty ingenuity is often required to bring academic enterprises together and this is perhaps more of a problem in relation to the organization of teaching than the stimulation of research. On the other hand, there are examples of determination and enthusiasm overcoming these obstacles; we need to attend to the conjunction of factors – at institutional, faculty, departmental and individual levels – which allowed such success.

There is a clear argument here for initiatives that will increase research/teaching synergy, for example in 'new blood' fellowships that divide staff time between the two aspects of

⁵⁰ This programme is supported by NERC, BBSRC, EPSRC, the Environment Agency, DEFRA, the Medical Research Council and the Wellcome Trust.

⁵¹ On a related note, a UK-wide framework for policy research has been published by the UK Historic Environment Research Group (UKHERG), bringing together organisations from England, Northern Ireland, Scotland and Wales involved in commissioning socio-economic policy research on the historic environment.

academic activity. The need to create more fluidity in the transfer from research to teaching was very much in evidence in this project, particularly in terms of filtering research down to UG level. While enthusiasts find creative ways to deliver sustainability teaching, the tendency to disciplinary specialisation and the lack of curriculum embedding mean that when 'enthusiasts' migrate from institutions or go on leave, their teaching provision is usually lost.

3. STUDENT ENGAGEMENT

A number of potential obstacles were noted in relation to levels of student knowledge, for example in a lower overall level of basic political education or in the need for quantitative sophistication when introducing analytical tools such as GIS. Issues of student preparedness, willingness and experience in thinking outside traditional disciplinary boxes were also highlighted: there was a distinct sense that there is more to learn, but that students are less prepared, for the intellectual realities of a comprehensive ESD agenda. Issues of feed-through from school education were noted both as barriers and opportunities; for example Geography has been dropped as compulsory post-15, but Citizenship is now part of the National Curriculum (although a lack of comprehensiveness has been noted here, so it will be some years before undergraduates reach Higher Education with a clear understanding of its relationship to sustainability).

Comments about student interest were surprisingly mixed in relation to sustainability and environmental issues. A number of participants mentioned high levels of engagement and that students have an orientation towards the inter-disciplinary and away from traditional disciplinary boundaries. Yet others argued that students have less interest in sustainable development, and cancellations were found due to low recruitment on a number of modules and programmes. This may relate to an apparent decline in Environmental Science recruitment and raises the question of whether vocational concerns are a factor: the point was made that students perhaps see inter-disciplinary programmes as vocationally risky and may be unaware of the employment opportunities available⁵². There was general agreement that employability considerations must be central to the development of the ESD agenda emphasis and that innovative forms of pedagogy should be part of this drive to harness the vocational dimension.

In general terms, the level of political and public debate was considered to be a positive factor for ESD. The increase of governmental and policy activity over recent years means there is a great deal of practical material available to engage students in HCA and C-SAP disciplines. Some academics were concerned that 'neo-liberal assumptions' around sustainable development have been lodged in public consciousness by political and media discourses, making interest and engagement around the operations of global economic systems more difficult. However, this was also seen as a useful prompt; the intransigence of the Bush administration on sustainability and the issues around oil resources in Iraq were cited as good opportunities for ESD debates. The question remains unanswered as to the nature of student interest at different levels (UG, PG and research), and whether students in fact prefer denunciation and resistance to understanding and engagement. A further issue concerns the engagement of international students and the potential use of ESD as a cheap recruitment tool, although these students may have their own motivations and interests, which are well served by such tactics.

4. ACADEMICS & PROFESSIONAL IDENTITIES

It has been noted that in some disciplines, the potential for interdisciplinary collaboration is somewhat hampered by traditions of isolation, both theoretical and in terms of professional relationships; the situation within our disciplines is varied in this respect. On the positive side, each of our two Subject Centres is involved with a discipline which encompasses both

⁵² One archaeologist noted that inaccurate student perceptions of employability prospects in the fields of heritage and conservation are guiding recruitment choices on two Masters programmes with a great deal of shared content, and may lead to the disappearance of one of these options.

biological/physical and social/cultural dimensions (Anthropology and Archaeology); there is obvious potential for further integration and development in these subjects. This project also uncovered many academics active in areas around sustainability who have career trajectories spanning the natural and social sciences. One of the noticeable features of our discussion day was the number of participants with a background in the natural sciences, who had moved into the human or social sciences⁵³.

However, many of those consulted pointed out that there is still a strong sense of intellectual and professional 'threat' around any inter-disciplinary agenda that seeks to integrate the natural and social sciences. Conflicts and boundary maintenance are significant factors in discussions of ecological 'facts', the applications of policy, comparative definitional and conceptual work, and the limits to development set by natural and human circumstances. To a degree this conflict is inevitable (and perhaps even desirable from the perspective of the socio-political sciences), although confidence can deteriorate into arrogance in these encounters. There is a long way to go in developing a mutual agenda between faculties in relation to possible modes of engagement with the natural sciences. There are also significant issues around the acquisition of multi-disciplinary expertise and knowledge; the problems of over-crowded curricula and intellectual preparedness also apply to the professional lives of academics.

At the same time, we found a great deal of enthusiasm for collaboration and respect for the aims of integrated knowledge during this project. A number of those consulted were of the opinion that this is an issue of academic generations, in that younger academics are more oriented to inter-disciplinary work and feel less constrained by their disciplinary traditions. On the other hand, career progress considerations might suggest that junior faculty will follow particular academic lines, and that seniority ought to bring with it licence and space for innovation. Overall, a good deal of emphasis was given to the need to go beyond simplistic critiques of science and look for more constructive modes of engagement – including suggestions that more use might be made of professional associations and existing networks for subject Heads of Department.

5. PEDAGOGY & VOCATIONAL DIMENSIONS

We have highlighted particular areas where vocational considerations suggest an 'engaged' pedagogy as the most valuable approach to teaching and learning in multi-faceted areas such as ESD. Our consultation revealed enthusiastic support for learner-centred, contextualised, problem-centred methodologies, on the basis that action is needed as well as knowledge. Such approaches may also be a route to achieving further resolution between divergent disciplinary concerns and creating meaningful inter-disciplinary innovations. A common suggestion was that mutual engagement between disciplines is best served by a problem-solving approach, using scenario-building and case studies, so we anticipate continued activity in this vein, harnessing the vocational dimensions of 'ESD' by linking teaching to policy formation and employment requirements. One timely example given was that national policy changes have rendered Strategic Environmental Assessments a requirement for all local plans from 2005 (and where the government interpretation of this is focused on sustainability). The increasing demand for policy advice and evaluation work from academics was also noted as having great pedagogical potential, generating materials to engage student interest and enhance employability, without missing opportunities to explore the workings of political rhetoric. Certainly Policy and Law seem to be particularly fruitful points of inter-disciplinary connection, since planners, hydrologists, engineers and other professionals are necessarily engaged with policy and legal issues.

Active community involvement was also highlighted as a necessity for meaningful ESD, whether in the form of alliances on curriculum development or placements and dissemination

⁵³ Our initial explorations suggest that such individuals are most common in Anthropology, Archaeology and Sociology, but they are not unknown in the other subjects.

within the community. Universities are important players in many local economies and mutual assistance can be served by links with NGOs, charities, local government, FE and Continuing Education units (the example of local/regional history is salient here). The issues around placements can be difficult; they serve an important function in this respect but also present potential difficulties in terms of differences between the perspectives, agendas and influence of academics and employers. While we did find interesting examples of placements in relevant courses⁵⁴, the UK system of HE (based upon three levels and still expecting completion within three years) is not generally conducive to placements. It is also important that innovative dissemination methods are harnessed as part of such an 'engaged pedagogy', for example in the use of public debates and displays, plus written output in non-academic publications and via the internet.

Moving from local level to the global community, while placements may be even more difficult to organise outside the UK context, the need for inter-cultural literacy has been underlined in this project. While extended fieldwork abroad is an obvious route to the development of such skills (as in Anthropology), this is more often a feature of research degrees, and there is perhaps a need to seek alternative ways to create a more embedded approach. Creating more positive global links in the form of mutually beneficial partnerships with international NGOs and universities in the 'global South' is one avenue, for example in Central Lancashire's collaboration with the The Maasai Centre for Field Studies in Kenya (linked to the department of Environmental Management). Such links are also important avenues for collaboration on the production of knowledge, for example in the interactions between the Centre for World Environmental History at Sussex and the National Institute for Science, Technology and Development Studies (New Delhi), the Forest Research Institute at Dehra Dun (Uttar Pradesh) and Jawaharlal Nehru University (New Delhi).

5. SUMMARY & FUTURE DEVELOPMENTS

Conflicts over development have played out across time and space; the struggle for the control of scarce resources has provided one of the central battlegrounds of human activity, with both sustainable and unsustainable outcomes. The disciplines reviewed here provide multiple illustrations of this and the essential background for students to understand why 'sustainability' is important, to recognise that it is not a novel issue, and to appreciate the complexities and constraints involved in decisions about 'development'. Our academics do not want the implicit to be made crudely explicit; their teaching efforts are directed towards furnishing students with essential skills they will need if they are to develop 'sustainability literacy'. There are still questions to be asked in relation to the role of HE in the world and the creation of 'critical graduates' (particularly in relation to themes around 'internationalism'), and similar questions arise in relation to the ways academics might see their roles as educators (for example in the use or rejection of radical pedagogies).

The clear conclusion of this project is that HCA and C-SAP academics are actively teaching 'sustainable development' issues in a number of ways, both explicit and implicit, across the range of disciplinary territories. Clearly there is ample scope for distilling principles and contexts for the analysis of 'sustainability' from these materials, and this may indeed be the most important contribution of C-SAP and HCA, rather than a more obvious type of 'ownership' of the ESD terrain. Indeed, so much of this work takes place with different degrees of implicitness and at different levels of complexity, it would be inappropriate to suggest simplistic formulas to represent it. ESD within HCA and C-SAP certainly appears to be a vibrant and expanding sphere of activity; we are keenly aware that this survey is not comprehensive and this report represents only a sample of what takes place 'on the ground'.

⁵⁴ For example in professionally-oriented Archaeology courses, in PG courses such as the Goldsmith *MA Anthropology of Development*, and in some cases at UG level, for example in the *BA Globalisation and Development* at Newport.

This project has also exposed an encouraging level of commitment to furthering the existing inter-disciplinary work that branches out from HCA and C-SAP to the natural, ecological and more pragmatic or vocational disciplines. Despite the range of barriers identified in relation to research funding, institutional structures, audit processes and professional lives, high impact inter-disciplinary research and teaching is clearly in evidence, with the promise of further innovations. One of the clearest indicators from the evaluations of our discussion day was the desire among staff to move ahead with inter-disciplinary activities⁵⁵ and we identified a number of places where the power dynamics and cultural values analysed by our disciplines are being explored in conscious awareness of their relationships with the ecological sciences. Ultimately an environment must be created where a bi-directional movement can take place between the 'mother disciplines' and the broader disciplinary context, so that impulses from within the disciplines reach out to forge new inter-disciplinary connections, while also feeding back into the disciplines to secure further embedding.

REITERATION OF KEY POINTS:

- Relevant research activity is highly diverse in scope and appears to be filtering down at least to PG level in many places, yet there are significant obstacles to achieving a more secure sense of embedding in the UG curriculum.
- Barriers to further ESD developments exist at multiple levels: disciplinary, institutional and sectoral. An important part of future work will be to explore the particular conditions and configurations where innovations have flourished and we see this as a preliminary step to enable Subject Centres to advise departments on embedding.
- An 'engaged' pedagogy is necessary: learner-centred, problem-solving and community-focused approaches are valuable ways to harness the complexity around ESD, while responding to the employability concerns driving the student market and the need to integrate knowledge and action.
- It is important to recognise that motives and interests differ among students, academics, activists, employers, and at departmental, institutional and sectoral levels; for example consideration must be given to the different needs of research-driven Russell universities and post-92 universities existing in contexts driven more by teaching and business interests.
- Inter-disciplinary work should be supported by activities involving the range of HEA Subject Centres⁵⁶ and relevant FDTL and CETL expertise⁵⁷. At this stage, it seems important to avoid simplistic toolkits and instead to facilitate workshops, talks and conferences; there is a clear need for blended activities that will support networking, reflection and research/teaching synergy.

⁵⁵ Of 10 responses received (from 12 participants), 8 rated the inter-disciplinary agenda as the most significant aspect of the event, all 10 considered this to have been productive, and in relation to important issues that had not been fully covered during the event, 5 commented that it was crucial that this type of work should be taken forward.

⁵⁶ GEES, PRS, LLAS, HLST, SWAP and the centres for Economics, Law, and Engineering all show immediate potential for fruitful alliances, and other connections should become apparent as the ESD agenda evolves.

⁵⁷ CETLs with an obvious connection include: ESD: Centre for Excellence in Teaching and Learning for Education for Sustainable Development (University of Plymouth), C-SCAIP: Centre for Sustainable Communities Achieved through Integrated Professional Educations (Kingston University), CRUCIBLE: Centre for Rights Understanding and Citizenship Based on Learning through Experience (Roehampton University), CeAL: Centre for Active Learning in Geography, Environment and Related Disciplines (University of Gloucestershire), IDEAS: Inter-disciplinary ethics across subject disciplines (University of Leeds), not to mention those dealing with pertinent pedagogical matters, such as E3I: Enhancing, Embedding and Integrating Employability (Sheffield Hallam University) and the Institute for Enterprise (Leeds Metropolitan University).

EXTERNAL RECOMMENDATIONS:

In the HEA Subject Network consultation (Dawe et al 2005), a number of barriers to ESD were identified; some of these (such as perceived irrelevance and lack of staff awareness) do not seem to apply in HCA and C-SAP disciplines. Our academics seem to have the requisite expertise to represent ESD as it applies to their disciplines; the need for support appears instead in relation to the intellectual and pragmatic demands of inter-disciplinary work. We welcome the support of the ESD Planning Group in creating links between the networks emerging in the Subject Centres and in taking the inter-disciplinary agenda forward in ways that will increase synergy between research and teaching.

The institutional and sectoral barriers highlighted in the HEA consultation are indeed serious obstacles in the eyes of C-SAP and HCA academics (for example in relation to institutional commitment and structural obstacles). We would ask for support from both the HEA and HEFCE in reviewing audit processes which have proved to be stultifying in relation to new and inter-disciplinary programmes such as those involving ESD and to stimulate change in the barriers to inter-disciplinary work within the RAE process and Research Funding Councils. We would also seek further advice on how to create successful proposals for research and pedagogical activity in this area.

FUTURE PRIORITIES & ACTIVITIES:

Time and space constraints on this project mean that a number of issues could not be explored in greater detail. In terms of disciplinary terrain, a more thorough survey might expose further activity of relevance, for example in relation to Heritage and Conservation, International Relations and Globalisation, Citizenship, Health and Development Studies. An additional area ripe for further investigation would be the inter-disciplinary territory within Anthropology and Archaeology and the underlying theme of Human Ecology. The issues around 'sustainability literacy' would also benefit from further analysis, in relation to psychological barriers and political positions, academic assessment and accreditation, Personal Development Planning for students and Continuing Professional Development for academics. Further work could also engage remaining questions around student interest and recruitment, implicit or 'hidden' sustainability teaching and access to resources.

In terms of immediate activities, a collaborative project is under way between C-SAP, GEES and HLST on Employability & Corporate Social Responsibility. A successful bid has been made to the HEA ESD Planning Group to take the inter-disciplinary agenda forward with a seminar series that engages a wider range of disciplines, spanning the natural and human sciences. One aspect of this work will be an event exploring one institution in more depth, to analyse the constraints and success factors for inter-disciplinary collaboration in a given context. Ideas are also being developed for smaller projects, for example to explore the notion of sustainability in the paradigms, resources and methods of certain disciplines, in relation to broader themes around the sustainability of knowledge and academic practice. In all these and future activities, we will continue to use and expand our networking directory and the resources arising from this project, which will be available on the HCA and C-SAP websites.

APPENDIX 1: Inter-disciplinary Discussion Day Agenda

EDUCATION FOR SUSTAINABLE DEVELOPMENT DISCUSSION DAY AGENDA

Mon 21st Nov 2005: Dahrendorf Room, St Anthony's College, Oxford University

Facilitators: Dr Colin Brooks (Director: HCA)
Dr Mike Neary (Academic Co-ordinator: C-SAP)
Dr Alex Ryan (Project Officer: C-SAP/HCA)

START: 10.30 - 11.00 COFFEE AND ARRIVALS

SESSION 1: 11.00 - 12.30

"ESD" - CURRENT SITUATION & KEY ISSUES: WHOLE GROUP DEBATE

- *The ESD Initiative* – does this theme fit with the particular concerns of our disciplines in terms of 'environmental' and 'development' issues?
- *Teaching & Research* – why is there a lack of undergraduate modules and a gap between research and teaching in many of these areas?
- *Knowledge Distribution* - how is 'sustainable development' knowledge in our areas being publicised - who is it reaching and via which conduits?
- *Obstacles & Opportunities* – what are the pedagogical, institutional, policy, political and disciplinary factors we need to take into account?
- *Curriculum Development* – how might this fit into an undergraduate programme and what examples do we have of successful initiatives?

LUNCH: 12.30 - 1.30

SESSION 2: 1.30 - 2.45

FUTURE DEVELOPMENTS: SMALL GROUP DISCUSSIONS

- *Pedagogy*: Given the emphasis in our disciplines on the relationship between power and resources, are we in fact teaching 'ESD' implicitly? If so, how and to what extent should we make the implicit explicit? Do the nature of these materials and the sensitivity of the discussions deriving from them suggest a particular type of pedagogy?
- *Inter-disciplinarity*: How might we move forward in constructive ways on the various crossover areas around this topic, both in terms of the interplay between HCA and C-SAP disciplines, and beyond, particularly into the natural sciences - what tactics and networks are needed?

TEA: 2.45 - 3.00

SESSION 3: 3.00 - 3.45

PLENARY DEBATE & SUMMARY

APPENDIX 2: Acronyms Used & Relevant Journals

ACRONYMS:

AHRC: Arts & Humanities Research Council
 BBSRC: Biotechnology & Biological Sciences Research Council
 CETL: Centre for Excellence in Teaching & Learning
 C-SAP: HEA Subject Centre for Sociology, Anthropology & Politics
 DEFRA: Department for Environment, Food and Rural Affairs
 EPSRC: Engineering & Physical Sciences Research Council
 ESD: Education for Sustainable Development
 ESRC: Economic & Social Research Council
 FDTL: Funds for the Development of Teaching and Learning
 HCA: HEA Subject Centre for History, Classics & Archaeology
 HEA: Higher Education Academy
 HEFCE: Higher Education Funding Council for England
 GEES: HEA Subject Centre for Geography, Earth & Environmental Sciences
 HLST: HEA Subject Centre for Hospitality, Leisure, Sport & Tourism
 LLAS: HEA Subject Centre for Languages, Linguistics & Area Studies
 NERC: Natural Environment Research Council
 PRS: HEA Subject Centre for Philosophical & Religious Studies
 SWAP: HEA Subject Centre for Social Policy & Social Work
 UCAS: Universities and Colleges Admissions Service

JOURNALS:

American Journal of Environmental History
 Circaea: Journal of the Association for Environmental Archaeology (1983-1996)
 Corporate Social Responsibility
 Critical Perspectives on Globalisation
 Development and Change
 Ecological and Environmental Anthropology
 Ecology & Society: a journal of integrative science for resilience and sustainability
 Ecos
 Environmental Archaeology: the journal of Human Palaeoecology (Journal of the Association for Environmental Archaeology 1997 onwards)
 Environmental History Review
 Environmental Ethics
 Environmental Politics
 Environmental Values
 Environment & Development
 Environment & History
 European Environment
 Food and Foodways
 Forest and Conservation History
 Global Environmental Politics
 Human Dimensions of Wildlife
 Human Ecology Review
 Human Ecology: an interdisciplinary journal
 International Journal of Environment and Sustainable Development
 International Journal of Heritage Studies
 International Journal of Sustainable Development and World Ecology
 International Review of Environmental Strategies
 Journal of Ecological Anthropology
 Journal of Environmental Management
 Journal of Global Ethics
 Organisation and Environment
 Progress in Development Studies
 Social Movement Studies
 Social Studies of Science
 Society & Animals
 Society & Natural Resources
 Technology and Culture
 The Ecologist
 The Journal of Corporate Citizenship
 Worldviews: Environment, Culture, Religion

APPENDIX 3: Related Organisations & Reports

ORGANISATIONS:

Citizenship Foundation - www.citizenshipfoundation.org.uk
 Council for Environmental Education – www.cee.org (closed 2005 but website active)
 DEFRA: Sustainable Development - www.defra.gov.uk/environment/sustainable/index.htm
 Department for Education & Skills: Sustainable Development - www.dfes.gov.uk/aboutus/sd
 Department for International Development – www.dfid.gov.uk
 Development Education Association - www.dea.org.uk
 Earthwatch: Research Expeditions – www.earthwatch.org
 Forum for the Future - www.forumforthefuture.org.uk
 International Institute for Environment & Development – www.iied.org/index.html
 International Institute for Sustainable Development – www.iisd.org
 IUCN: World Conservation Union – www.iucn.org
 Millenium Goals – www.developmentgoals.org
 National Strategies for Sustainable Development - www.nssd.net/index.html
 Organisation for Economic Co-operation & Development – www.oecd.org
 People & Planet: Student Campaigns - www.peopleandplanet.org
 Qualifications & Curriculum Authority: ESD - <http://www.nc.uk.net/esd/index.htm>
 United Nations Division for Sustainable Development – www.un.org/esa/sustdev
 United Nations Environment Programme – www.unep.org
 United Nations Group of 77 Third World Countries - www.g77.org/indexswf.htm
 World Development Movement - www.wdm.org.uk
 World Summit on Sustainable Development 2002 – www.earthsummit2002.org
 World Business Council for Sustainable Development – www.wbcsd.org

REPORTS:

Brundtland Commission report (1987): World Commission on Environment and Development *Our Common Future* (Oxford University Press)

Department for Education and Skills (DfES) (1999): *A better quality of life: a strategy for sustainable development for the UK* (HMSO, London)

Department for Education and Skills (DfES) (2005/6): Sustainable Development Action Plan *Learning for the Future* – available at: <http://www.dfes.gov.uk/aboutus/sd/docs/SDAP%202006%20FINAL.pdf>

Forum for the Future/Sustainability Integration Group/Higher Education Partnership for Sustainability: - see: http://www.forumforthefuture.org.uk/aboutus/signet_page2115.aspx

HEFCE consultation/responses (2005): *Sustainable Development in Higher Education: Consultation on a support strategy and action plan* – available at: http://www.hefce.ac.uk/pubs/hefce/2005/05_01/

OFSTED report (2003): *Towards an Education for Sustainable Development* – available at: <http://www.ofsted.gov.uk/publications/docs/3389.doc>

Royal Geographical Society report (2005): *Global Perspectives in Higher Education* - see: <http://www.rgs.org/category.php?Page=mainresearch>

UK Government strategy on Sustainable Development (2005): *Securing the Future* – see: <http://www.sustainable-development.gov.uk/publications/uk-strategy/index.htm>

Dawe, G., Jucker, R. & Martin, S. (2005): HEA Subject Network Consultation report: *Sustainable Development in Higher Education: Current Practice and Future Developments* – available at: <http://www.heacademy.ac.uk/misc/sustdevinHEfinalreport.pdf>