



UNIVERSITY EDUCATORS
FOR SUSTAINABLE DEVELOPMENT

Mapping opportunities for developing Education for Sustainable Development (ESD) competences

REGION NORTH

University of Gloucestershire, United Kingdom

June 2014

Prof Daniella Tilbury, Dr Ingrid Mula and Dr Alex Ryan

UE4SD – University Educators for Sustainable Development – Regional Mapping Process

This report has been developed as part of a 3-year project entitled “University Educators for Sustainable Development (UE4SD)”, funded by the European Commission under the Lifelong Learning Programme - Erasmus Academic Networks. The project works across Europe to identify best practices, new initiatives and usable tools to support the professional development of Education for Sustainable Development (ESD) capabilities of university educators.

The project is working with 55 partners across 33 countries mainly in Europe. The partnership is organised into four regional hubs, to ensure that regional scenarios and contexts are visible throughout the project. The North region is co-ordinated by the University of Gloucestershire (UK), the South region by the Autonomous University of Madrid (Spain), the East region by Charles University (Czech Republic), and the West region by Leuphana University of Lüneburg (Germany).

The first phase of the project involved each country completing a mapping template to capture existing professional development opportunities for university educators. The template and the guidelines for collecting the information were presented to partners in regional meetings during February and March 2014 in the different regional hubs.

The UE4SD North region is composed of 11 participants from Aalborg University (Denmark), Institute of Ecology at Tallin University (Estonia), ECO-UNESCO (Ireland), Institute of Sustainable Education at Daugavpils University (Latvia), Centre for Sustainable Business (Latvia), Vilnius University (Lithuania), University of Oslo (Norway*), Malmö University (Sweden), Uppsala University (Sweden), London South Bank University (UK) and University of Gloucestershire (UK).

The North region partners participated in the regional UE4SD meeting in Cheltenham, UK, on 24-25 February 2014. After this meeting, national template coordinators worked with project partners from their country to collect data, finalised their templates and submitted them to the regional hub coordinators on 30 April 2014 (see Table 1).

Table 1. North region countries and partners involved in the mapping exercise

Country	Partner	Number of HE institutions	Number of HE students
Denmark	Aalborg University	30	Approx. 229,000 (2008/09)
Estonia	Institute of Ecology, Tallin University	23	64,803 (2012-13)
Ireland	ECO-UNESCO	44	164,498
Latvia	Institute of Sustainable Education, Daugavpils University	33	81,744
	Centre for Sustainable Business at SSE Riga		
Lithuania	Vilnius University	47	Approx. 170,000
Sweden	Malmö University	44	425,000 (2011-12)
	Uppsala University		
United Kingdom	University of Gloucestershire	163 (2011-12)	2,340,275 (2012-13)
	London South Bank University		

**Note: no mapping template was received from the partner institution in Norway.*

The regional hub coordinators analysed the country templates to develop this regional report which provides an overview of the status of ESD and professional development for ESD in Higher Education (HE) at the national level in the UE4SD North region. The report collates information about key policies, resources and initiatives that are supporting the development of ESD in HE and identifies the kinds of professional development opportunities currently available for university educators in ESD.

The process of gathering and validating data varied by country (see table 2):

- In Denmark, the data was collected through desktop research and interviews with participants and facilitators engaged in the good practices selected. The information was then validated with two key informants with expertise in higher education for sustainable development.
- In Estonia, the information was captured through desktop research and analysis. The data was validated through interviews with officers of the Ministry of Education and Research and the head of the National Committee of Sustainable Development.
- In Ireland, the data was collected via websites and an adapted version of the template was circulated to key contacts every third level institutions in the country. The information was validated by follow-up phone calls and conversations with respondents to the questionnaire.
- In Latvia, a variety of data collection methods was used and the information was triangulated for validation. First, a group of national key informants with expertise in ESD in HE gathered virtually to discuss the template and then completed it individually. Face-to-face interviews with 5 informants were then organised to clarify questions. Finally, the national template coordinators conducted internet searches and reviewed key publications and reports.
- In Lithuania, the information was captured through desktop research and short discussions with representatives of four selected universities and informants of the National Centre for Quality Assurance in Higher Education. The data was primarily validated through the analysis of the documents presented by the selected universities and the Centre.
- In Sweden, the national template coordinator contacted a group of key informants involved in ESD as well as experts and practitioners from most Swedish universities. The UE4SD project and mapping template was presented at a HU2 meeting of the Swedish Network for Sustainable Development in Higher Education, followed up with an email to network partners requesting examples of good practice. In addition, the Chair of SwEdnet (The Swedish Network Educational Development in Higher Education) included a news item on the UE4SD mapping exercise in the network's newsletter requesting feedback and examples of good practice in the country.
- Finally, in the UK, the data was collected through desktop analysis and web research supported by a consultation process using a questionnaire circulated to UK the main national news network for ESD practitioners (Sustainability in Higher Education Developers). The information was validated through a key informant review with experts on ESD in HE, including key contacts with expertise in each of the UK devolved administrations.

Table 2. Data collection and validation methods

	Forwarding the template	Consultation with ESD in HE experts	Focus Groups	Interviews	Key informants	Desktop research
Denmark				✓	✓	
Estonia				✓		✓
Ireland	✓	✓		✓		✓
Latvia	✓		✓	✓		✓
Lithuania				✓		✓
Sweden	✓	✓		✓		✓
UK		✓			✓	✓

This report was sent to the UE4SD mapping work package leader, Leuphana University of Lüneburg, on 30 June 2014. The work package leader combined the four UE4SD regional reports to develop the state of the art document presented at the UE4SD annual meeting and seminar on 2-3 October 2014 in Prague, Czech Republic.

The status of ESD within Higher Education at the national level

1. National strategies and policies that recognise ESD in HE in partner countries

Overall the North region is showing an increasingly favourable policy context for ESD in HE, across the different countries involved in the mapping exercise. The type of strategic level support for ESD in HE varies across national contexts and is framed in different kinds of policy documentation.

This shows the range of ways in which high level legislative support can be created for ESD in HE and how some countries (e.g. Ireland and Scotland) support ESD through more than one policy framework (see Table 3 below and Annex 2 Box 1):

- In 5 out of 7 countries, ESD is reflected in national sustainable development strategies and action plans or through other national legislation for sustainable development (Estonia, Latvia, Lithuania and in the UK, for Wales, Scotland and Northern Ireland)
- In 4 out of 7 countries, ESD is recognised in specific strategies, acts or development plans that influence in the HE sector (Ireland, Latvia, Sweden and in the UK, England)
- In 3 out of 7 countries, ESD is supported through ESD/DESD strategies and action plans (Denmark, Ireland and in the UK, both Scotland and Wales).

Table 3. Recognition for ESD in HE through national policy and legislation

	National Legislation	SD/Agenda 21 strategy/plan	ESD/DESD strategy/plan	HE Act or Strategy	Development plan for HE
Denmark			✓		
Estonia		✓			
Ireland			✓	✓	
Latvia		✓			✓
Lithuania	✓				
Sweden				✓	
UK	✓ (Wales)	✓ (Scotland, Northern Ireland)	✓ (Scotland, Wales)	✓ (England)	

For those countries that support ESD in national legislation, only 2 specifically recognise ESD in HE. In Lithuania, the *Law on Higher Education and Research* (2009) emphasises the role of the HE sector and its *Descriptor of Study Cycles* (2011) includes competences for sustainable development. Latvia reported that ESD in HE is recognised in its Development Plan (2014-2020), but the focus is mainly on supporting sustainable development at the national level.

By contrast, in Wales (UK), the *Futures Generation Bill* will be introduced in summer 2014 establishing sustainable development as a central organising principle for the Welsh Assembly Government and all publicly funded bodies. This has been supported by an Education for Sustainable Development and Global Citizenship (ESDGC) strategy at all levels of education since 2006.

The UK example is interesting, as education is a devolved responsibility: each country (Scotland, Wales, Northern Ireland and England) has different strategic pathways that support ESD in HE. However they have all received critical support through the Higher Education Academy (HEA), the national agency that operates across the UK to promote teaching and learning and support the training of university educators:

- Scotland supports ESD through its national Sustainable Development Strategy (2005) and DESD Action Plan (2006, updated in 2010) which has priorities for the HE sector.
- In Wales, the ESDGC Strategy (2006, updated in 2008) has specific actions for the HE sector and this is supported by legislation for sustainable development at the national level.
- In England, ESD is championed by the Higher Education Funding Council for England (HEFCE) and features in its strategy (2008, updated in 2013) for all HE institutions in England.

The HEFCE's influence extends through its funding of the HEA, which has been central to the strategic development of ESD in UK HE. The HEA has actively supported ESD since 2005 and also has responsibility for the competence framework that guides all professional training for UK academic staff (*UK Professional Standards Framework* - see 1.2 below). The HEA example shows how momentum for ESD can develop quickly where an influential national HE agency is involved and has the position to support ESD through staff professional development.

1.1. ESD processes and approaches promoted in national strategies

In many North region countries, high level support for ESD in HE has come from international sustainable development frameworks and the DESD, with several countries using these declarations and frameworks to guide universities in embedding ESD. In Latvia, for example, the UN Millennium Goals, the 1992 Rio Declaration and UNESCO *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability* developed (2005) are used to support ESD in HE.

The mapping process uncovered a range of strategic supports for ESD in HE, but very little detailed information about the type of ESD approaches and processes that are being promoted in policies and strategies at the national level (see Table 4 below and Annex 2 Box 2). Where these documents did show clear principles of ESD, these have been categorised into three main approaches:

- *Whole-of-institution*: where changing the university's entire approach to sustainable development is seen as the vehicle for ESD developments
- *Strategic/systemic*: where ESD initiatives are being developed across the curriculum and as an approach that can be used in all subjects and courses

- *Competence/skills-based*: where ESD initiatives to improve the curriculum are being developed so that they target the learning outcomes for students on any course

If the strategic documents highlighted key principles of ESD that are important for the teaching and learning approaches to be used, these are also shown in Table 4 (which refers to key principles of ESD promoted through the UN DESD literature).

Table 4. Summary of ESD approaches and principles in North region national strategies

	ESD approaches			ESD principles				
	Whole-of-institution	Strategic/systemic	Competence/skills-based	Futures thinking	Critical/creative thinking	Action learning	Systemic thinking	Participation/Partnerships
Denmark								
Estonia		✓						
Ireland		✓						
Latvia		✓						
Lithuania			✓			✓		✓
Sweden								
UK	✓ (Scotland, Wales, England)		✓ (Scotland)		✓ (Wales)	✓ (England)	✓ (England)	✓ (Scotland)

The data suggests that systemic approaches are most common and there is an understanding in these countries that ESD is about cross-curricular education change and not the creation of ‘add-on’ courses that treat sustainability as a special subject. In Ireland, for example, the National Strategy on ESD discussion paper (2007) promotes an infusion model for integrating sustainability in the existing curriculum rather than creating new discrete modules/courses on ESD or sustainable development.

In Lithuania and Scotland, the approach is to creating curricula which are competence/skills-based and that focus on developing student capabilities in the area of sustainability. In the UK, some key national strategic documents promote whole-of-institutional approaches to sustainability.

It is noticeable that few national policies and strategies highlight the teaching and learning principles of ESD. However, in some documents from Lithuania and the UK there are references to pedagogical principles, with action learning and participatory learning mentioned most often. It is also worth noting that futures thinking, which is so critical to the ESD approach, is not in any way visible yet in the higher level documents that are supporting ESD in HE.

1.2. Reference to professional development in ESD within national strategies

Across the North region, as noted above, strategic and policy documents that support ESD in HE mainly lack any detailed reference to how ESD can be developed. In line with this, it is noticeable that very few of these documents mention the professional development of university educators.

As shown in Table 5 below, only the UK and Ireland have examples that have made or will make reference to the need professional development in ESD for academic staff in the HE system.

Table 5. References to ESD professional development in North region national strategies

	Yes	No	Extract from national templates
Denmark		✓	"As mentioned, no specific strategies, policies or legislations are laid down for ESD in Higher Education."
Estonia		✓	"No."
Ireland	✓		"There is a mapping exercise being carried out by the National Forum for the Enhancement of Teaching & Learning in HE. The preliminary discussion for the new 2014 ESD strategy did include discussion on professional development within HE (particularly within teacher education in HE). However, the exact nature of training hasn't been made publicly available yet."
Latvia		✓	"Not much has been stated about the development of ESD competencies of university educators."
Lithuania		✓	"Not explicitly ESD."
Sweden		✓	N/A
UK	✓		<p>Only two of the strategic documents outlined above refer to the need for professional development in ESD for university educators. Most of the emphasis in these documents is on developing student skills in the area of SD.</p> <p><i>"Learning for change"</i> (Scottish Government, 2010-15): Action no.7 explicitly refers to university educators' professional development and makes a strategic move to influence the agency responsible for the framework of professional standards of university educators in the UK: <i>"HEA to consider how they might ensure that ESD is accommodated to future revisions to the Professional Standards Framework"</i> (p. 17).</p> <p><i>"Sustainable development in higher education"</i> (Higher Education Funding Council for England, draft 2014) also includes a directive to the HEA, which holds the UK professional standards framework and is funded partly through the HEFCE: <i>"HEFCE funds the Higher Education Academy, and sustainability is one of the 12 priorities set out as a condition of receiving our funding."</i> (p.10).</p> <p>Note: several other UK national education and skills agencies have developed guidelines on ESD to support professional development. The UK trade union for HE academic staff, UCU, has created ESD guidelines and encourages its university level representatives to lobby for professional development in ESD.</p>

In Ireland, preliminary discussions for the new 2014 ESD strategy include discussions on professional development in HE. In the UK, the Scottish DESD Action Plan (2006, updated in 2010) makes an important strategic move to try and advance the professional development issue, by highlighting the need to embed ESD in future revisions of the *UK Professional Standards Framework* which is operated by the Higher Education Academy (HEA). This is the common reference point for UK universities when seeking to gain formal recognition for the professional training courses they provide for their teaching staff, to demonstrate that teaching standards are being met.

It is worth noting that where there is a national agency acting to improve professional capabilities of university educators, this has been recognized as an important strategic opportunity for ESD. In the UK example, this has also been understood by the HE Funding Council for England, who directed the HEA to continue working on ESD during the period of the DESD. Interestingly, the UK mapping data

showed that the UK trade union is also active in supporting ESD and trying to encourage members to lobby for professional development in ESD for UK academic staff.

2. Strategic plans and guidelines of HE institutions to promote ESD

Moving from the national to the institutional level, it is clear that developments are happening in individual universities, although in most cases the examples identified are at the early stages.

In the North region, 5 out of 7 countries state that few HE institutions have included ESD in their strategic plans and guidelines (as shown in Table 6 below and Annex 2 Box 3). However, in Estonia, all HE institutions are currently updating their action plans for the period 2015-20 and are obliged to implement the sustainability actions outlined in the Estonian Sustainable Development Strategy.

In Sweden, several universities support ESD and have included strategic objectives in their corporate plans and appointed staff to lead and take this agenda forward at the institutional level. Good examples include Malmö University, Gothenburg University, Höskolan i Borås and Linné University.

The UK is the only country which reported positive policy and strategic measures to support ESD now taking place in many HE institutions. As shown in Section 1, there has been an encouraging sector context for ESD, with supports from national HE Funding bodies and other policy frameworks. This has led to improved campus sustainability practices, whole-of-institution responses, and work to develop ESD in teaching and learning, supported by the UK HEA and student organisations. These influences have all contributed to the growth of ESD as an strategic issue for UK universities.

The speed of change in the UK has been interesting and has also been encouraged by the development of the *Green League* performance league table, run by student campaigning organisation *People and Planet*, for UK universities to demonstrate their progress on sustainability and ESD. The 2013 results involved 143 of approximately 152 UK universities and showed that they are making commitments to work on ESD in the curriculum strategically in several ways:

- 80% of universities and colleges have ESD in their environmental and sustainability policies.
- 46% have integrated ESD into their teaching and learning strategies.
- 35% have ESD included in their corporate or strategic plans.

Table 6. Number of strategic plans and guidelines that promote ESD in the North region HE institutions

	None	Few	Several	Many	All	Key messages
Denmark		✓				<ul style="list-style-type: none"> ESD is mentioned in some Universities' institutional profile. There are only few guidelines that promote ESD. <p><i>Good examples:</i> The student association of Green Roskilde University has provided input on sustainability to the University's Strategy. At Aalborg University, a study on ESD practice at the Faculty of Engineering and Science was undertaken with the aim of developing guidelines on how to embed ESD.</p>
Estonia		✓				<ul style="list-style-type: none"> ESD is not specifically mentioned in action plans, but universities are obliged to implement the Estonian Sustainable Development Strategy. <p><i>Good examples:</i> In 2014, all Estonian universities will prepare their action plans for the period 2015-20. Some universities, like Tallinn University, have plans to embed ESD in the curriculum and provide ESD professional development opportunities to staff members.</p>
Ireland		✓				<ul style="list-style-type: none"> In general, ESD is not mentioned in strategic plans. <p><i>Good examples:</i> Dublin City University, which has recently become an RCE, has included ESD in its strategic plan, and other institutional documents. The University has also appointed a Director of Sustainability to coordinate sustainability actions across the University at various levels, including teaching and learning and research.</p>
Latvia		✓				<ul style="list-style-type: none"> Few examples were found. <p><i>Good examples:</i> Daugavpils University's Strategy has included sustainability as a key priority in teaching and learning, research and management. The University is working towards achieving eco-status.</p>
Lithuania		✓				<ul style="list-style-type: none"> Only a few examples reported. <p><i>Good examples:</i> Kaunas University of Technology is strongly oriented to sustainable development in all academic and management activities. The Renewal Programme for Research and Studies established in 2013 stresses the need of developing competences of university educators in this area. Another institution, 'Kauno Kolegija'/University of Applied Sciences approved its Corporate Strategy (2012-20) which includes sustainable development as a principle in academic and practical activities of the institution.</p>
Sweden			✓			<ul style="list-style-type: none"> Due to the Swedish Act of Higher Education, Syllabus of Formal School System and a request from the society and students, several universities promote ESD. A number of HE institutions in Sweden include sustainable development (hållbar utveckling) in their strategic plans and have staff responsible for strategic work on sustainable development. <p><i>Good examples:</i> The new Strategy of Malmö University, Strategy 2020, aims for education and research for a sustainable society. Similar good examples include Gothenburg University, Högskolan i Borås and Linné Universitetet.</p>

UK				✓		<ul style="list-style-type: none"> Growing numbers of universities are making commitments to ESD: e.g. the 2013 <i>Green League</i> showed extensive strategic commitments by UK universities. <p><i>Good examples:</i> Plymouth University and University of Gloucestershire support ESD by including it in both their Teaching and Learning strategies as well as their corporate and environmental strategies, creating approaches that prioritise sustainability across all university activities. Many other UK universities now support ESD through their sustainability or environmental strategies, with different approaches being taken by universities to progress their strategic efforts in ESD: for example University of Wales Trinity Saint David committed to embed sustainability into 15% of all student experiences by 2013, with initiatives 'One Planet Curriculum' and 'One Planet Passport'.</p>
----	--	--	--	---	--	---

Table 7. Number of HE institutions in the North region that support the professional development of university educators in ESD

	None	Few	Several	Many	All	Key messages
Denmark		✓				<ul style="list-style-type: none"> There is no established process for ESD professional development for university educators. Most training is focused on teaching pedagogies and courses in human resource management. Some universities have provided specific ESD training workshops and seminars as well as interdisciplinary collaboration and partnerships between university departments.
Estonia		✓				<ul style="list-style-type: none"> N/A
Ireland		✓				<ul style="list-style-type: none"> There are few opportunities and initiatives for university educators to develop ESD specific competences. Most of the initiatives in this area are provided through collaborative and research projects on embedding ESD in teaching and learning as well as teacher education networks, such as the UBUNTU network.
Latvia				✓		<ul style="list-style-type: none"> There are many types of ESD professional development opportunities provided by institutions in Latvia. These generally involve the participation of university staff in ESD conferences and in projects focused on ESD.
Lithuania		✓				<ul style="list-style-type: none"> There are few universities that provide ESD professional development opportunities for university educators. Good examples include Kaunas University of Technology which is highly committed to sustainability and has opportunities for university educators to develop transdisciplinary competences. Mentoring is used to develop a more student-centred curriculum and educators are encouraged to join international sustainability networks as well as linking courses with UNECE ESD strategic documents and guidelines. Another good example is the University of Applied Sciences which has in-service training for staff as an integral activity of its corporate strategy. This includes developing competences in holistic approaches, envisioning change and action learning.
Sweden		✓				<ul style="list-style-type: none"> Few opportunities exist and these take the form of external seminars, workshops and specific ESD courses.
UK			✓			<ul style="list-style-type: none"> A growing number of professional development opportunities: the 2013 <i>Green League</i> showed that 32% of 143 HE institutions provide support or training to educators to embed ESD in the curriculum. Types of activity include: embedding ESD into in-house academic staff training and induction sessions; use of curriculum audits to review how ESD is integrated in courses; development of frameworks and guidelines to improve understanding of ESD and its pedagogies; creation of fellowships on ESD; establishment of awards to recognise excellent ESD teaching practice; and holding one-off capacity-building workshops and training.

3. Initiatives by HE institutions to support professional development in ESD

The overall picture across the North region shows that the provision of professional development for university educators in ESD is still quite rare: as Table 7 (above) shows, 5 out of 7 countries reported that few HE institutions offer specific professional development opportunities for ESD. In most cases, the countries reported that these opportunities take the form of in-house or external ESD workshops, seminars and training.

However, there are signs of deeper approaches developing. In Denmark, professional development for ESD has also been promoted through the creation of interdisciplinary teams. In Lithuania, Kaunas University of Technology has also introduced a mentoring scheme for university educators to develop transdisciplinary competences and develop a more student-centred curriculum.

In Latvia and in the UK, there are signs of more growth and a variety of innovative opportunities and good examples were discovered during the mapping exercise (see Table 7 and Annex 2 Box 4). Some of these initiatives are going beyond the one-off experiences and providing more developmental support for educators, through mentoring processes, longer-term training, development projects and professional recognition in ESD. Other interesting examples have included ESD within the main professional training courses offered in-house by universities, such as the University of Plymouth (see good practice examples in section 2 of this report).

However, it is also important to note that even in countries where the range is greater and more opportunities are found, participation in workshops and seminars is still the most common pathway for most university educators to experience any form of professional development in ESD.

4. ESD as part of quality assurance and accreditation processes in HE institutions

For most of the North region, ESD has not yet developed to the stage where it is ready to be included as part of the quality assurance or formal accreditation processes of the HE system. As observed in Table 8 below, 4 out of 7 countries stated that ESD is not part of these frameworks or processes. The exceptions are Latvia, Lithuania and the UK.

In Latvia, ESD has been included as part of the evaluation and accreditation of doctoral research through a programme at Daugavpils University, which has inspired other universities in Latvia to take similar steps. The aim is to connect the strategic focus of research with the development of ESD competencies, to include ESD approaches within the academic environment for young researchers.

In Lithuania, an example was identified of a qualitative indicator included in the national evaluation framework which acknowledges the importance of building students' capabilities in national and regional development. Although this is not using explicit ESD language and is therefore not a comprehensive ESD indicator, it shows close connections with key principles of ESD.

In the UK, a few universities have taken the first steps to include ESD in their curriculum approval and review processes. There have also been moves to bring ESD into national approaches to improving curriculum standards and quality in HE. The agency responsible for approving academic standards in HE, the Quality Assurance Agency (QAA), released guidance in 2014 on ESD and graduate learning outcomes, to guide academic staff in embedding ESD in HE courses. It has also included ESD as a key education theme in the national *UK Quality Code for HE* which benchmarks HE curriculum standards.

Also in the UK, a national project funded by the HE Funding Council for England piloted approaches to embedding ESD into university quality assurance processes and uncovered the importance of professional development not just for university educators but also for key staff responsible for curriculum standards and academic quality. As an exploratory initiative in this area, it pointed to the importance of improving staff understanding of ESD across the university, to support the embedding of ESD into formal accreditation and quality assurance systems.

Table 8. ESD in HE quality assurance and accreditation in the North region

	Extract from question 5 of national templates
Denmark	"No."
Estonia	"None."
Ireland	"In general with respondents, ESD did not form part of Quality assurance or Accreditation of HE institutions currently."
Latvia	<p>"Increased provision of sustainable quality higher education and research institutions and training is carried out through accreditation of universities in Latvia. The accreditation of doctoral program in terms of its sustainability and developing staff competencies has received the highest evaluation for Daugavpils University, Latvia.</p> <p>Implementation of the doctoral programmes complies with the development strategy of the Institute and the departments. For development and implementation of the study programme the inclusive research environment has been created at the Institute. The solidarity of the aims and partnership has influenced the gradual shift of focus in the doctoral programme. Instead of knowledge acquisition and accompanying research activities, the doctoral programme has been shifted towards the research activity and developing ESD competencies and theories.</p> <p>The research carried out by doctoral students reflects areas outlined in the Institute's strategy: reorientation of higher education towards the aim of sustainable development and elaboration of pedagogic theory that encourages development of higher education and research at the university and to prepare researchers for researching, expert analysis and reform of the educational situation outside the university (both in school and higher education).</p> <p>The international evaluation of research units has gained high evaluation as well. Research initiatives of Institute of Sustainable Education have gained high evaluation for quality of carrying international trans disciplinary research on ESD."</p> <p>Links: http://www.ise-lv.eu</p>
Lithuania	<p>In the evaluation area of <i>Impact on Regional and National Development</i> there is a qualitative indicator of "inclusion of themes pertaining to national and regional development in students' training practice and graduation projects" (para 11.4).</p> <p><i>Methodology for conducting an institutional review in higher education</i> (approved by the order No 1-01-135 of the Director of the Centre for Quality Assessment in Higher Education of 25 October 2010)</p> <p>Links: http://www.skvc.lt/en/content.asp?id=86</p>
Sweden	"Not as far as our survey has shown."
UK	<p>"The Quality Assurance Agency for Higher Education (QAA) conducts regular reviews of every HE institution with a licence to award HE degrees, and maintains the <i>UK Quality Code for HE</i> which is the formal framework for good practice in UK HE teaching and learning. The QAA has included ESD as one of the key themes mentioned in the <i>UK Quality Code for HE</i> (chapter B3) as important for the teaching and learning strategies developed by HE institutions. In 2014, QAA released a national guidance document on ESD in the curriculum which was developed in collaboration with the UK HEA, as a reference point for university educators and to help improve student learning through curriculum design, delivery and assessment across all disciplines.</p> <p>A few universities have included ESD in their internal curriculum development quality assurance processes (for example, University of Bradford and University of Wales Trinity St David) but face challenges of creating deep and not just surface levels of engagement with ESD in this process. To address this issue, a national project was funded by the HEFCE and led by University of</p>

	<p>Gloucestershire, working collaboratively with the QAA. The “<i>Leading Curriculum Change for Sustainability: Strategic Approaches to Quality Enhancement</i>” project (2010-12) connected ESD with quality assurance systems, with five pilot universities (Aston University, University of Brighton, University of Exeter, Oxford Brookes University, University of Gloucestershire).”</p> <p>Links: ESD and QA guidance document: http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/education-for-sustainable-development-guidance.aspx <i>Leading Curriculum Change for Sustainability</i> – HEFCE project website: http://insight.glos.ac.uk/sustainability/Education/hefcelgmquality/Pages/default.aspx <i>Guide to Quality and Education for Sustainability in HE</i> – HEFCE project resource: http://efsandquality.glos.ac.uk/</p>
--	---

5. HE networks, partnerships and other key drivers that support the professional development of university educators in ESD

HE networks and partnerships have provided important opportunities and often been key drivers for the creation of ESD professional development in HE in the North region (see Table 9 and Annex 2 Box 5). Several national and local networks have been identified that have been supporters or drivers for work with university educators to bring ESD innovation into the HE curriculum.

Regional and international networks, such as COPENICUS Alliance, are playing a critical role, by providing collaborative platforms for sharing ESD teaching and learning experiences and best practices. An interesting regional example highlighted by Lithuania is the Baltic University Programme (BUP), a permanent network of more than 200 universities in the Baltic Sea region (including 12 Lithuanian universities). BUP focuses on sustainable development, environmental protection and democracy in the region, and has a programme of activity around ESD in HE, including the development of online materials and international seminars for the teachers in the network.

The role of UNU RCEs has been significant in supporting ESD in local regions, providing formal and informal learning for academic staff and other professionals interested in ESD in different sectors. In some countries, such as Ireland, Sweden and the UK, non-profit associations and NGOs with links in the HE sector have also provided significant momentum for professional development in ESD.

Finally, in countries such as Ireland, Latvia and Lithuania, there have been several specific collaborative ESD projects, funded either by national governments or the European Union, that have been crucial in supporting the development of ESD competences for university educators. In Ireland, there has been successful work to embed ESD in teacher education through the work of the UBUNTU network and DICE (Development and Intercultural Education), working with university educators and funded by Irish Aid. In Latvia, the UN Millennium Goals, the 1992 Rio Declaration and UNESCO *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability* developed (2005) are used to support ESD in HE through professional teacher education networks.

Table 9. North region HE networks, partnerships and drivers for ESD professional development

	Local and national networks	Local and national associations, NGOs and foundations	Regional and international centres and networks	External and national funded collaborative projects
Denmark	Learning and ESD - RCE Denmark		Aalborg University Centre for PBL in	

			Engineering Science and Sustainability	
Estonia				
Ireland	UBUNTU Network; RCE Dublin	ECO-UNESCO		DICE/Irish Aid
Latvia			BBCC; UNESCO-Unitwin	ENERCE Network; ICT-enabled ESD
Lithuania			BUP	QUESTE-SI
Sweden	LÄRHU-network, HU2,	WWF-Sweden		
UK	EAUC; 8 RCEs; ESD FORUM (Northern Ireland); TEES-Net; IDEAS (Scotland); LUEG (London)	EAUC, Ellen McArthur Foundation; NUS; Sustainability NGOs	COPERNICUS Alliance	

6. Development of HE initiatives in response to the UNECE ESD competences

As the UNECE ESD Educator Competence Framework was released quite recently in 2011, only a few initiatives were identified through the mapping process that have started to apply this tool in specific activities to support the professional development of university educators in ESD. In the North region, activities in this area have been identified in Sweden and the UK.

In Sweden, the importance of developing the competencies of educators was recognised in a national initiative to train teacher educators (see good practice examples in section 2 of this report). Although the seminars pre-dated the UNECE framework, they shared the focus on the need to develop educator competencies in ESD.

In the UK, the framework has informed academic staff training at Plymouth University and the University of Arts London, as well as a curriculum change and professional development project in Education Studies at the University of Gloucestershire. Further details are shown in Table 10 below and also in the good practice examples in section 2 of this report.

Table 10. Existing ESD initiatives linked to the UNECE framework in the North region

	Yes	No	Extract from national templates
Denmark		✓	
Estonia		✓	
Ireland		✓	
Latvia		✓	
Lithuania		✓	"Not directly."
Sweden	✓		"The National Seminars on Education for Sustainable Development and Global Challenges is a very good example from 2006-07". The six days of seminars were focused on action competence for ED & GC and involved 20 teacher education institutes in Sweden. This was funded by SIDA and the Swedish Authority of School Development to develop ESD in teacher education by 'training the trainers'" and 40 teacher educators took part.
UK	✓		The UNECE framework has informed a small number of new activities in universities that are linked to professional development in ESD:

		<p><i>Plymouth University:</i> The University's staff development course, the PG Certificate in Academic Practice, includes a <i>Sustainability Education</i> module option. The UNECE framework is used as a mapping tool at the end of the module, to assess what has been learnt and where to focus ongoing CPD in ESD. Link: http://xerte.plymouth.ac.uk/play.php?template_id=292</p> <p><i>University of Arts London:</i> The University's staff development course, the MA in Academic Practice, includes an <i>Education for Sustainability</i> module option. The UNECE framework is often reviewed with students as part of this process and also informed the criteria for the University's Sustainability Award. Link: http://blogs.arts.ac.uk/sustainability/inspire/</p> <p><i>University of Gloucestershire:</i> The <i>Learning for Sustainable Futures</i> funded a project using the UNECE framework to develop ESD competences for students on the Education Studies course, through the curriculum and a professional reflection portfolio. Graduates of this course go on to work in the formal education sector and in different roles in non-formal and community education. Link: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/LFSFLiveProjects2013-14.aspx</p>
--	--	---

ESD Professional Development examples for University Educators

The North region mapping data showed that there are professional development opportunities in ESD for university educators now taking place in different countries. For most countries, this is through one-off seminars and events, or short courses, providing entry level encounters with ESD or supporting ongoing professional dialogues and the sharing of ideas and good practices.

However, the good practice examples submitted show that there are several interesting approaches being developed across North region countries, that provide a deeper interaction with ESD. These opportunities are supporting university educators to consider how they can work with ESD principles in curriculum development and their own academic practice.

Overall, 13 examples of good practice were presented by the North region, with 1 each from Estonia, Latvia and Lithuania, 2 each from Ireland and Denmark, and 3 each from Sweden and the UK. A range of innovative and interesting approaches were found in these examples:

- training academy process for HE institutional staff teams (Green Academy, UK)
- action research programme to support curriculum embedding (ISE, Latvia)
- national cross-institutional training seminars (Global School, Sweden)
- intensive short course and online resource linked to European network (RUCAS, Ireland)
- professional support scheme providing project grants and mentoring (LFSF, UK)
- seminars and academic working group for university educators (MUSLI, Denmark)
- nationally funded short course for training and curriculum development (ESF, Estonia)
- optional unit within mainstream academic staff training courses (PedRIO, UK)
- subject-specific short course to support curriculum embedding (ECE, Sweden)

Table 11 describes these initiatives, which showed the strongest alignment with the focus of the UE4SD mapping criteria in supporting professional development in ESD for university educators. Most of the good practices did not have any explicit connections with the UNECE competences framework, so there are no patterns to report about how the professional development approaches are connecting with the different aspects and principles of that framework.

Table 11. Good practice examples most clearly aligned with UE4SD mapping criteria

Professional development opportunities in ESD for university educators: strongest examples with clear focus and approach to developing ESD competences	
Country	Title and Description
Denmark	<p>Problem Based Learning (PBL) and Sustainability Initiatives</p> <p>Aalborg Centre for Problem Based Learning in Engineering Science and Sustainability, under the auspices of UNESCO, has organised a series of ESD training opportunities for university staff at the Faculty of Engineering and Science, Aalborg University. The ambition of these initiatives is to integrate sustainability principles in all study programmes at the Faculty, by providing teaching support, seminars and creating an academic working group in ESD.</p> <p>In August 2012 and 2013, two seminars were held as part of a research project to review the embedding of ESD in courses at the Faculty. The seminars used active learning approaches and</p>

	<p>attracted around 50 staff participants. In March 2012 after the first seminar, a group meeting was held and the University Sustainability Learning Initiatives (MUSLI) academic working group was established. MUSLI has small groups of 10-15 staff and students who meet to share good practice and experiences and develop their resource space on embedding sustainability in educational programmes at Aalborg University. This has been followed by an ESD workshop at the University Pedagogical Day in April 2014 with support from management and Faculty staff.</p> <p>Links: http://www.ucpbl.net/aau-staff-development/pbl-sustainability-initiatives/ http://www.pblee.aau.dk/musli/</p>
Estonia	<p>ESF Program: Development of Environmental Education</p> <p>This professional opportunity is a short course facilitated by the Environmental Board of Estonia and funded by the European Social Fund. The course is targeted at teacher training educators, aiming to prepare curricula and conduct vocational education for university educators in teacher training. It started in April 2014 and will be completed in February 2015. This is an interesting initiative because it is the first ESD-focused professional development opportunity in Estonia.</p> <p>The aim of the course is to train teacher trainers to prepare curricula for future teachers who will teach sustainability as a cross-cutting topic, at all educational levels. It aims to develop the skills of educators to treat sustainability with a wider focus than just geography or biology. Approximately 60 educators will gather three times for a period of two days. The course gives a general overview of the main areas of sustainable development (society, environment and economy) and works with educators to embed sustainability in their courses and to introduce them to approaches linked to ESD such as active learning.</p> <p>Links: http://www.ht.ut.ee/et/node/2238587/view http://www.keskkonnaamet.ee/teenused/keskkonnaharidus-2/esf-programm-keskkonnahariduse-arendamine/</p>
Ireland	<p>Reorienting University Curricula to Address Sustainability</p> <p>This initiative is an online and face-to-face 10 hour short course for university educators from the Faculty of Humanities and Social Science at Dublin City University. It was funded by the European Commission (Tempus project) and ran for a period of three years (2010-13), as part of the larger RUCAS academic network in ESD led by the University of Crete.</p> <p>The course aimed to enable staff to understand concepts, contexts, principles and practices of ESD and to guide them towards embedding sustainability within their own curricula. It used experiential, constructivist and transformative pedagogical approaches and was taken by around 10 participants, creating an academic working group focused on ESD.</p> <p>Links: http://rucas.edc.uoc.gr/</p>
Latvia	<p>Participatory action research in HE to reorient teacher education towards sustainability</p> <p>This initiative is led and coordinated by the Institute of Sustainable Education (ISE) at the Regional University of Latvia, Daugavpils University. The ambition is to re-orient the curriculum of all teacher education courses at the Faculty of Education and Management (Bachelors, Masters and Doctoral level) towards sustainability using a participatory action research approach to support the professional development of staff. The process has been in development over 5 years through the voluntary participation of staff at the ISE as part of its European funded ESD activities.</p> <p>University educators engaged in this initiative are introduced to the theory and practice of action research for sustainability and share their reflections in discussion groups, to help them engage students with research and learning processes for ESD. Participatory action research provides an opportunity for educators to collectively reflect on the process of changing and embedding ESD in the curriculum and experience of working with transformative learning approaches.</p>

	<p>Links: http://www.du.lv/en/about_university/faculties/ivf/institute</p>
Sweden	<p>National seminars on ESD and Global Challenges</p> <p>From November 2006 to May 2007, Den Globala Skolan – The Global School (currently part of the Swedish Council for Higher Education) and the Stockholm School of Teacher Education (currently part of the Stockholm University) organised three two-day national seminars (with work in between) for teacher educators from 20 teacher education institutions in Sweden. SIDA and the Swedish Authority of School Development funded the course, food and accommodation, and participating universities funded the travel costs and working hours of participants.</p> <p>The aim of these seminars was to train teacher trainers on learning for sustainable development and global challenges (ESD & GC); explore how to implement interdisciplinary learning in ESD & GC; explore collaboration avenues with school representatives and local actors; create a network of educators engaged in ESD & GC; and embed ESD at participating universities.</p> <p>Links: http://www.programkontoret.se/denglobalaskolan</p>
Sweden	<p>Learning for sustainable development</p> <p>This is a 4.5 ECTS short course for educators run annually at the Royal Institute of Technology facilitated and funded by ECE Industrial Ecology (Seed, ABE). The course aims to embed sustainable development in engineering education and guide approximately 35 educators to integrate ESD principles in their teaching.</p> <p>Links: www.kth.se/student/kurser/kurs/LH215V?/=en</p>
UK	<p>Green Academy</p> <p>The Green Academy's ambition is to facilitate curriculum and institutional change as well as improve the overall student experience in sustainability through a professional development and support programme. The Academy is facilitated by the Higher Education Academy (HEA) and funded by HEFCE and participant institutions. It was launched in 2012 and runs on an annual basis.</p> <p>Every year, between 8-10 universities can apply to participate at the Academy which involves a two day residential training, face-to-face meetings and ongoing bespoke support and mentoring. Institutional teams include at least one senior management (e.g. Deputy Vice-Chancellor), one student, one operational staff (e.g. estates) and one academic staff, who are involved in this initiative and focus on change-agency and the development of skills and approaches to ESD.</p> <p>Links: http://www.heacademy.ac.uk/resources/detail/change/GA_ESD_12_13/GA_ESD_info</p>
UK	<p>Learning for Sustainable Futures (LFSF)</p> <p>LFSF is an initiative to develop the capabilities of teaching staff in ESD, extend dialogue on sustainability in the curriculum and build the community of thinking and practice in ESD across academic and professional teams at the University of Gloucestershire. The scheme provides small grants to staff to develop new projects on curriculum development and student learning in ESD.</p> <p>The scheme is facilitated and funded by the Sustainability Team and Academic Development Unit at the University and awards several grants each year to academic and professional staff, or to staff teams, to create action inquiry projects (not formal research processes) that will lead to changes in curriculum and student learning. Project leaders receive funding to release time from existing duties, as well as expert mentoring and tailored ESD guidance. The results are showcased at an annual event with colleagues from the University and HE institutions across the UK.</p> <p>Links: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/default.aspx</p>

	ult.aspx
UK	<p>Sustainability Education Negotiated Study Module</p> <p>This is an optional ESD module which is offered as part of the in-house certification for new teaching staff at Plymouth University. It was created and has been facilitated through the University's Pedagogic Research Institute and Observatory (PedRIO) since 2012. The aim is to provide an introduction to ESD with the opportunity for academics to embed new knowledge in disciplinary practice, reflect on their practice and make changes to what they do.</p> <p>The professional development initiative focuses on ESD in HE contexts. The premise is that the University is a beacon of good sustainability practice and houses an emergent community that is embedding sustainability across different areas of University life: education, procurement, estates and management. The module attempts to pull these seemingly disparate dimensions together in efforts to reconceptualise and advance sustainability education and literacy.</p> <p>Links: http://xerte.plymouth.ac.uk/play.php?template_id=292</p>

Most of these good practice examples have been developed and provided through the initiative of HE institutions, although some are supported at the national level and are open to universities across the HE system of that country. For some, the key agencies responsible for HE or for sustainable development are important funders or brokers of these initiatives (e.g. Environmental Board of Estonia, UK Higher Education Academy, Swedish Authority of School Development). Funding has mostly been provided by the HE institutions whose staff will be the participants or beneficiaries. However, some initiatives have also been supported through European level project funding.

The target groups for these initiatives are university educators, and most of these initiatives are open to academic staff from any subject area. One example from the UK that includes ESD as an option on the standard professional training courses is targeted at staff in the early stages of their teaching careers. Other UK initiatives (Green Academy and LFSF) also support professional staff working in non-academic departments or management roles to gain experience in ESD. Some of the good practice examples are aimed at teaching staff in specific subject areas such as teacher education (3), engineering/science/technology (2) and humanities/social science (1).

For many of these professional development initiatives, the level of engagement and depth of work with ESD approaches is at the introductory level. Many staff who take part in these activities are experiencing ESD for the first time and the content focuses on core ESD principles and introductory materials on ESD in the curriculum. An interesting range of approaches are used to support the professional development processes, including action learning, participatory and collaborative learning, and constructivist approaches to learning.

Of the 13 good practice examples submitted, 4 showed some alignment with the UE4SD mapping criteria but were not as closely connected. In some cases this was because the ESD focus was less prominent, or the professional development opportunity was less well established. These examples are described below, with brief notes to show where the alignments are clearest.

Table 12. Good practice examples showing connections with UE4SD mapping criteria

Professional development opportunities in ESD for university educators: interesting examples with less explicit focus on developing ESD competences	
Country	Explanation
Denmark	<p>Green Sustainable Economy</p> <p>This opportunity was led by University College Northern Denmark as part of a European funded project which worked with 5 other HE institutions from Denmark, Lithuania, France and Greece. The project generated a two-week intensive course entitled 'Green Sustainable Economy and the Effects of Climate Changes on European Business and Societal Activities' (8-19 April 2013). Course participants work in multicultural and multidisciplinary teams, are faced with real-life professional tasks and mentored by a multinational and multidisciplinary team.</p> <p>Note: <i>the course includes innovative teaching practices and has a strong focus on competences and the professional context, with input from external companies. Professional development for staff happened through the cross-institutional staff team who developed the course, but the course is looking at 'green economy' and climate change issues rather than also having a pedagogical component on ESD.</i></p> <p>Links: http://www.ucnorth.dk/Home/Programmes-Courses/Erasmus_IP/Green_Sustainable_Economy.aspx http://www.ucnorth.dk/Home/About_UCN/Partnerships_and_Projects/About_Erasmus_IP.aspx</p>
Ireland	<p>Leadership in Sustainable Development</p> <p>This is a one-day short course/seminar for university educators which is facilitated by ECO UNESCO on request from universities or colleges. It aims to introduce concepts and principles of sustainable development and ESD for educators to improve their understanding and skills development both areas. This includes an introduction to some of the approaches of ESD such as experiential and transformational learning.</p> <p>Note: <i>the professional development opportunities offered are relevant but limited to the level of engagement possible in the one-day format and dependent on the university agreeing to fund participants. It provides an entry point for staff to sustainable development and ESD but the short course format means less space for working on the pedagogical aspect of ESD.</i></p> <p>Links: www.ecounesco.ie</p>
Lithuania	<p>Implementation of problem-based learning in Lithuanian University of the Health Sciences (LUHS)</p> <p>This is a mentoring programme/short course developed as part of a European project (2005-08) and facilitated by the LUHS. 75 educators from the Faculty of Medicine were involved and when the project finished, the University continued to offer it to new university educators. The purpose was to embed problem-based learning (PBL) and improve the abilities of university educators LUHS to implement PBL in teaching practice at LUHS.</p> <p>The 40 hour course empowers educators to develop problem-solving abilities in their students compatible with ESD learning outcomes, i.e. critical thinking, understanding complexity/systemic thinking; problem-setting and problem-solving; understanding interrelationships across disciplines/holistic approach; decision making, in situations of uncertainty; collaboration/team working; negotiation and consensus building; distributing responsibilities (subsidiarity); acting</p>

	<p>with respect for others.</p> <p>Note: <i>this opportunity for professional development has many implicit links with ESD pedagogies, although the pedagogical framework of ESD is not the main focus. With the PBL focus it may be harder for participants to connect clearly with the aims of ESD and to connect PBL explicitly with the change competencies that are important to ESD.</i></p> <p>Link: http://pm.lsmuni.lt/j156/index.php</p>
Sweden	<p>Faculty Specific Web Based Tool Box on ESD at the University of Gothenburg</p> <p>In March 2014, the Board of Education at the University of Gothenburg appointed the Centre for Environment and Sustainability (GMV), a network organisation at Chalmers University of Technology and the University of Gothenburg, to lead this institutional three year project aimed at developing faculty specific, web based tool boxes on ESD to be used as resources for teaching and learning.</p> <p>Note: <i>this professional development resource clearly focuses on ESD in specific areas, although opportunities to apply the toolkit will depend on other opportunities for the educator to put it into practice and engage in curriculum embedding activities or further staff development, to build the pedagogical approach and change competencies associated with ESD.</i></p> <p>Links: http://libguides.ub.gu.se/ESD</p>

Reflection and Conclusion

Taking account of the mapping process for the entire North region, there are some clear messages emerging about the current landscape for professional development in ESD in HE as well as signs of how innovation can be supported and interesting examples of ways forward:

1. ***There is a favourable policy context for ESD overall:*** some countries have yet to prioritise ESD, but many countries have found high level pathways through strategy or legislation, although so far, not many give specific recognition to the role of HE. There is recognition that ESD involves a strategic or 'systemic' approach that covers all subjects in the curriculum, but overall there is little explanation of what ESD involves or its key approaches and principles.
2. ***National and regional drivers for ESD in HE can be identified:*** in many countries, regional and international networks have worked well to support ESD in HE (and global sustainable development or frameworks and the DESD have been valuable supports). Some of the most significant developments are happening where there are national HE initiatives (Estonia) and where uplift has resulted from key HE education agencies becoming active in ESD (UK).
3. ***Professional development for ESD needs a stronger profile:*** there are very few references to the need for staff development in high level documentation or in the activities for ESD that have been initiated by HE institutions. Most of the existing opportunities are at entry level, offering initial experiences through events and toolkits, taking short courses and sharing good practices. There are more opportunities in teacher education and far less in other subjects, which shows 'disconnect' with the strategic intentions expressed at policy level.
4. ***New approaches to ESD professional development are emerging slowly:*** some of the most interesting activities involve university educators across all subjects, in their institutional teams and through the routine work of their departments. Several initiatives were found that have strong pedagogical approaches and professional development processes, for example through training academies, expert mentoring, professional support and innovation projects (with notable examples from Denmark, Estonia, Ireland, Latvia, Sweden and the UK).

Strategic national approaches seem to have significant potential for supporting responses to ESD in the curriculum by greater numbers of HE institutions and to secure the place of ESD in the HE system. To achieve greater impact in professional development of university educators, deeper training processes will be needed, to move beyond isolated events and short courses. There is also the need to recognise that ESD must involve both *content* and *pedagogy* – and that training activities must support educators to connect these two aspects in their own teaching practices.

Some of the most interesting work found through the North region mapping has shown that there is great value in engaging with existing pathways for professional development of university educators. ESD can develop through national professional competence frameworks and within HE institutions, through training courses and practical projects for academic staff to gain ESD experience.

The next stages of the UE4SD project could help to explore these issues and to understand how the UNECE ESD Educator Competences framework could be used to support new opportunities and to ensure that university educators can develop pedagogical as well as change capabilities for ESD.

ANNEX

- 1. Acknowledgments**
- 2. Extracts from National Reports in the North region**
- 3. Good Practice Examples in the North region**
- 4. Resources**

ANNEX 1 – Acknowledgements

We would like to acknowledge the effort and support from all partners in the North region of the UE4SD project who contributed to the national mapping process:

Denmark	National Co-ordinator: Jette Egelund Holgaard, Aalborg University
Estonia	National Co-ordinator: Mihkel Kangur, Institute of Ecology at Tallin University
Ireland	National Co-ordinator: Elaine Nevin, ECO-UNESCO
Latvia	National Coordinator: Arnis Sauka, Stockholm School of Economics in Riga
	National mapping collaborator: Dzintra Ilisko, Institute of Sustainable Education at Daugavpils University
Lithuania	National Co-ordinator: Laima Galkute, Vilnius University
Sweden	National Co-ordinator: Kerstin Sonesson, Malmö University
	National mapping collaborator: Paula Lindroos, Uppsala University
United Kingdom	National Co-ordinators: Prof Daniella Tilbury, Dr Ingrid Mula and Dr Alex Ryan, University of Gloucestershire
	National mapping collaborator: David Clemson, London South Bank University

ANNEX 2 – Extracts from National Reports in the North region

Box 1. Data extracted from question 1 of national templates

Denmark:

"The Ministry of Higher Education and science have presented no specific strategies, policies or legislations for ESD in Higher Education. However, there is a reference to the Copenhagen Declaration stating the aim of a "the transition towards a knowledge based economy capable of sustainable economic growth with more and better jobs and greater social cohesion brings new challenges to the development of human resources".

<http://ufm.dk/uddannelse-og-institutioner/internationalisering/internationalt-samarbejde-om-uddannelse/kobenhavn-processen/kobenhavn-erklaringen/the-copenhagen-declaration?searchterm=education%0A%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20for%20sustainable%20development>

However, the Ministry of Education having authority over primary, secondary and highschool education have however formulated a strategy for ESD. This is starting to show in the teachers education taking place at University Colleges.

<http://www.uvm.dk/Service/Publikationer/Publikationer/Tvaergaende/2009/Education-for-Sustainable-Development/Initiatives-and-actions>"

Estonia:

"Estonian Sustainable Development Action Plan (SE21) (approved by the Parliament, Riigikogu, 14.09.2005) recognises education, including the higher education, as key factor for sustainable development."

Ireland:

"A consultation to develop a National Strategy took place in 2007 and 2008. A new consultation took place in 2013. A new National Strategy in ESD, negotiated by Minister of Education is being finalised currently and is due to be implemented in 2014. This has not yet been published but it is envisaged that it will include reference to Higher Education and the Higher Education Authority in Ireland (HEA); the importance of whole institution approaches; initial primary and secondary teacher education.

There is a National Strategy for Higher Education 2030- which highlights quality teaching and learning and explores how *'it can ensure that higher education students can continue to have an excellent teaching and learning experience, informed by up-to date research and facilitated by a high-quality learning environment, with state-of-the-art learning resources'*. This highlights the importance of *'All higher education institutions must ensure that all teaching staff are both qualified and competent in teaching and learning, and should support ongoing development and improvement of their skills.'*

There is a National Forum for the Enhancement of Teaching & Learning in Higher Education which was established by the Minister for Education and Skills in Ireland, in November 2012 in order to enhance the quality of the learning experience for all students at third level. The Forum calls together all of those involved in shaping third-level teaching and learning in Ireland in order to support and develop excellent practices in teaching and learning already underway in many of our colleges. The National Forum engages with leaders, managers and teachers across all institutes of education at third level in Ireland. This forum mobilises expertise and inputs from across the entire sector to shape best practice in all of our institutes of education. See more at: <http://teachingandlearning.ie/about-us-2/what-we-do#sthash.iXeO3iOY.dpuf>."

Latvia:

- **"UN Millennium Declaration** signed by Latvia, and its goal is to ensure environmental sustainability.
- Latvia a signatory to the **1992 Rio de Janeiro Declaration**.
- **The Agenda 21 for the Baltic Sea Region was signed** by Latvia to improve cooperation on sustainable development in the Baltic Sea Region and to implement Agenda 21 regionally. 20 municipalities have initiated Agenda 21 processes. Many of those initiatives resulted in the preparation of environmental policy or action plans, with minor integration of sustainability issues into other sectors. Agenda 21 lead institution is frequently the Environmental Department, without strong political support from other sectors."
- **National Development Plan (2014 - 2020)** for Latvia includes sustainability as a goal. It complies with Latvija2030 and NRP of Europe 2020: The main goal is defined a sustainable growth of Latvia's economy with increasing national competitiveness in international markets. New National Development Plan of Latvia for 2014 -2020 replaced the present medium-term planning development plan expiring in 2013. The new Plan is guided by the principle of "economic breakthrough" to be enforced via the main priorities aimed at encouraging human resilience, growth of the national economy, and growth-enhancing territories.
- **Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability (2005)** UNESCO: EDUCATION FOR SUSTAINABLE DEVELOPMENT IN ACTION, Technical Paper Nr2: UNESCO created a UNITWIN/UNESCO Chair on Reorienting Teacher Education to Address Sustainability and established an International Network of teacher -education institutions in 28 countries to address this issue. The International Network began planning strategies and methods for moving forward. This document is the result of their efforts. It is born of practice informed by theory. The international network undertook many types of initiatives in their efforts to reorient teacher education, decided which

themes or sustainability goals to emphasize within their curricula, programs, practices, and policies to ensure that teacher-education programs fit the environmental, social, and economic conditions and goals of their communities, regions, and nations. The Example of Latvia, Institute of Sustainable Education is part of this book.

- **“Strategy of Sustainable Development 2030”:** A group of experts in accordance with the task of the Ministry of Regional Development and Local Government. It has developed the draft sustainable development strategy of Latvia “Latvija 2030”. Sustainable development strategy of Latvia determines the main tasks for the state and the society in their way to common target – balanced and sustainable development of Latvia. The capital approach used in the strategy is one of the ways to find a reply to the question what is the best way to use – human, culture, economic, social and natural capitals, including location capital, which we would like to hand over to next generations in multiplied forms:
 - It sets the aim to ensure the quality of education at all levels and in all respects in line with the needs of social and economic development.
 - To ensure social equality in the access of education.
 - To ensure flexible opportunities in obtaining education all through lifetime.
 - To ensure the rate of growth of the scientific potential.
 - To provide a state aid for the development of innovative companies and infrastructure – scientific research centres.”

Lithuania:

“In the **Law on Higher Education and Research** (2009) the role of higher education is defined as follows: “A coherent system of higher education and research is the foundation of the development of knowledge society, the strengthening of knowledge-based economy and the sustainable development of the country”. ESD is not mentioned explicitly in the national legislation for higher education. However, **Descriptor of Study Cycles** (approved by the decision No V-2212 of the Minister of Education and Science of 21 November 2011) defines learning outcomes for the first (bachelor and professional bachelor), second (master) and third cycle (PHD). All study programmes should follow learning outcomes which are presented in 5 categories: knowledge and application, research skills as well as special, social and personal abilities. Some of transversal abilities within *Descriptor* <...> are compatible with sustainable development competences.

For example: “following the principles of professional ethics and citizenship”, “responsibility for the impact of his/her activity and its results on public, economical and cultural development, wellbeing and environment” (for the 1st and 2nd cycle); for the 2nd cycle, there is also mentioned “the ability to integrate knowledge, manage complicated situations and make decisions when there is no comprehensive and well-defined information, and assess alternative solutions and possible impact on environment”, “skills of systemic and strategic thinking”, “the ability to make innovative decisions assessing possible public and ethical outcome of activity”; for the 3rd cycle, there is mentioned the “ability to develop creative activity and culture, and encourage technical, public and cultural progress favourable to society development” as well as “to react promptly to dynamic changes in society, economical, cultural and technological environment”.

Sweden:

“Not ESD, but SD is recognised in the Swedish Higher Education Act states in Section 5: *‘In the course of their operations, higher education institutions shall promote sustainable development to assure for present and future generations a sound and healthy environment, economic and social welfare, and justice.’*”

UK:

In the UK, education is a devolved responsibility for the governments of the four devolved administrations: Scotland, Wales, Northern Ireland and England. Therefore this section first identifies the important policy, legislative, strategic and guidance documents developed by:

- a) National agencies that are responsible for teaching and learning across the UK HE sector and its devolved administrations; and
- b) The specific HE funding agencies that have responsibilities for policy and standards at the country and/or regional level.

a) Strategic documents from national agencies for teaching and learning:

The **Higher Education Academy (HEA)** is the UK organisation responsible for quality enhancement in teaching and learning in HE. It supports both HE institutions and individual staff, with the aim of improving teaching practices and curriculum development, to support the learning experience for students. The HEA oversees professional training for university educators by operating the *UK Professional Standards Framework* (UK PSF). Training courses for academic staff at HE institutions must be validated by the HEA and show alignment with the professional competences of the UK PSF.

The HEA has played an important role in leading the ESD field; since 2005 it has resourced and produced new research and practices that have helped to shape the growth of ESD in UK HE. In its current strategy, *“The Higher Education Academy Strategic Plan 2012-16”*, HEA outlines its priority themes to support university educators in

responding to contemporary challenges; ESD is one of these named themes and this is supported by opportunities for professional, curriculum and institutional development in ESD (see Q2).

Links:

HEA: <http://www.heacademy.ac.uk/>

HEA - UK Professional Standards Framework: <http://www.heacademy.ac.uk/ukpsf#dimensions>

HEA Strategy: <http://www.heacademy.ac.uk/assets/documents/aboutus/strategic-plan-2012-16.pdf>

HEA ESD: <http://www.heacademy.ac.uk/education-for-sustainable-development>

The **Quality Assurance Agency for Higher Education (QAA)** is the UK agency established to safeguard standards and assure the quality of teaching and learning in UK HE. The QAA conducts regular reviews of every HE institution with a licence to award HE degrees, producing public 'quality audit' reports that also highlight good practice and any recommendations for improvement. It maintains the *UK Quality Code for HE* which is the formal framework for good practice in UK HE teaching and learning that underpins the institutional quality review process and benchmarks national curriculum standards.

The QAA has included ESD as one of the key themes mentioned in the *UK Quality Code for HE* (chapter B3) as important for the teaching and learning strategies developed by HE institutions. In 2014, QAA released a national guidance document on ESD in the curriculum which was developed in collaboration with the UK HEA. This document serves as a reference point for university educators and complements the mention of ESD in the *UK Quality Code for HE*, to help improve graduate learning outcomes through curriculum design, delivery and assessment across different disciplines.

Links:

QAA: <http://www.qaa.ac.uk>

QAA - UK Quality Code for HE: <http://www.qaa.ac.uk/AssuringStandardsAndQuality/quality-code/Pages/default.aspx>

QAA ESD guidance document: <http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/education-for-sustainable-development-guidance.aspx>

The UK also sits on the UNECE Steering Committee on ESD and is committed to report on national progress in the implementation of the UNECE Strategy for ESD.

Links:

UNECE Strategy for ESD: <http://www.unece.org/env/esd/welcome.html>

b) Strategic documents from funding agencies in the UK regional administrations:

Across the UK, the regional governments and HE funding agencies have responded in different ways to the promotion of policy and strategy for ESD:

SCOTLAND

In Scotland, ESD in HE was recognised in *"Choosing our Future: Scotland's Sustainable Development Strategy"* (2005), which highlights that universities and colleges have a role to play in creating awareness and supporting research in SD and introducing ESD in the curriculum.

ESD also featured in the Scottish Government's DESD action plans, *"Learning for our Future"* (2006) and *"Learning for change"* (2010). The first plan has 7 priority areas for HE including developing annual reports, research on career choices and building capacity for ESD in the **Scottish Funding Council (SFC)**, the HE institutions' funding body in Scotland. The second plan has 9 different priorities for HE and gives more emphasis to ESD. Actions include embedding ESD in strategic documents and activities, supporting student initiatives in ESD and supporting interdisciplinary research. Action 7 explicitly refers to university educators' professional development and the HEA's UK PSF: *"HEA to consider how they might ensure that ESD is accommodated to future revisions to the Professional Standards Framework"* (p17).

Links:

Scottish SD Strategy: <http://www.scotland.gov.uk/Publications/2005/12/1493902/39032>

Scottish First Action Plan: <http://www.scotland.gov.uk/Resource/Doc/137705/0034170.pdf>

Second Action Plan: <http://www.scotland.gov.uk/Topics/Education/Life-Long-Learning/cld/cldactionplan>

WALES

Wales is one of the few countries in the world to write SD into its constitution via the Government of Wales Acts 1998 and 2006. Under these acts the Welsh Assembly Government (WAG) has a duty to promote SD and report annually on progress. It has recently proposed to legislate for SD to be the central organising principal of government for all publicly funded bodies in Wales via the *"Futures Generation Bill"* which will be introduced in summer 2014.

Education for Sustainable Development and Global Citizenship (ESDGC) is one of the WAG priorities and is

integrated into funding programmes and policy development across all levels of the education sector in Wales. In September 2004, Estyn (the Inspectorate for Education and Training in Wales) introduced a Common Inspection Framework that made it a requirement for all school inspection reports to comment on ESDGC (a unique feature of the inspection process in Wales).

In 2006, the WAG published its strategy *“Education for Sustainable Development and Global Citizenship – a strategy for action”* with actions to enable the effective implementation of ESDGC in the sector and a ‘Champion’ to drive the agenda. This document was updated in 2008 to report on progress to date. The strategy includes one chapter on the role of HE in ESDGC and a sets of specific actions for the sector in the areas of leadership and commitment, teaching and learning, institutional management, partnerships, and research and monitoring. The **Higher Education Funding Council for Wales (HEFCW)**, as the HE funding body in Wales, had oversight of these actions, which included a sector-wide audit of ESD in the curriculum. Since 2009, the Department for Education and Skills (DfES) has no longer managed ESDGC as a standalone agenda, but in a mainstreamed approach in support of its wider SD obligations.

Links:

Government of Wales Act 2006: <http://www.legislation.gov.uk/ukpga/2006/32/contents>

Futures Generation Bill: <http://wales.gov.uk/topics/sustainabledevelopment/future-generations-bill/?lang=en>

ESDGC Strategy for Action (2008):

<http://wales.gov.uk/topics/educationandskills/publications/guidance/esdgcstrategy/?lang=en>

HEA Wales ESDGC network: <http://www.heacademy.ac.uk/wales/esdgc>

NORTHERN IRELAND

In May 2010, the Northern Ireland Executive approved the publication of the SD strategy, *“Everyone’s Involved”*, which is accompanied by an action plan, *“Focus on the Future: Sustainable Development Implementation Action Plan”* (2011-14). ESD in HE is not mentioned in this document, but there is evidence that the Department of Education at the Northern Ireland Executive is extending the implementation of SD within schools and other education establishments, including HE institutions (UK National Commission for UNESCO, 2013).

The 2012 NI HE strategy document had no explicit mention of ESD or commitment at NI policy level for ESD work in HE (it is more focused on the economy and employment). However, other elements of the strategy might have an indirect effect on promoting ESD e.g. expansion of lifelong learning and improved rural access to HE through further education colleges. There is also a particular emphasis on community engagement, strategies for community engagement to be embedded into each institution, and a defined role for HE in advising the government on policy issues. The Department of the Environment NI seems to be more focused on schools.

Links:

SD Action Plan (2011-14): http://www.ofmdfmi.gov.uk/focus_on_the_future.pdf

NI HE Strategy 2012: <http://www.delni.gov.uk/graduating-to-success-he-strategy-for-ni.pdf>

ENGLAND

In England, while the Department for Education has considerably decreased its commitment to ESD over the past few years, the ESD engagement of government agencies has significantly increased. Notably, the **Higher Education Funding Council for England (HEFCE)**, as the funding body for English HE institutions, has been a driver of this agenda and has recognised ESD as an overarching priority in its new strategy, *“Sustainable development in higher education”* (draft 2013). The document states that the HEFCE expects the agencies it supports with funding, such as the HEA, to support ESD at the strategic level. This commitment is reflected in HEFCE’s grant letters to HE institutions, which include SD as a condition for receiving funding.

In addition to HEFCE, it is important to mention that the Learning and Skills Improvement Service (LSIS) has also recognised the role of ESD in HE in its *“Sustaining our Future: A framework for moving towards a sustainable learning and skills sector”* (Draft 3, February 2011). This document supports providers and strategic bodies to build on current practice, to support SD practice and to bring collective strength and coherence to provider and cross-sector developments. The framework is relevant to all education sectors (not exclusively the HE sector) and provides a vision and thematic entry points for education institutions to engage in sustainability. In 2012, the schools inspections agency Ofsted issued *Sustainable Development in Learning and skills Inspections: Guidance for Inspectors* which notes the importance of embedding ESD in the curriculum and of whole-institutional approaches to ESD in schools.

Links:

HEFCE: <http://www.hefce.ac.uk/>

Draft HEFCE ESD Strategy (2013): http://www.hefce.ac.uk/media/hefce/content/pubs/2013/201331/2013_31.pdf

LSIS: <http://lsis.org.uk/>

LSIS framework: <http://www.excellencegateway.org.uk/node/2765>

Ofsted (2012): http://efsandquality.glos.ac.uk/toolkit/OFSTED_Inspections_2012.pdf

Box 2. Data extracted from question 1.1 of national templates

Denmark:

"As mentioned, no specific strategies, policies or legislations are laid down for ESD in Higher Education."

Estonia:

"SE21 recognises the education as key factor and stresses out the need to improve education and innovation in education in order to full fill the aims of action plan. This means both developing the educational system in general moving towards the knowledge society. Specifically it is pointed out to focus on four key elements: viability of Estonian culture, integrated society, increased wellbeing and ecological balance."

Ireland:

"The National Strategy on ESD discussion paper in 2007 was focusing more on an infusion model that is one of integrating sustainability within existing curricula as opposed to having new discrete modules/ courses on ESD/ SD."

One recommendation from the National Strategy on ESD discussion paper in 2007 was that *'the Higher Education Authority would establish a Working Group to embed appropriate ESD content, values and approaches into higher education programmes, particularly in regard to training of teachers, and training for the business, science, construction, engineering, technology, energy and environmental sectors, as well as the legal, social science and humanities fields.'*
<http://www.ecunesco.ie/images/esddiscussionpaper.pdf>

The 2014 National ESD Strategy hasn't been fully released so difficult to comment at this time.

Currently underway in Ireland there is a mapping of professional development in higher education being carried out by the *National Forum for the Enhancement of Teaching & Learning in Higher Education*. As of March 2014 the project is in the middle of the gathering phase from where ongoing analysis will be made."

Latvia:

"Strategy of Sustainable Development 2030."

Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability - Describes the best experience in partner countries in re-orienting education towards sustainability.

Sustainable Development Council (2003) Formed under the auspices of the Ministry of Environment.

- Consists of senior representatives from sector ministries, NGO, representatives from academic sector, municipal sector associations, the employers union etc.

Functions include:

- Support the implementation of the Strategy for Sustainable Development of Latvia;
- Integrate sustainability issues and measures into sector policy documents and legislation;
- Coordinate Latvia's participation in the implementation of UN, EU, Agenda 21 for the Baltic Sea Region sustainable development initiatives;
- Develop an elaborated Sustainable Development Strategy until 2010."

Lithuania:

"*Methodology for Evaluation of Higher Education Study Programmes* (approved by the order No 1-01-162 of the Director of the Centre for Quality Assessment in Higher Education of 20 December 2010) calls for a multi-stakeholder approach (particularly, involvement of students, employers and other stakeholders), teaching and assessment methods consistent to learning outcomes, periodical review of the study programmes reflecting new knowledge and society development as well as relevant competences of teachers. "

Sweden:

N/A

UK:

Most of these policies and strategies are not specific about ESD pedagogies or approaches, but emphasise the importance of skills and capabilities developed by students. The HEA also recognises the importance of HE institutions engaging with ESD as a 'whole-institution' issue.

a) Strategic documents from independent agencies and non-governmental groups:

"*The Higher Education Academy Strategic Plan 2012-16: Championing excellent learning and teaching in higher education*" (HEA, 2012):

ESD approaches or processes are not explicitly defined in this document as these tend to be developed through the specific projects and programmes supported by HEA, which approaches ESD in a holistic way and promotes transformative approaches to teaching and learning.

“Education for Sustainable Development” (QAA, 2014):

The guidance stresses the transformative role of ESD and focuses on graduate outcomes, skills and teaching and learning approaches. ESD is defined as: “Education for sustainable development is the process of equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations (p.5).

“Sustaining our Future: A framework for moving towards a sustainable learning and skills sector” (LSIS, 2011):

ESD approaches supported in this document are systems thinking, contextual learning, active global citizenship, democratic and civic participation, change agency, collaborative work, values orientation, capacity development, learner empowerment.

b) Strategic documents from HE agencies in the UK regional administrations:

SCOTLAND
“Choosing our Future: Scotland’s Sustainable Development Strategy” (The Scottish Government, 2005): In this document, ESD is defined as a lifelong learning process relevant to everyone to “understand the consequences of our actions in terms of SD; identify what we can do to achieve better outcomes; and, know how these changes can be made.” ESD processes and approaches are not explicitly described.
“Learning for our Future” (The Scottish Government, 2006-10): The document promotes a whole-institutional approach to ESD and defines it as “an approach that not only delivers knowledge and understanding but also enables learners to act on this information to change their behaviour. The importance of values is central to this: people are more likely to change their behaviour if they value the benefits that a more sustainable way of living might bring” (p.2). The strategy promotes ESD principles such as: interdependence, diversity, capacity building, rights and responsibilities, equity and justice, uncertainty and precaution. It supports action learning and learning through participation in ‘real activities’ as key ESD pedagogical approaches. The plan also states that learners should develop skills related to joined-up thinking, participative working and reflective practice.
“Learning for change” (The Scottish Government, 2010-15): In this document, ESD “seeks to raise awareness and understanding of all the issues relating to sustainable development: to help us learn how best we can participate in building stronger communities and developing a sustainable economy; how best we can reduce our impact on the environment; and how best to cultivate skills and attributes which help us contribute to a just and equitable society” (p. 5). ESD processes or approaches are not mentioned.
WALES
“Education for Sustainable Development and Global Citizenship (ESDGC) – A Strategy for Action” (Welsh Assembly Government, 2008): ESDGC approaches and processes are not explicitly detailed in this document. However, the Welsh approach is outlined in other documents and reports and involves whole-of-institution approaches, not merely an ‘add on’ subject. ESDGC is about the links between society, economy and environment and between our own lives and those of people throughout the world; the needs and rights of both present and future generations; and the relationship between power, resources and human rights. Active learning and critical reflective practices are encouraged in all forms of education.
NORTHERN IRELAND
“Focus on the Future: Sustainable Development Implementation Action Plan” (Northern Ireland Executive, 2011-14): The document gives special emphasis on embedding ESD at the school level. It only includes a few references on HE which mostly focus on the environmental management of universities. ESD processes or approaches are not explicitly mentioned in this document.
ENGLAND
“Sustainable development in higher education” (HEFCE, draft 2014): The document does not explicitly explain ESD approaches and processes, but refers to key sector documents such as the HEA-NUS survey on students’ sustainability perceptions and behaviours (see Bone and Agombar, 2011) as well as the quality and ESD guide developed by the QAA (QAA, 2013). The strategy also showcases the University of West England as a good example in embedding ESD in the curriculum and offering opportunities to staff and students to engage in this area. HEA-NUS survey: http://www.heacademy.ac.uk/assets/documents/sustainability/firstyearattitudes_finalreport.pdf

Box 3. Data extracted from question 3 of national templates

Denmark:

"Some actors have mentioned sustainability in their institutional profile (typically Universities), but there is few guidelines to promotes ESD. One example is from the student associations (Green Roskilde University Center) GRUC, who have formulated input to the University strategy. Another example is Aalborg University, where the UNESCO Chair in PBL in Engineering and Science made a study on the ESD practice at the faculty of Engineering and Science, and what to use this as a platform to develop institutional guidelines on how to proceed with the integration of ESD."

Estonia:

"Not specifically pointed on action plans, but as SE21 is higher level document also for the universities they need to follow it's guidance to develop higher education on fields pointed out on the document. During the year 2014 all universities are preparing their action plans for years 2015-2020. At least in case of Tallinn University the aim to develop the curricula for SD and to educate university members on field of SD is discussed and included into the working documents."

Ireland:

"In general ESD is not mentioned in strategic plans. Some colleges are active in providing courses in Sustainable Development for example Dublin Institute of Technology who delivered the first Masters in Sustainable Development in Ireland. Trinity College Dublin is also delivering a Masters in Sustainable Development.

In some colleges such as Dublin City University, which has recently become an RCE, ESD is mentioned in its Strategic Plan, and other documents. DCU has also appointed a Director of Sustainability to coordinate sustainability actions across the University at various levels, including teaching and learning and has also a pillar of research dedicated to Sustainability (with associated Chair), and is involved in many international consortia aimed at infusing sustainability at all levels within the university (research, teaching and learning, general practice etc.). The Strategy for Infusing Sustainability (SIS) in DCU devised and articulated by Dr. Charlotte Holland, 2012, comprises four elements: *Fostering an ethos and culture of sustainability; Infusion of sustainability in curriculum and pedagogy; Infusion of sustainability in general practice; Capacity building in sustainability within research units and across connected communities.*"

Latvia:

"Institute of Sustainable Education at Daugavpils University has development strategy till 2016 (http://du.lv/files/000/002/960/III_Strategija.pdf?1349678950) The mission of the institute is to strive for distinction in academic and professional higher education through implementation of educational researches for sustainable development. Institute defines sustainability as a priority.

The strategic aim of the Institute of Sustainable Education is to carry out scientific, academic, administrative, communicative activities and cooperation in order to encourage reorientation of education towards sustainable development, the research of sustainable education and introduction of the results of the researches in the regional, national and global context.

The objectives of the activity are as follows:

1. to introduce the results of the researches and innovations in education encouraging sustainable development of the country;
2. to ensure orientation of study programmes of all levels of DU Faculty of Education and Management towards sustainable development ;
3. to implement cooperation of researchers of sustainable development at the national and international levels;

The implemented research areas are related to the scientific and academic activities aimed at reorientation of pedagogical theory and practice, branch pedagogy and life-long education towards sustainable development and research of sustainable education and reorientation of academic and professional study programmes towards sustainable development;

The Institute puts the following tasks forward:

- reorientation of higher education towards sustainable development;
- elaboration of the theory of modern education for sustainable development;
- focus on reorientation of educational science in compliance with modern requirements thus bringing it nearer to the aims and needs of the society's development;
- publishing the results of the researches carried out by the ISE personnel in the issues included in international data bases as well as in jointly reviewed scientific issues;
- publishing internationally acknowledged scientific issues;

Daugavpils University's strategy is sustainability oriented academic work and research and striving for the eco- status of the University."

Lithuania:

“Some HEIs include sustainable development in their missions and strategies. For example: “The mission of the University is to provide research-based studies of international level, to create and to transfer knowledge and innovative technologies for sustainable development and innovative growth of the country, to provide an open creative environment that inspires leaders and talented individuals” (Kaunas University of Technology). “Klaipeda University is a centre of Lithuania as a marine country and a centre of the Baltic Sea region research, arts and studies, which prepares highly qualified specialists, fosters humanist values and pays parallel priority attention to: <...> Sustainable development of Western Lithuania and the Klaipeda-city; <...>” (Klaipeda University).

Some universities provide sustainability-oriented master study programmes, for example: Sustainable Regional Health Systems (Vilnius University, Faculty of Medicine); Communication for Sustainable Development (Vilnius University, Faculty of Communication); Policy and Management for Sustainable Environment (Mykolas Romeris University).

The development of staff and teachers’ competences in particular, usually is included in the institutional strategies. However, ESD competences are not mentioned explicitly, even in the case if university mission is oriented towards sustainable development.”

Sweden:

“Due to the Swedish Act of Higher Education, Syllabus of Formal School System and a request from the society and students, several universities promote ESD. Several HEI are involved in the four RCEs and involved in formal as well as informal ESD.

A number of HEIs in Sweden include sustainable development (hållbar utveckling) in their strategic plans and have staff responsible for strategic work regarding SD. Some good examples are Gothenburg university <http://www.mls.adm.gu.se/>, Högskolan i Borås <http://www.hb.se/Om-hogskolan/>, Linné universitetet <http://lnu.se/om-lnu/strategi-och-verksamhetsutveckling>

The new strategy of Malmö University, Strategy 2020, is aiming for *education and research for a sustainable society* http://strategi2020.mah.se/?page_id=38. There are probably more examples on HEI promoting ESD in Sweden.”

UK:

“In 2013, 143 colleges and universities participated in the People and Planet Green League which is the only comprehensive and independent league table of UK universities ranked by environmental and ethical performance. The results show that:

- Approximately, 35% of the 143 participating institutions have made a commitment to integrate sustainability into the curriculum in their Corporate or Strategic Plan.
- Approximately, 46% of the 143 participating institutions have made a commitment to integrate sustainability into their Teaching and Learning Strategy.
- Approximately, 80% of the 143 participating institutions have made a commitment to integrate sustainability into the curriculum in the Environmental Policy.

Some examples of the many institutions with strategic plans or guidelines to promote ESD are included in the table below, which is based on responses to the UE4SD mapping process. It is notable that some institutions pursue this through their environmental and sustainability strategies, some through their learning and teaching strategies, and others through their overarching corporate strategies. Several institutions adopt ESD through more than one policy

Institution	Strategic documents which promote ESD
University of Arts London	<p>The institution promotes sustainability and environmental ethics; however whilst at times it might frame this in terms of ESD it is often conceived in other disciplinary terms for instance in terms of eco-efficiency or through specific approaches to sustainable practice. Sustainability is a key priority of the University Strategy 2010-15 and is also featured in the University’s teaching and learning strategy. Sustainability is promoted via curriculum funding (£150k over 5 years), the creation of a staff Sustainability Award and through course planning prompt in the formal documentation for course validation and revalidation.</p> <p>Links: http://www.arts.ac.uk/media/old-arts-site/old-reddot-assets/docs/UAL-Strategy-2010-2015.pdf (page 27) http://www.arts.ac.uk/media/arts/about-ual/strategy-and-governance/documents/university-strategy/UAL_Learning_and_Teaching_Strategy_2011-15.pdf http://blogs.arts.ac.uk/sustainability/about/ http://blogs.arts.ac.uk/sustainability/inspire/</p>
University of Exeter	<p>Its Education Strategy 2014-19 specifies sustainability awareness as a graduate attribute (not yet published) and its Sustainability Strategy includes an ESD action plan.</p>

	<p>Links: http://www.exeter.ac.uk/media/universityofexeter/campussservices/sustainability/pdf/13_14_University_Sustainability_Plan_Issue_1.3.pdf, http://www.exeter.ac.uk/sustainability/curriculumandresearch/</p>
University of Gloucestershire	<p>The University has an institutional commitment to ESD in the curriculum which is outlined in its Strategic Plan 2012-17. It also makes specific mention of ESD in its Learning and Teaching Strategy, both as an overarching educational concern that connects across all the principles of the strategy but with particular emphasis in relation to ‘Learning for the Future’.</p> <p>These ESD commitments are also present in the Sustainability Strategy, which prioritises ESD in terms of the whole-institutional approach to learning for sustainability as part of the sustainability transformation of the University.</p>
Manchester Metropolitan	<p>The University is working on a new Environmental Sustainability Strategy in which two specific sections relate to ESD; Learning for a Sustainable Future and Sustainability Engagement, both of them include Continuing Professional Development and student and staff engagement on curricular and extra-curricular activities on ESD. The Learning, Teaching and Assessment Strategy also suggests that “all programmes should identify the ways in which their curriculum incorporates concepts of internationalisation, global citizenship, sustainability and social responsibility” and principle two of the strategy expands on this.</p> <p>Links: http://www.celt.mmu.ac.uk/ltastrategy/principles.php http://www.celt.mmu.ac.uk/ltastrategy/LTA_strategy.pdf</p>
Plymouth University	<p>Teaching and Learning Strategy 2013-2020: In this strategy, Goal 2: Inspiring learning opportunities states: “We aim to raise all students’ (undergraduate and postgraduate) aspirations and provide opportunities to extend their skills and knowledge. We endeavour to offer learning opportunities that [...] differentiate our academic offer by ensuring issues and principles of sustainability permeate and inform our programmes and modules, learning from existing best practice so that students engage positively with sustainability issues affecting their personal and professional lives.”</p> <p>http://www1.plymouth.ac.uk/ouruniversity/teachlearn/Documents/Teaching%20Learning%20and%20Student%20Experience%20Strategy%20Final%20with%20logo.pdf</p> <p>Sustainability Strategy 2014-2020: In this document, there are three areas of action that reflect the tri-cameral approach at Plymouth – teaching, research, and operation. The second area is entitled ‘Learning for the future’ which states: “Learning from sustainability best practice within Plymouth University and across the world, our students will be able to engage positively with sustainability issues affecting their personal and professional lives in a rapidly changing world. In support of this, we will enable organisational learning involving all members of the University community towards sustainability-oriented whole institutional change.”</p>
University of Wales Trinity Saint David	<p>Sustainability is embedded within the institution’s Strategic Plan as a core value, defining characteristic and strategic priority. Excerpts relevant to ESD are:</p> <ul style="list-style-type: none"> • Promotion of sustainable development “<i>through a system-based approach to delivering meaningful and relevant educational pathways we will promote learning and social responsibility that supports “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (Brundtland Commission, 1987)</i>”. • We are a university that “offers a well-defined undergraduate curriculum, which delivers distinctive graduate attributes in the areas of employability, enterprise, sustainable education and global citizenship”. <p>Strategic Plan: http://www.tsd.ac.uk/en/media/uniweb/content/documents/departments/qualityassuranceunit/academicqualityhandbook/Chapter_01_Institutional_Context_Pages_1-4.pdf (pages 2-4).</p> <p>The University has also committed to embed sustainability into 15% of all students’ experiences creating a distinctive Trinity Saint David ‘One Planet Curriculum’ (INSPIRE Prospectus, 2011, http://issuu.com/trinitysaintdavid/docs/inspire_e-booklet_eng/1?e=0/6570513, page 10.)</p>

Box 4. Data extracted from question 4 of national templates

Denmark:

"There is no tradition to provide staff training in HE institutions moving beyond pedagogical training and courses in Human resource management. However, in many institutions it is possible to attend specific courses prepared for students by own request. Even though few examples are identified, as for examples the ones stressed in the following description of best practice (seminar activity: Danish Technical University in 2010 and 2011; Aalborg University in 2012, 2013 and 2014; Meeting places: Aalborg University; projects with mutual inspiration among staff in providing international courses on sustainability (University college Northern Jutland, University College Lille Baelte). But what characterises these and other examples is that they are seminars, workshops or collaborations, with the main purpose of establishing interest or mutual inspiration about ESD. This does not mean that ESD is not practised, as there are many examples of ESD courses prepared for students. The Danish way, so to speak, is to create interdisciplinary staff teams. Where there is strong collaboration among those teachers this can be very effective – however, when this is not the case, there is a risk that sustainability is seen as an add-on, which is not really related to the professional profile."

Estonia:

N/A

Ireland:

"In general there are few initiatives to support the professional development of university educators in ESD.

Again in Dublin City University there are some projects, i.e. The TEMPUS RUCAS project 2010-2013 re-oriented curriculum within the Faculty of Humanities and Social Sciences at Dublin City University towards sustainability. This project involved six EU Universities and 6 Universities in Middle East, and involved the development and implementation of an e-Toolkit in ESD to train higher education academic staff (from all disciplines) in how to effectively infuse sustainability curriculum content, principles, pedagogies and practices within the undergraduate and postgraduate higher education curricula. This resulted in the infusion of sustainability in 15 DCU courses.

DICE (Development and Intercultural Education) funded by Irish Aid, works with university educators in the context of primary teacher education and includes ESD as part of its remit. It currently works with St. Patricks Teacher training colleges, Marino Institute of Education among others.

UBUNTU network funded by Irish Aid, works with university educators in the context of post-primary pre service teacher education and includes ESD as part of its remit. This is based in the University of Limerick."

Latvia:

Organization of international scientific conferences:

Conference "Education for sustainable development" which was held, for the first time in the Baltics, on 21 and 22 February, 2013 in Riga, Latvia. The objective of the conference was to promote debate on how to efficiently integrate the principles of sustainable development in the content of training of educational curricula.

Travelling International BBCC/JTEF conferences:

"Sustainable Development. Culture. Education" is an annual international scientific conference of the Journal of Teacher Education for Sustainability (JTEFS), organized by Baltic and Black sea Circle Consortium in educational research (BBCC). Each year the conference takes place in a different BBCC member state. Participants publish their research results and make use of the opportunity to establish valuable contacts and become involved in international networking in the sphere of ESD. The conference usually welcomes around 100 participants including the newcomers to the BBCC family and the long-term members from the former years. The geography of participants is wide and over the years has covered all continents and such countries as Latvia, Lithuania, Estonia, Finland, Norway, United Kingdom, Ireland, France, Spain, Italy, Greece, Malta, Turkey, Russia, Belarus, Poland, Hungary, Germany, the Netherlands, Slovakia, Slovenia, Bosnia and Herzegovina, USA, Canada, Brazil, Costa-Rica, South Africa, Nigeria, Kenya, Taiwan, Iran, Malaysia and others.

10 travelling conferences have been held so far:

2003 – [Daugavpils University](#) (Latvia)

2004 [Tallinn University](#) (Estonia)

2005 – [Vechta University](#) (Germany)

2006 – [Helsinki University](#) (Finland)

2007 – [Debrecen University](#) (Hungary)

2008 – [Anadolu University](#) (Turkey)

2009 – [Daugavpils University](#) (Latvia)

2010 – [UNESCO Headquarters in Paris](#) (France)

2011 – [Siauliai University](#) (Lithuania)

2012 – [University of Eastern Finland](#) (Finland)

2013 - Saint-Petersburg (Russia)

2014 - Chelm (Poland) to be held

Participation at International projects:

PROJECT "Synergetic approach with eLearning, TV and mobile technologies" to promote new business developments", shortly known as eBig3. Institute of Sustainable Education (ISE) implements this project jointly with Riga Technical University (lead partner), Liepaja University, Latvia University of Agriculture, Kaunas Technological University, Siauliai University and Utena Labour Market Training Centre. The project is funded by Latvian-Lithuanian cross-border cooperation program 2007-2013. It aims to promote technologically facilitated learning that would contribute to the development of entrepreneurship in the Latvia-Lithuania borderland. The unique input of the project is tapping into the complementarity of

computer-assisted e-learning with TV and mobile communication technologies. Thus, the project suggests an innovative solution to the challenge of learner recruitment and subsequent retention which is often evident in high dropout rates in traditionally implemented e-learning courses.

LLP PROJECT "ICT-enabled Education for Sustainable Development" led by the University of Crete (Greece) which aims to develop a joint Master degree study program (deployed on an advanced virtual platform) in ICT and ESD. Other participants: University of Crete (the lead partner from Greece), Dublin City University (Ireland), Frederick University (Cyprus), University of Graz (Austria), Open University of Cyprus (Cyprus) and Uppsala University (Sweden).

PROJECT „Comparative Research of Mathematic Teachers’ Beliefs”.

Project was commenced in January 2010, when four project core countries – Finland, Estonia, Latvia and Lithuania started the development of survey and research design for the The aim of the project was to explore the beliefs of Baltic and Nordic mathematic teachers on teaching mathematics, by developing the adequate research instrument for international comparative research, collecting, analysing and comparing the data in all project countries. The individual beliefs are determined by culture and teachers’ beliefs have different impact on their classrooms.”

Lithuania:

“*Kaunas University of Technology* is strongly oriented to sustainable development in all academic activities as well as the practice. In the Renewal Programme for Research and Studies established in 2013, developing competences of teachers are particularly emphasised as an objective. Both special (subject-based) and transversal competences of teachers as well as teaching methodology should be improved to achieve relevant learning outcomes of students; mentoring system is planned in order to make studies more individualised and student-centred. An international dimension should be noticed in the activities of the Kaunas University of Technology, i.e. participation in the international networks for sustainability (see point 6) and linking studies with the UNECE documents for ESD.

‘*Kauno Kolegija*’/University of Applied Sciences approved the Strategy -2020 in 2012. One of the strategic objectives in the area of management was formulated as implementation of sustainable development principles in academic and practical activities of the institution. In-service training of staff represents an integral part of the Strategy-2020 including a holistic approach (integrative thinking and practice), envisioning change (critical thinking that covers understanding of the causes of unsustainable development and managing the change from unsustainable practices towards advancing quality of life, solidarity, and environmental sustainability), and achieving transformation (integration of the principles of sustainable development into the learning outcomes of the study programmes, thus facilitating students with developed critical thinking and active citizenship attitudes for making a difference in their future real work practices). Competence Development Centre was established in 2013 to fulfil this task. ‘Kauno Kolegija’ was certified as a member of the Regional Centre of Expertise (RCE Lithuania) by the UNU IAS in December 2013.”

Sweden:

“Most of the HEI answered our question with a NO. However, some answered that if someone asked for it, there was possibilities to participate in workshops, seminars or courses outside the HEI.”

UK:

The Green League results show that approximately 32% of the 143 participating institutions provide support or training to all staff to help them integrate sustainability into the curriculum. The type of professional development opportunities are not specified in the Green League, but several examples were collected through an online consultation with ESD in HE colleagues in the UK, interviews with key informants and an internet search (see PART C of this template for more details on how the information for this template was collected).

The table below captures these examples and the range of activities on offer. It is worth noting that these are providing opportunities for professional development at different levels, such as:

- entry level and introductory experiences, through guidance briefs or staff induction, or via one-off events and seminars in ESD
- mapping, recognition and reflection on existing examples of curriculum development, through awards, workshops and curriculum audits
- developmental activities and professional training, through academic staff training courses, project grants and mentoring schemes

ENTRY LEVEL & INTRODUCTORY EXPERIENCES	
ESD Guidance & Frameworks	– University of Brighton: The University has developed a document which draws on current and previous work at the institution to explore what is meant by ESD in the curriculum. Links: http://staffcentral.brighton.ac.uk/xpedio/groups/public/documents/staffcentral/doc014787.pdf
	– University of Bristol: The purpose of the University’s educators’ guide is to introduce and explain ESD, its benefit to educators, students and employers, and how it fits into the University as a whole. Key examples of assistance provided to academics by ESD support staff are also listed. Links: https://wikis.bris.ac.uk/download/attachments/52396807/UoB+Teaching+and+Learning+Guide+to+ESD+draft+v.4.pdf?version=1&modificationDate=1350910974000
	– University of Gloucestershire: The guides cover basic pedagogic methods, approaches to

	<p>curriculum design and signs of demand among students and organisations for sustainability skills in the graduate employment arena.</p> <p>Links: http://insight.glos.ac.uk/sustainability/Education/Pages/EducationforSustainabilityGuides.aspx http://insight.glos.ac.uk/sustainability/Education/Documents/Efs%20Educators%20Guide%20FINAL%207July11.pdf</p> <ul style="list-style-type: none"> – Exeter University: has produced a quick guide on ESD targeted to university educators. Links: https://www.exeter.ac.uk/sustainability/curriculumandresearch/quick_guide/ – University of Wales Trinity Saint David: as from the 2014/15 academic year all faculty staff development plans will have to demonstrate how they are building the capacity of their staff to meet sustainability objectives. These plans will be aligned to commitments within each faculty's Sustainability Plan (all faculties have had to develop a sustainability plan, to be approved by the Sustainability Committee).
Staff induction	<ul style="list-style-type: none"> – Plymouth University: is currently developing a staff induction online programme in Sustainability (delivered by an external agency but developed by Plymouth University). – London School of Economics: the staff induction at the London School of Economics includes a session on sustainability and ESD. Links: http://www.lse.ac.uk/intranet/LSEServices/estatesDivision/sustainableLSE/policyObjectives/educationForSD/TrainingGuidance.aspx – University of Gloucestershire: the staff induction at the University includes a session which introduces sustainability and ESD as well as the University's commitment in these areas to new staff and provides entry level guidance materials on ESD. – University of Wales Trinity Saint David: the staff induction day includes an introduction to sustainability, ESD and the University's sustainability objectives. This is delivered by one of the INSPIRE team. The University also runs a staff development week every September, which all staff are obliged to attend, with sustainability being one of the key sessions.
Workshops and training events	<ul style="list-style-type: none"> – University of Bradford: The University of Bradford and Ellen MacArthur Foundation are developing an ambitious academic partnership to support and develop teaching and research programmes around the circular economy. Key features of this Pioneer University partnership include, amongst others, ongoing circular economy-focused conferences and seminars linked to how education is approached and delivered, and circular economy CPD sessions for teachers across Bradford. Links: http://beta.ellenmacarthurfoundation.org/higher_education/global_campus/p_and_n_universities/bradford http://www.ellenmacarthurfoundation.org/news/education-event-25th-27th-march-2014 – Manchester Metropolitan University: CELT organises a workshop for programme leaders which explores themes around global citizenship and sustainability and how this translates into your own curriculum. This session has grown from the HEA-funded Global Citizens, Global Futures project. In 2014, the University will also be the host of the 2nd World Symposium on Sustainable Development at Universities. ESD will be one of the main themes of the event and publications. Links: http://www.celt.mmu.ac.uk/cpd/viewcourse.php?unit_id=42 http://www.celt.mmu.ac.uk/global_citizens/index.php http://www.mmucfe.co.uk/events/happening/2nd-world-symposium-on-sustainability-at-universities http://www.haw-hamburg.de/en/ftz-als/veranstaltungen/wssd-2014/aims-wssd011.html – Exeter University: Professional development for teaching staff is mainly via the ASPIRE scheme which provides workshops and development resources aligned to all its strategic themes, including ESD. Links: http://as.exeter.ac.uk/aspire/ – Plymouth University: professional development staff training open to all university staff, developing personal responses to sustainability. Also run externally. Links: http://www.eauc.org.uk/shop/mms_single_event.php?event_id=3543 – University of Arts London: organises various workshops for university educators to explore teaching and learning approached in the area of ESD. Links: http://www.arts.ac.uk/about-ual/learning-and-teaching/qualifications-and-prof-devpt/workshops/exploring-education-for-sustainability/ – London South Bank University: Through its RCE London, it organises seminars and conferences

	<p>focused on curriculum innovation and ESD. It is also the host of networks in the areas of ESD and teacher education, place-based learning, higher education and business. Through the University's PGCHE, workshops on "Teaching Sustainability Literacy" are organised. These include case studies of work areas by academic staff members active in ESD and PRME. This has been recently supplemented by a VLE (Moodle) workshop entitled Teaching Sustainability Literacy – intended to be done in 3 hours – includes an introduction, readings, video clips of interviews with ESD experts and practitioners, and forum discussions.</p> <p>Links: http://www.londonrce.kk5.org/</p> <ul style="list-style-type: none"> – University of Gloucestershire: Through the RCE Severn, it organises a annual seminars series and events focused on HE leadership for sustainability, organisational learning, student experience and employability for ESD. <p>Links: http://insight.glos.ac.uk/sustainability/partnerships/rce/Pages/default.aspx</p>
MAPPING, RECOGNITION & REFLECTION	
ESD Audits	<ul style="list-style-type: none"> – Wales Curriculum Audit: In 2008, the Higher Education Funding Council for Wales (HEFCW) sponsored a nationwide review of ESDGC in curricula using the STAUNCH (Sustainable Teaching Audit for University Curricula in Higher Education) audit tool developed by the Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) at Cardiff University. BRASS provided professional training to university staff using the tool to assess how ESDGC had been embedded in the curricula. The results of the audit are being used to help individual schools, and institutions, to plan the further integration of sustainability principles within their teaching. <p>Links: http://www.heacademy.ac.uk/assets/was%20York%20-%20delete%20this%20soon/Documents/aboutus/wales/ESDGC_Wales_June_2009.pdf</p> <ul style="list-style-type: none"> – University of Wales Trinity Saint David developed a Sustainability Skills Audit in 2011, to help identify sustainability related skills and experience across the institution. The audit included academic and non-academic staff and a review of the literature at the time indicated that a similar audit had not been undertaken at this scale internationally. Having an in depth understanding of the skills base enabled the university to develop new curricula and research and wider sustainability initiatives. The University has since helped other universities across the UK to replicate the audit. It has also adapted the audit for further education colleges and local government. University of Wales Trinity Saint David is also building on the model that University of Bristol have used to audit the curriculum for ESD, this is due to be completed by the end of June 2014. <p>Links: http://www.uwtsd.ac.uk/inspire/inspire-activity/an-inspired-education/</p>
Recognition & Incentives	<ul style="list-style-type: none"> – Plymouth University: PedRIO Pedagogic Research Funding and Plymouth University Teaching Fellowships – annual funding call open to university staff for research/teaching projects (up to £10,000). Projects with a focus on ESD are welcome. <p>Links: http://www1.plymouth.ac.uk/ouruniversity/teachlearn/fundingopportunities/Pages/UTF.aspx</p> <ul style="list-style-type: none"> – University of Arts London: The University's Sustainability Award recognises excellent practice in relation to learning and teaching and sustainability
DEVELOPMENTAL ACTIVITIES & PROFESSIONAL TRAINING	
ESD included in staff training (PG Certificates in HE) offered by institutions	<ul style="list-style-type: none"> – Plymouth University: The PGCAP at Plymouth has an elective module 'PGCAP770 Sustainability Education' (Level 7, 15 credits) which provides an introduction to the subject area and the opportunity for the student to explore ESD in relation to their own academic practice. <p>Links: http://xerte.plymouth.ac.uk/play.php?template_id=292</p> <ul style="list-style-type: none"> – Manchester Metropolitan University: through its Centre for Excellence in Learning and Teaching (CELT), it provides two optional units for staff related to ESD in the MA Academic Practice and the PGCAP: Global Citizens, Learners Unit and ESD. <p>Links: http://www.celt.mmu.ac.uk/cpd/accredited/index.php http://www.celt.mmu.ac.uk/cpd/accredited/unit_details.php?unit_id=5 http://www.celt.mmu.ac.uk/global_citizens/implementationphase.php http://www.celt.mmu.ac.uk/cpd/viewcourse.php?unit_id=42</p> <ul style="list-style-type: none"> – Exeter University: Taught sessions for the PGCAP invite participants to discuss a number of key strategic themes, including sustainability/ESD, and consider the implications for their own curriculum design and disciplinary teaching. <p>Links: http://www.exeter.ac.uk/staff/development/academic/teach/pcap/one/</p> <ul style="list-style-type: none"> – University of Arts London: The Education for Sustainability Unit is an optional unit of the PGCAP. However, the University is currently reviewing the programme to include elements such as this so

	<p>that it will also be core with an opportunity to undertake an optional unit to go more in depth. In addition, Education for Sustainability is a 20 credit Masters Unit that forms part of the University's HEA accredited MA in Academic Practice.</p> <p>Links: http://www.arts.ac.uk/about-ual/learning-and-teaching/qualifications-and-prof-devpt/teaching-qualifications/units-of-study/ http://www.arts.ac.uk/about-ual/learning-and-teaching/qualifications-and-prof-devpt/teaching-qualifications/units-of-study/</p> <ul style="list-style-type: none"> – Cardiff University: The University has taken the step of embedding SD in the HE agenda within its Postgraduate Certificate in University Teaching and Learning (PCUTL). This will enable sustainability to be practised and taught within a wide range of teaching modules in the University. <p>Links: http://www.cardiff.ac.uk/pcutl</p>
Grant-based professional development opportunities	<ul style="list-style-type: none"> – University of Gloucestershire: The <i>Learning for Sustainable Futures</i> (LFSF) initiative was launched in 2012 and provides grants for staff to take forward the University's commitment to embedding ESD in the curriculum and student learning. Participation in LFSF provides award holders with: <i>development funds</i> to release time from teaching duties and work on curriculum innovation; <i>guidance and mentoring</i> on ESD as well as opportunities to connect with external experts; CPD opportunities for professional exchanges and workshops to share new practices; national showcase for their work at the annual LFSF event with colleagues across the UK. See PART B of this template for more information on this professional development programme. <p>Links: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/default.aspx</p> <ul style="list-style-type: none"> – Canterbury Christ Church University: The <i>Futures Initiative</i> was established in 2011 to help students and staff to develop their thinking about sustainability and the environment. Last year the Futures Initiative supported over a dozen projects from across the university designed to embed education or sustainable futures within academic programmes and awards. Projects included developing new perspectives on public health, work on community history and planning for a new student-led module on sustainable schools. A range of Departments and Faculties from across the university was involved. <p>Links: http://www.canterbury.ac.uk/projects/sustainable-development/ESD/Bid_Information.asp http://www.canterbury.ac.uk/projects/sustainable-development/ESD/Documents/Report%20of%20the%20Futures%20Initiative%20Mar%202013%20V.02.pdf</p> <ul style="list-style-type: none"> – University of Worcester: is borrowing and replicating the Learning for Sustainable Futures (LSF) programme developed by the University of Gloucestershire. The LSF in Worcester was launched in December 2013 and has awarded 8 small grants to staff to implement ESD projects at the University through 2014-15. <p>Links: http://uwstaffnews.wordpress.com/2014/01/06/learning-for-sustainable-futures-2/</p> <ul style="list-style-type: none"> – Plymouth University: The Centre for Sustainable Futures (CSF) funds a number of <i>Curriculum Development Small Grants</i> (between £500 and £1000) for projects that seek to create and explore new practices that will enrich the student experience of sustainability education, open to any member of the university teaching or support staff with interests in sustainability education. – University of Arts London: It provides a curriculum development funding that typically funds around 10 projects a year for up to £3,000 – between 2010-2015.
Research on ESD through externally funded initiatives	<ul style="list-style-type: none"> – University of Gloucestershire: From 2009 to 2010, the Director of Sustainability at the University was awarded a Marie Curie International Incoming Fellowship by the European Commission. The aim was to conduct research on the complexity of, and opportunities for, embedding sustainability as an interdisciplinary research activity at the University and embedding education for sustainability across professional courses. The project adopted an action research approach using collaborative enquiry, critical reflection and the development of change strategies. <p>Links: http://insight.glos.ac.uk/SUSTAINABILITY/EDUCATION/Pages/MarieCurieIIFProjectonSustainability.aspx</p>

Box 5. Data extracted from question 6 of national templates

Denmark:

"As mentioned, 25 February 2013, the RCE Denmark network was formally constituted as an association with the new name: Learning and Education for Sustainable Development - RCE Denmark."

<http://www.rce-danmark.dk/RCE+Denmark/Foundationpapers+for+RCE+Denmark/>

Another example is the newly established (launch 26. May, 2014) Aalborg Centre for Problem Based Learning in Engineering Science and Sustainability under the auspices of UNESCO. <http://www.ucpbl.net/> However, this centre also consider staff training outside the Danish borders – and this activity has up to now (from the UNESCO chair) been related to Problem Based Learning initiatives."

Estonia:

"No."

Ireland:

"DICE (Development and Intercultural Education) funded by Irish Aid, works with university educators in the context of teacher education and includes ESD as part of its remit.

UBUNTU network funded by Irish Aid, works with university educators in the context of post-primary pre service teacher education and includes ESD as part of its remit. This is based in the University of Limerick.

An Taisce, works with higher education providers in relation to green initiatives and a green campus programme.

ECO-UNESCO works on an ad hoc, request basis on professional development of university educators and has provided training to Dundalk Institute of Technology.

There is a recently approved UNU Regional Centre of Expertise in ESD In Dublin (RCE Dublin), coordinated by Dublin City University which will act as a focal point in the greater Dublin area in education for sustainability at all levels of education, including higher education. This will develop several online modules on sustainability that can be used to up-skill staff in higher education on ESD – currently a PhD student in Dublin City University has devised a model for integrating sustainability in higher education; that guides educators through the concepts, contexts, principles and practices of ESD while offering a practical framework for infusing sustainability in their curricula, pedagogies and practices. She also has identified indicators for sustainability.

Other opportunities available in the National Forum for the Enhancement of Teaching & Learning in Higher Education."

Latvia:

"NETWORKING - building bridges with experts on ESD in higher education:

UNESCO/UNITWIN global NETWORK on reorienting teacher education towards the aim of sustainable development. Implementation of teacher education guidelines in teacher education practice

Daugavpils University (DU) has always been represented at the forum ever since the network was established in the year 2000. This consortium was founded in 2005 as a regional European sub-network within the global network at York University.

BBCC NETWORK

Baltic and Black sea Circe Consortium (BBCC) is an international network that unites researchers and practitioners in the fields of teacher education and education for sustainable development (ESD). Since its creation in 2005, the consortium has become a platform for experience exchange among researchers and experts in ESD from more than 20 countries around the world

The outcome: BBCC members meet and discuss joint research projects on ESD in HE every year at the annual international scientific conference "[Sustainable Development. Culture. Education](#)", which is hosted by a different consortium member state each year. Everyone who participates in this conference becomes a member of BBCC (receives a membership card). The member's status gives an opportunity to join a 'family' of like-minded enthusiasts, get involved in collaborative research and international networking in the sphere of ESD.

Since its establishment, BBCC has evolved into a holding network with five sub-networks:

(1) network of host universities to the annual international conference "*Sustainable Development. Culture. Education*" of the *ISE Journal of Teacher Education for Sustainability* and BBCC (the first decade of the conference was celebrated this May in Savonlinna, Finland),

(2) peer-review network for publications from ISE and BBCC (3172 pages of scientific articles have been published thus far with contribution from authors and reviewers representing 45 countries),

(3) collaborative ISE and BBCC researchers' network for creation of sustainable education theory,

(4) network for expertise and approbation of doctoral research from ISE and BBCC, and

(5) collaborative network of bachelor and master students from ISE and BBCC.

The network of the organizers of DU and BBCC journal's annual conferences (universities involved in BBCC) (<http://www.ise-lv.eu/index.php?show=49>).

The following organizations have assisted DU ISE in the establishment of BBCC: Tallinn University (Estonia), Debrecen University (Hungary), The University of Vechta (Germany), University of Joensuu (Finland). The Consortium encourages the exchange of the experience between theorists and practitioners from Latvia, Lithuania, Estonia, Germany, Finland, Norway, Denmark, USA, Canada, South Africa, Sweden, Hungary, Jamaica, Australia, UK, New Zealand, Hong Kong, Malaysia, Thailand, Malta, The Netherlands and other countries. One of the Consortium's tasks is reorientation of education to address sustainable development in the region of Baltic and Black Sea through implementing the aims of UNESCO/UNITWIN and UN decade.

The network of the editorial board of DU and BBCC scientific editions (<http://ise->

lv.eu/publications.php?pub=3&sub_show=40&show=39).

Since the establishment of BBCC, the international editorial boards of the ISE editions and the editions themselves have become the basis of the network of the editorial board of DU and BBCC scientific editions.

The first ISE international journal *Journal of Teacher Education for Sustainability* has become the ISE and BBCC journal and has been included in the Scopus Data Base. Established in 2003, the international journal *Journal of Teacher Education for Sustainability* is now the only world-scale journal of reorientation of teacher education to address sustainability. The journal has turned into a forum where various opinions, ideas and researches meet, and its aim is to encourage further research and development of practical experience in teacher education in all areas of formal, non-formal and informal education related to its reorientation towards sustainability.

The second international journal - *Discourse and Communication for Sustainable Education* and the collection of scientific articles *Education and Sustainable Development: First Steps towards Changes*. The international journal *Discourse and Communication for Sustainable Education* is being released since spring 2010. It is aimed at policy, research of theories and practices, which highlight the discourse and communication about the issues of sustainable education.

The cooperative network of DU and BBCC of assessment and expert advice on doctoral researches

BBCC activities have created the environment for international scientific discussions in which doctoral students participate through presentations of their research at international conferences

SWEDST – the outcome: principles to meaningful and supportive policy at the local level that include four main recommendations which can be construed as four hopeful pathways towards sustainability in education:

http://swedesd.se/images/stories/PDF/unfolding_the_power_of_esd_lessons_learned_and_ways_forward.pdf Institute of Sustainable Education (Latvia) is a part of this network.

ENERCE NETWORK

Participants: the University of Granada (Spain), Comenius University in Bratislava (Slovakia), University of Augsburg (Germany), Dublin City University (Ireland), University of Seville (Spain), University of Cyprus (Cyprus) and Daugavpils University (Latvia). Common project with participants from ENERCE

Erasmus lifelong learning programme project "ICT-enabled Education for Sustainable Development" (Nr. 510212-LLP-1-2010-1-GR-ERASMUS-EVC). Project partners from ENERCE: Dublin City University, University of Cyprus, Daugavpils University. Throughout 2012, the lead partner (University of Crete, Greece) organized several project seminars as well as the final project conference "New Technologies, Education for Sustainable Development and Critical Pedagogy" (Rhymymnon, Greece, June 15-16, 2012). The focus of the project is to use ICT as a tool for Sustainable Development."

Lithuania:

"The Baltic University Programme (BUP): a permanent network of more than 200 universities throughout the Baltic Sea region. The Programme focuses on questions of sustainable development, environmental protection, and democracy in the Baltic Sea region. 12 universities from Lithuania are involved in the Programme. On-line materials as well as international seminars are available for the teachers of the network.

More information: <http://www.balticuniv.uu.se/index.php/about-us>).

The *Quality System of Science and Technology Universities for Sustainable Industry (QUESTE-SI)* was founded under the Lifelong Learning Program ERASMUS of the European Union. The project is managed by a consortium of 18 international partners in 2010-2013. The overall objective of the QUESTE-SI project is to support quality improvement of sustainable development education at Scientific and Technological Universities. In Lithuania, Kaunas University of Technology received the QUESTE-SI award. Evaluated activities cover 4 areas: Strategy; Education and Curriculum; Students' Involvement; and Research and Innovation. Particularly, in Education component, ESD is emphasized in relation of new methodologies in pedagogy and new "transverse" skills such as crisis communication and management, policy analysis and formulation, interdisciplinary approaches to problem solving, but above all, a broader view of problems, their causes, consequences, and solutions; problem-led or project-based learning techniques are recommended."

Sweden:

"Yes, a few networks and partnerships see Part D. After the ESD-seminars (example 1) the participants developed a network among teacher trainers, the LÄRHUT-network. During three-four years we met in two-day seminars once year. Since then, the network is resting. HU2, another network, Sustainable development in higher education, arranges meetings twice a year and ESD-related information on Education and research are send to the network every now and then. WWF Sweden (in cooperation with Per Sund, Mälardalen University) is in charge of web-based information on ESD in higher education. All this initiatives are open to individuals interested in ESD and working with higher education."

UK:

<p>The Environmental Association of Universities and Colleges (EAUC)</p>	<p>EAUC is a not-for-profit charity with a membership of over 220 universities and colleges, supporting sustainability in the UK tertiary education sector. Although EAUC primarily focuses on campus management, it also provides professional development opportunities to develop staff ESD capabilities. Examples include:</p> <ul style="list-style-type: none"> – <i>Trainings and events</i>: events and workshops every year, webinars and face to face training events, as well as an Annual Conference for members and external stakeholders. In some cases, these are focused on ESD teaching and learning and are targeted to university educators. – <i>Sustainability Exchange</i>: free access through an online portal to ESD materials including best practice guides, toolkits, news, reports, videos, podcasts, communities and forums on sustainability and ESD.
---	--

	<ul style="list-style-type: none"> – <i>Green Gown Awards</i>: EAUC organises these prestigious awards for sustainability initiatives across the UK tertiary sector and hold webinars to present the work of winning entries are organised as well as workshops linked to the annual awards ceremony and facilitated by experts in the field. – <i>Topic Support Networks</i>: EAUC has facilitated the creation of Topic Support Networks (TSNs) for staff to network and collaborate on a specific sustainability area. There is a specific TSN on ESD in Scotland. – <i>Sustainability in HE Developers</i>: SHED is a cross-sector community of practice network for ESD in the UK for ESD, jointly led by the HEA and the Environmental Association of Universities and Colleges (EAUC). It connects over 300 tertiary education staff who specialise in ESD or sustainability and operates a special interest group on ESD. For professional development, it provides an online portal of ESD and SD resources, and offers webinars and an annual conference for the exchange of ideas, dialogue and good practices in ESD. <p>Links: http://www.eauc.org.uk/home http://www.eauc.org.uk/shop/mms_event_list.php https://www.eventsforce.net/assuredevents/frontend/reg/thome.csp?pageID=19303&eventID=61&eventID=61 http://www.sustainabilityexchange.ac.uk/ http://www.eauc.org.uk/green_gown_awards http://www.eauc.org.uk/uccfs/education_for_sustainable_development http://www.heacademy.ac.uk/resources/detail/sustainability/ESD_2014/SHED_network</p>
Regional Centres of Expertise (RCE)	<p>RCEs are networks of existing formal, non-formal and informal education organisations, mobilised to deliver ESD to local and regional communities. RCEs are hosted by existing organisations (mostly universities) and form part of an international community of RCEs co-ordinated by the United Nations University.</p> <p>In the UK, there are 8 recognised RCEs and most of them are active in the organisation of ESD seminars, events and forums for university educators and community stakeholders. Some examples of events and training opportunities are provided in question number 4 of this template.</p> <p>Links: http://archive.ias.unu.edu/sub_page.aspx?catID=108&ddlID=183 http://www.ias.unu.edu/sub_page.aspx?catID=108&ddlID=183</p>
ESD Forum (Northern Ireland)	<p>ESD Forum is a networking organisation that promotes a co-ordinated approach to the delivery of environmental education in Northern Ireland. Members include representatives of central and local government, the voluntary sector and the educationalists. Some of the professional development opportunities in the area of ESD that this forum provides include:</p> <ul style="list-style-type: none"> – <i>Networking</i>: The ESD Forum is primarily a networking organisation which acts as a conduit to facilitate information exchange to and between its 86 members. – <i>ESD Days</i>: Every year the Forum runs ESD Days at all of Northern Ireland's University establishments. These are delivered by ESD Forum member groups, and are aimed at trainee teachers and Postgraduate Certificate in Education (PGCE) students. The days consist of a series of workshops in which the leaders' demonstrate best practice in delivery of environmental education through various aspects of the curriculum. – <i>Conferences</i>: The Forum holds one conference per year to explore topical aspects of environmental education. The Conference is open to all members and interested parties, groups and individuals. <p>Links: http://www.eefni.org.uk/aboutus/ http://www.eefni.org.uk/aboutus/whatwedo.php http://eefni.org.uk/publications/universityesddays.php</p>
Teacher Education Network for ESD (TEESNet)	<p>TEESNet is the UK teacher education network for ESD and global citizenship, which evolved from collaboration with World Wide Fund for Nature UK, Oxfam and teacher educators. TEESNet has a membership of over 70 Teacher Education providers (many with 4-5 individual members), 42 NGOs and 10 national educational bodies, and is one of the most active platforms in supporting the professional development of university educators in the area of ESD. This is primarily done through the organisations of events, seminars, training and conferences on ESD, global citizenship and teacher education.</p> <p>Links: http://teesnet.ning.com/events http://teesnet.ning.com/</p>
The International Development	<p>IDEAS is a network of organisations and individuals involved in development education and education for global citizenship across Scotland. Members primarily support education for global citizenship at the school level and provide training and CPD opportunities for school teachers and staff. However,</p>

Education Association of Scotland (IDEAS)	<p>they also work with many of the Initial Teacher Education institutions around Scotland to support teacher training with a global dimension.</p> <p>Links: http://www.ideas-forum.org.uk/ http://www.ideas-forum.org.uk/sector/schools</p>
Ellen McArthur Foundation	<p>Ellen McArthur Foundation is a charitable organisation working in education, business innovation and analysis to accelerate the transition to a Circular Economy. The Foundation has a HE programme which includes professional development opportunities for university educators such as:</p> <ul style="list-style-type: none"> – <i>Global Campus</i>: Individuals from universities across the world are able to join the Foundation's online courses and use the Global Campus website for open access to films, books, articles, webinars, and e-newsletters. – <i>Pioneer and Network Universities</i>: Pioneer universities enter into individual formal agreements with the Foundation for up to three years, agreeing a substantial programme of co-operation and development involving research and/or teaching in the area of circular economy. The first Pioneer University in the UK is the University of Bradford which in partnership with Ellen MacArthur foundation organises a series of seminars and events for university educators to engage in circular economy issues. <p>Links: http://www.ellenmacarthurfoundation.org/ http://www.ellenmacarthurfoundation.org/higher_education/global_campus/global-campus-courses http://www.ellenmacarthurfoundation.org/higher_education/global_campus/p_and_n_universities</p>
National Union of Students (NUS) Green Fund	<p>NUS Students' Green Fund provides students' unions (SU) with the funding to develop transformative, student-led sustainability projects with real impact and legacy. In 2013, using £5mil of HEFCE funding, NUS funded 25 ambitious projects developed by SUs from across England. Some professional development opportunities have been provided as part of the Green Fund awarded projects, helping staff and students to develop a better understanding of ESD so change can be embedded at the institutional level.</p> <p>Links: http://www.studentsgreenfund.org.uk/</p>
COPERNICUS Alliance.	<p>COPERNICUS Alliance is a European network on higher education for sustainable development with a long history in promoting institutional change and transformation in the sector. Members of COPERNICUS in the UK include London South Bank University, Canterbury Christ Church University, the NUS and University of Gloucestershire (host of the Alliance since 2012). Professional development opportunities provided by the network include seminars/events and an Annual Conference. In January 2014, the University of Gloucestershire hosted the Conference on global frameworks and transformative approaches to sustainability in HE. The next Conference in Prague in October 2014 will focus on staff development and competences in ESD.</p> <p>Links: http://copernicus-alliance.org/ http://copernicus.betawerk.eu/elgg/pg/pages/view/38/</p>
London Universities Environmental Group (LUEG)	<p>LUEG was set up to bring together sustainability professionals from London's tertiary institutions in order to contribute to achieving SD in the sector in the Greater London Area. LUEG has sub-groups to discuss current issues and share best practice, including one on curriculum which provides some opportunities for university educators to engage with ESD learning and pedagogy approaches.</p> <p>Links: http://www.eauc.org.uk/sub-group_curriculum1 http://www.lse.ac.uk/intranet/LSEServices/estatesDivision/sustainableLSE/policyObjectives/communitlyInvolvement/LUEG/home.aspx</p>
Sustainability NGOs	<p>UK NGOs such as Forum for the Future and the Schumacher Institute have provided professional opportunities for university educators in the form of one-off workshops and trainings to introduce them to ESD both within the HE curriculum and through informal and social learning for sustainability.</p> <p>Links: http://www.forumforthefuture.org/ http://www.schumacherinstitute.org.uk/</p>

ANNEX 3 – Good Practice Examples in the North region

DENMARK - EXAMPLE 1	
Title of the professional development initiative	Problem Based Learning (PBL) and Sustainability initiatives
Who is the facilitator or leading institution?	Aalborg Centre for Problem Based Learning in Engineering Science and Sustainability under the auspices of UNESCO
Who participates?	Teachers within the Faculty of Engineering and Science
How many people can participate?	As it is now, the participation to the workshops and meetings has been from 10-60.
What type of professional development is it?	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (please specify):
When does the initiative take place? (Please only list initiatives since 2005.)	<p>Two seminars, August Seminar 2012 and August Seminar 2013, have been organised and held as part of research project called "PROBLEM BASED LEARNING AND SUSTAINABILITY – PRACTICE AND POTENTIAL: An inventory carried out at the Faculty of Engineering and Science, Aalborg University, Denmark". About 50 staff members attended.</p> <p>As a follow-up to a two hour workshop on Greening Engineering Education, held as part of the Pedagogical Day at Aalborg University on 14 March 2012, it was decided to create a meeting-place for people working with Sustainability Learning Initiatives. The a meeting place for University Sustainability Learning Initiatives (MUSLI) was established. In MUSLI, smaller groups of 10-15 people meetings has been held among teachers to inspire each other from then.</p> <p>Again in April 9 2014 there was a two hour workshop at the Pedagogical day of the University.</p>
How long does it take?	The two seminars has been 1 day seminars, the follow-up workshops have been of two hours duration and meetings in MUSLI 2-3 hours.
What is the purpose and objective?	<p>The overall aim of the two seminars and workshops was to highlight already existent teaching practises in relation to sustainability, and to discuss how to further integrate sustainability in the teaching of all programmes. Sustainability scientist presented fruit for thought and then discussions took place.</p> <p>The overall objective of MUSLI is to create a meeting-place and information resource for teachers and students working with sustainability in educational programmes at Aalborg University.</p>
What is the ambition (idea behind the initiative)?	To integrate sustainability in all programmes at the Faculty of Engineering and Science Aalborg University.
What is the professional development initiative about (focus, thematic entry point)?	The focus is on how sustainability can be integrated in a problem based learning environment. That means integrating sustainability through semester themes, workshops, courses and projects.
What is the pedagogical approach?	Active learning and a lot of discussion for mutually inspiration.
What has attracted the participants to take part in the initiative?	Support from the management – especially at dean level – but also an overall concern about the sustainability challenge.
What is valuable and interesting about this initiative? Why is it worth doing it?	Because, we need more ambassadors from different disciplines , and we need to conceptualise sustainability in relation to the different disciplines in order to make it relevant for the staff to integrate. This we can not do without starting up staff development – and taking our point of departure in what first movers among teachers are doing.
How is the initiative being funded?	Faculty has supported the initiative.
How is the initiative being evaluated? If possible, please share some of the results.	The initiative has not yet been evaluated – but positive and ongoing interest has been observed along the process.
Link to website/ references	http://www.ucpbl.net/aau-staff-development/pbl-sustainability-initiatives/ http://www.pblee.aau.dk/musli/

DENMARK - EXAMPLE 2	
Title of the professional development initiative	Green sustainable Economy
Who is the facilitator or leading institution?	University college Northern Denmark (together with students and lecturers from Greece, Lithuania, The Netherlands and France)
Who participates?	<ul style="list-style-type: none"> • University College Northern Denmark • Hogeschool Utrecht • Groupe Ecole Supérieure De Commerce Chambéry Savoie • Vilnius University of Applied Science • Technological Educational Institute of Kavala
How many people can participate?	//Information lacking – plan for interview//
What type of professional development is it?	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (please specify):
When does the initiative take place? (Please only list initiatives since 2005.)	University College of Northern Denmark, Aalborg. (8-19 April 2013)
How long does it take?	2 weeks intensive course.
What is the purpose and objective?	The project generated a two-week intensive course on 'Green Sustainable Economy and the Effects of Climate Changes on European Business and Societal Activities'; representing 5 universities from different regions of Europe.
What is the ambition (idea behind the initiative)?	The gathering of students and staff fo enables us to provide students and staff with uptodate and multifarious insights on an urgent and relevant environmental cross border issues.
What is the professional development initiative about (focus, thematic entry point)?	Due to on-going and rapid developments in the work field, this project requires intensive cooperation with authorities, companies and individuals for real life cases, best practices, guest lecturers and company presentations. Besides this staff from five different Universities will work together and inspire each other in the development of the course.
What is the pedagogical approach?	<p>The programme of the IP is based on the concept of 'competency based learning' (meaning that relevant professional tasks and situations have been the starting point for the design of the programme).</p> <p>Students work in (multicultural and multidisciplinary) teams (4-5 students from different European countries) and are faced with real-life professional tasks (analysis, planning, implementation and evaluation of Management issues and decisions) within a realistic environment; being coached/tutored by a multinational and multidisciplinary team of academic staff from all partners and professionals from the region and abroad.</p>
What has attracted the participants to take part in the initiative?	//information lacking – plan for interview//
What is valuable and interesting about this initiative? Why is it worth doing it?	Because the intercultural collaboration between staff members in the making of a course on sustainability at the same time foster new approaches to teach sustainability – and thereby staff development.
How is the initiative being funded?	EU ERASMUS Intensive Programme - Life Long Learning Programme
How is the initiative being evaluated? If possible, please share some of the results.	//information lacking – plan for interview//
Link to website/ references	http://www.ucnorth.dk/Home/Programmes-Courses/Erasmus_IP/Green_Sustainable_Economy.aspx http://www.ucnorth.dk/Home/About_UCN/Partnerships_and_Projects/About_Erasmus_IP.aspx

ESTONIA - EXAMPLE 1	
Title of the professional development initiative	ESF Program: Development of Environmental education: Preparation of curricula and conducting the vocational education program for university educators of teacher training
Who is the facilitator or leading institution?	Environmental board of Estonia
Who participates?	university educators of teacher training programs and others
How many people can participate?	60
What type of professional development is it?	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (please specify):
When does the initiative take place? (Please only list initiatives since 2005.)	April 2014-February 2015
How long does it take?	3X two days
What is the purpose and objective?	To train university educators how to prepare the curricula for future teachers who have to teach sustainability as cross-cutting topic in all educational levels
What is the ambition (idea behind the initiative)?	Over the last 20 years topic of sustainable development has been part of environmental studies and the topic has been given by teachers of biology or geography. The ambition is to train future teachers regardless to their primary topic so they could use SD as framework or Cross-cutting topic.
What is the professional development initiative about (focus, thematic entry point)?	The focus is on three topics: Environment, society, economy. Courses are giving general overview why these topics are relevant in SD. All participants have to prepare curricula where the topics of SD have been integrated. The ability to integrate topics of SD into curricula has to be increased.
What is the pedagogical approach?	Not much information available. On first, environment module, different active learning approaches has been used to change participants attitude about the nature.
What has attracted the participants to take part in the initiative?	The topic environment and sustainable development is cross-cutting topic for state curricula for all educational levels. The teachers are interested how it works, how they could integrate SD into their work regardless their primary topic
What is valuable and interesting about this initiative? Why is it worth doing it?	It is the first attempt to educate university educators about SD. The focus on university educators responsible on preparation of future teachers. It is first time when some university educators are getting information about SD.
How is the initiative being funded?	Funded by European Social Fund
How is the initiative being evaluated? If possible, please share some of the results.	By the feedback of participants. No results available
Link to website/ references	http://www.ht.ut.ee/et/node/2238587/view http://www.keskkonnaamet.ee/teenused/keskkonnaharidus-2/esf-programm-keskkonnahariduse-arendamine/

IRELAND - EXAMPLE 1	
Title of the professional development initiative	Reorienting University Curricula to Address Sustainability
Who is the facilitator or leading institution?	Dr. Charlotte Holland, Dublin City University
Who participates?	Staff within the Faculty of Humanities and Social Sciences
How many people can participate?	Limited to 10
What type of professional development is it?	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar

	<input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input checked="" type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	2010-2013
How long does it take?	Online plus face-to-face (about 10 hours)
What is the purpose and objective?	To enable staff to understand concepts, contexts, principles and practices of ESD; to guide staff towards infusion of sustainability within their own curricula
What is the ambition (idea behind the initiative)?	To help infuse ESD in university curricula and practice – with the ultimate aim of increasing graduate ESD competencies (learning to Know. Do, Be, Live Together etc.)
What is the professional development initiative about (focus, thematic entry point)?	SD/ESD; How to infuse ESD in curricula
What is the pedagogical approach?	Experiential, Constructivist and Transformative
What has attracted the participants to take part in the initiative?	Wanted to develop student competencies in this regard
What is valuable and interesting about this initiative? Why is it worth doing it?	Students very engaged with Sustainability – more interested in doing further study in this area, or working within this area
How is the initiative being funded?	EU Tempus funding
How is the initiative being evaluated? If possible, please share some of the results.	EU evaluation (independent evaluator)
Link to website/ references	http://rucas.edc.uoc.gr/

IRELAND - EXAMPLE 2	
Title of the professional development initiative	Leadership in Sustainable development
Who is the facilitator or leading institution?	ECO-UNESCO (NGO)
Who participates?	All; has been provided to third level lecturers and educators
How many people can participate?	20
What type of professional development is it?	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	Takes place on an ad hoc request basis. ECO-UNESCO delivers the course on request from Universities or Institutes
How long does it take?	1-day training programme
What is the purpose and objective?	To introduce people to the concepts and principles of sustainable development and education for sustainable development.
What is the ambition (idea behind the initiative)?	To up-skill people on principles of sustainable development and education for sustainable development
What is the professional development initiative about (focus, thematic entry point)?	To up-skill on principles of sustainable development and education for sustainable development

What is the pedagogical approach?	Experiential; transformational
What has attracted the participants to take part in the initiative?	Selected third level institutes recognised the need to up-skill staff
What is valuable and interesting about this initiative? Why is it worth doing it?	Good as an introduction to education for sustainable development
How is the initiative being funded?	Colleges own training budgets
How is the initiative being evaluated? If possible, please share some of the results.	Evaluation post course using quantitative and qualitative evaluation forms.
Link to website/ references	www.ecounesco.ie

LATVIA - EXAMPLE 1	
Title of the professional development initiative	Participatory action research in Higher Education to reorient teacher education towards sustainability
Who is the facilitator or leading institution?	Regional University of Latvia - Daugavpils University, Institute of Sustainable Education.
Who participates?	Educators, Bachelor, Master, Doctoral Program students
How many people can participate?	All educators who care about issue of sustainability, groups of bachelor, Master, and Doctoral students from all faculties to keep the continuity of the sustainability study.
What type of professional development is it?	<input checked="" type="checkbox"/> Short course on Sustainability that involve students in participatory action research. <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	This is an ongoing initiative that is organically integrated in University syllabus on sustainability education for the last five years in professional bachelor study programmes "Preschool teacher" and " Basic School Teacher", particularly within the study course " Environmental Pedagogy?"
How long does it take?	The last five years.
What is the purpose and objective?	The participatory action research is used with the aim to reorient students frames of reference towards sustainability through experiential, reflexive learning on sustainability issues at the Faculty of Education and Management at Daugavpils University as a precondition for developing sustainable relationships with the world, thereby preparing teachers for the implementation of sustainability oriented teaching practices.
What is the ambition (idea behind the initiative)?	Engagement of students I the educational actin research may have implications for the high quality teacher education for sustainability: It will involve students in experience based, reflective and discursive inquiry as a multi- vocal venture.
What is the professional development initiative about (focus, thematic entry point)?	Professional development initiative for staff members is to introduce action research as methodology for teacher training purposes.
What is the pedagogical approach?	Participatory action research
What has attracted the participants to take part in the initiative?	To begin from the experience of students, to reflect on issues of mutual concern, and to identify new ways of seeing the world and acting within it, allows practicing open – mindedness, each opinion be valued, formulation of one's own views and enriching one's perspective through discursive participation, learning in mutually supportive environment.
What is valuable and interesting about this initiative? Why is it worth doing it?	Carrying out my action research study with pre-service teachers reveal transformative learning of the participants within the study courses in Bachelor and Master's program and allows to follow how their frames of reference undergo incremental transformation (orientation) towards understanding of sustainability. Action research essentially declares itself in opposition to the quantitative, hypothetic-deductive science which seeks objective representation of the world

	rather than attempts to make sense of human action and participation in it.
How is the initiative being funded?	The initiative is carried on a voluntarily bases by those who care about sustainability.
How is the initiative being evaluated? If possible, please share some of the results.	An essential aspect of action research is its hermeneutic pursuit of meaning from experience – an attempt to see the world as perceived through the eyes of the participants and promote their understanding of various phenomena r to help them find ways to change their own situations for the better through making informed choices. By students' transformed understandings about the world, social, economic reality, environment, oneself, and others.
Link to website/ references	www.du.lv

LITHUANIA - EXAMPLE 1	
Title of the professional development initiative	Project: „Implementation oft he problem-based learning in Lithuanian University of the Health Sciences (LUHS)“
Who is the facilitator or leading institution?	LUHS
Who participates?	Teachers of the Faculty of Medicine
How many people can participate?	75
What type of professional development is it?	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input checked="" type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	2005-2008 – project implementation; follow up activities – until now.
How long does it take?	Original project duration was 3 years. Currently the course for preparing tutors based on the project materials and experience is continuously offered for new-involved teachers (40 hours, 2 times per study year.
What is the purpose and objective?	Project purpose: Implementation of the problem-based learning PBL) system in LUHS. Specific objective: to improve qualification of university teachers for implementing PBL approach in their teaching practice.
What is the ambition (idea behind the initiative)?	The main intention of the project was to reorganise teaching/learning process to PBL system as the fundamental approach at the Faculty of Medicine.
What is the professional development initiative about (focus, thematic entry point)?	Empowering teachers to develop problem-solving abilities of students compatible to ESD learning outcomes, i.e. critical thinking, understanding complexity/ systemic thinking; problem-setting and problem-solving; understanding interrelationships across disciplines/holistic approach; decision making, including in situations of uncertainty; collaboration/team working; negotiation and consensus building; distributing responsibilities (subsidiarity); acting with respect for others.
What is the pedagogical approach?	Developing teachers' competences such as holistic approach (integrative thinking, dealing with complexities) and achieving transformation (teacher's role and teaching/learning process) Methods used for teacher training: lectures, PBL demonstration, piloting tutorials, reflection. Consultancy by the Centre of Studies is permanently available for teachers as well as support in management of student groups and adaptable timeframe.
What has attracted the participants to take part in the initiative?	Striving to participate actively in changing study process according to the common objectives as well as personal interest in new ways of teaching/learning.
What is valuable and interesting about this initiative? Why is it worth doing it?	An interdisciplinary approach (including anatomy, physiology, histology, etc) and its application in clinical situations according to 'scenarios' created by the group of teachers in advance. Development of scenarios which implicitly include learning targets, envisioning

	learning and communication dynamics in the group of students during the term as well as formative assessment of students were the main challenges to overcome in the work of teachers.
How is the initiative being funded?	EU Structural Funds during the project; LUHS budget for current activities.
How is the initiative being evaluated? If possible, please share some of the results.	On regular basis it is evaluated by the Rector's Annual Report and Annual student surveys. Special evaluation was carried out as the Project Report (2008) and external accreditation of the study programme "Medicine" by international group of experts in 2014.
Link to website/ references	Intranet; http://pm.lsmuni.lt/j156/index.php , accessed 20.04.2014

SWEDEN - EXAMPLE 1	
Title of the professional development initiative	Nationell seminariereserie för lärarutbildare om lärande i hållbar utveckling och globala frågor – National seminars on Education for Sustainable Development and Global Challenges
Who is the facilitator or leading institution?	Den Globala Skolan – The Global School (today part of the Swedish Council for Higher Education) & Stockholm School of Teacher Education (today part of Stockholm University)
Who participates?	40 teacher educators from 20 teacher education institutes in Sweden
How many people can participate?	Two persons per TEI were invited. At the moment there was 25-30 TEIs in Sweden
What type of professional development is it?	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	November 2006- May 2007
How long does it take?	Three two-day seminar with work in between
What is the purpose and objective?	<ul style="list-style-type: none"> To develop education and learning for sustainable development and global challenges (ESD & GC) with focus on preschool and school To present possibilities to implement interdisciplinary learning in ESD & GC To develop collaboration and learning in ESD & GC together with representatives of the school placement and other local actors to create a network among educators involved in development of teacher education and ESD & GC To initiate development of ESD at the home universities of the participants. <p>To problematize and develop the didactic questions; What, Why and How</p>
What is the ambition (idea behind the initiative)?	To develop ESD in Swedish teacher education by training the trainers
What is the professional development initiative about (focus, thematic entry point)?	<p>The three seminars had different focus.</p> <ol style="list-style-type: none"> 1) National and international perspectives on ESD. Sustainable development, ethics and democracy 2) Action competence and critical perspectives on global challenges. Cases and simulation. 3) Education for sustainable development. Research on ESD in Sweden. Representatives from the Swedish research network "Education and sustainable development" presented ongoing research. Young learners and sustainable development. Presentation of ongoing ESD development projects at the home universities
What is the pedagogical approach?	Active participation, talks, discussions and question times
What has attracted the participants to take part in the initiative?	A need to improve the individual competence on ESD. Interesting program in a nice environment. To meet colleagues from other TEI. Professional program and lectures. No fee to participate.

What is valuable and interesting about this initiative? Why is it worth doing it?	Early during the decade. Limited number from each TEI made it possible to meet colleagues from most TEIs in Sweden. We gained lots knowledge and experiences, time for reflections and discussions with colleagues.
How is the initiative being funded?	SIDA and the Swedish Authority of School Development funded the course, food and accommodation, whereas the home Universities funded the travel costs and working hours of the participants
How is the initiative being evaluated? If possible, please share some of the results.	Participants answered a questionnaire. The result of the evaluation was very positive. The individual/group expectations were met, in some cases exceeded, during the seminars
Link to website/ references	

SWEDEN - EXAMPLE 2	
Title of the professional development initiative	Learning for sustainable development
Who is the facilitator or leading institution?	ECE Industrial ecology(Seed, ABE)
Who participates?	Teachers at KTH
How many people can participate?	35
What type of professional development is it?	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	Every year
How long does it take?	4,5 ECTS
What is the purpose and objective?	Help teachers integrating sustainable development in their courses
What is the ambition (idea behind the initiative)?	To get SD as a part in all engineering education and help teachers not in the field of SD to do this
What is the professional development initiative about (focus, thematic entry point)?	
What is the pedagogical approach?	Using own cases an implementing the knowledge by writing course plans, seminars, discussion groups
What has attracted the participants to take part in the initiative?	They want to learn about SD and also to get some tips about how to integrate it
What is valuable and interesting about this initiative? Why is it worth doing it?	SD is a relative new area for engineers and students today are often more educated about this than their teachers + teachers either want to integrate this or are "forced" to by the "trend"
How is the initiative being funded?	ECE budget
How is the initiative being evaluated? If possible, please share some of the results.	By course evaluations
Link to website/ references	www.kth.se/student/kurser/kurs/LH215V?/=en

SWEDEN - EXAMPLE 3	
Title of the professional development initiative	The Development of a Faculty Specific, Web Based Tool Box Concerning <i>Education for Sustainable Development</i> at the University of Gothenburg.
Who is the facilitator or leading institution?	The Board of Education at University of Gothenburg has appointed Centre for Environment and Sustainability (GMV), a network organisation at Chalmers

	University of Technology and University of Gothenburg which promotes research and education for sustainable development, to lead the project.
Who participates?	All faculties of University of Gothenburg.
How many people can participate?	No limit
What type of professional development is it?	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	The project started March 1 st 2014, and spans over a three year period. Ideally, this is a <i>continuous</i> process the years to come.
How long does it take?	The webbased tool boxes are planned to be developed during 2014, and sustained during the years.
What is the purpose and objective?	To develop faculty specific, web based tool boxes concerning <i>Education for Sustainable Development</i> at the University of Gothenburg, to be used as resources for teaching and learning.
What is the ambition (idea behind the initiative)?	To increase the amount of ESD at University of Gothenburg, for to make the world a better palce to live in.
What is the professional development initiative about (focus, thematic entry point)?	Too early to tell.
What is the pedagogical approach?	The general starting point is constructive alignment.
What has attracted the participants to take part in the initiative?	<p>ESD is part of University of Gothenburg's Vision 2020, and reflects an increasing awareness concerning the global challenges that faces humanity.</p> <p>The project is a response to the growing ambition among the scientists/scholars/teachers at the university, also partly due to growing knowledge and interest among the students.</p>
What is valuable and interesting about this initiative? Why is it worth doing it?	It gathers and develops tool for teaching and learning.
How is the initiative being funded?	
How is the initiative being evaluated? If possible, please share some of the results.	No, not yet.
Link to website/ references	http://libguides.ub.gu.se/ESD

UK - EXAMPLE 1	
Title of the professional development initiative	Green Academy
Who is the facilitator or leading institution?	HEA (facilitator) / HEFCE (funding organisation)
Who participates?	Institutional teams composed of at least one senior manager (e.g. Deputy Vice-Chancellor), one student, one operational staff (e.g. estates) and one academic staff
How many people can participate?	Small teams of 5-6 members from 8-10 universities
What type of professional development is it?	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input checked="" type="checkbox"/> Seminar

	<input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input checked="" type="checkbox"/> Mentoring/ coaching program <input checked="" type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input checked="" type="checkbox"/> Others (<i>please specify</i>): action learning and change facilitation
When does the initiative take place? (Please only list initiatives since 2005.)	<ul style="list-style-type: none"> – Green Academy I, 2011 (pilot): February 2011 – May 2011 – Green Academy II, 2012-2014: December 2012 – January 2014
How long does it take?	Teams work on their institutional projects over one year (the entire process includes initial meetings and workshops that extend outside that year)
What is the purpose and objective?	<p>The overall aim of the Green Academy is to provide high quality, structured support to institutions seeking to achieve lasting sustainability change with a positive impact on the curriculum and student experience. The Academy provides opportunities for participating institutions to:</p> <ul style="list-style-type: none"> – Develop an understanding of sustainability and its role within the host institution; – Understand the process of change for sustainability relevant to the institution; – Link education, research, operations and student experience to achieve holistic sustainability change; – Develop new processes and content to lead to the embedding of ESD across the curriculum; – Work with sector-leading supporters in developing sustainability strategies and processes relevant to the host institution.
What is the ambition (idea behind the initiative)?	The Green Academy's ambition is to facilitate curriculum and institutional change as well as improve the overall student experience in the area of SD through a professional development and support programme.
What is the professional development initiative about (focus, thematic entry point)?	<p>All institutions selected for this programme need to prove that they have an existing or planned engagement with and/or commitment to sustainability within the institution. Therefore, there is an assumption that participants have an understanding of ESD issues before joining the programme.</p> <p>The Green Academy focus is on facilitating institutional change and developing change competences of participant institutions and members. Participants are involved in mapping, understanding, implementing and assessing change for ESD in HEIs. Support is provided through one-on-one meetings with a Green Academy and through group meetings with other participants:</p> <p><u>Bespoke support:</u></p> <p>All participating institutional teams are assigned a Green Academy facilitator with expertise in the area and who provides individual support and guidance throughout the programme. The HEA Academic Lead for ESD, who is responsible for overseeing the Green Academy, also provides ongoing support as required.</p> <p><u>Green Academy group meetings:</u></p> <p>All Green Academy participants come together as a group and participate in programme planned activities three times during the programme (timeframes based on the second edition of the Green Academy):</p> <ul style="list-style-type: none"> – Start-up meeting (month 1): This meeting is attended by team leaders + 1 other member from each team. The aim is to understand the objectives and purpose of the programme; initiate the development of a team vision to realise sustainability change in the institution; facilitate a team understanding of sustainability relevant to the institution; start the process of action planning in preparation for the residential meeting. – Two-day residential meeting (month 3): This meeting is for all institutional teams' members. Each team considers a business case for embedding sustainability in universities and in curricula, developing practical ways for taking forward sustainability within their institutions, and devising action plans. The residential includes presentation sessions, team based creativity

	<p>activities, introduction to tools and templates to plan institutional initiatives, collaborative challenge roundtable discussions, opportunities to present and share initiative plans to other teams. The sessions are facilitated by experts in HE and SD in the UK and teams are continuously supported by their facilitators. At the end of this meeting, participants return to their institutions to begin the implementation of the action plans developed.</p> <ul style="list-style-type: none"> – Final meeting (month 13): This meeting is for team leaders + 1 other member from each team. The meeting aims to engage participants in reflecting on and sharing the Green Academy process, learning and results as well as discussing future avenues to continue the work undertaken.
What is the pedagogical approach?	The Green Academy is based on an 'explore, challenge and apply' model of change and includes a set of inter-related activities and support mechanisms for participants to engage in change for SD. The pedagogical approaches used are action learning, critical reflection, participation and engagement and envisioning.
What has attracted the participants to take part in the initiative?	<ul style="list-style-type: none"> – The programme is based on the existing model from a national change process for university teams that is well-known and trusted in the UK. – It is interesting and valuable for participants in linking ESD and SD agendas into that HE institutional change process. – There is an institutional buy-in and prestige attached to the high level and recognised profile of this initiative and the national agencies leading it. – It is a formal mechanism for ESD and SD champions to engage with their 'whole institutional' change ambitions and to work in collaborative teams – The teams are encouraged to design change projects not just for SD but to focus on ESD in the curriculum and/or student learning and co-curriculum
What is valuable and interesting about this initiative? Why is it worth doing it?	<p>Value for participating institutions:</p> <ul style="list-style-type: none"> – The programme provides opportunities for institutions to shape and implement a more holistic and strategic approach of embedding ESD. – It is focused on change-agency and the development of competences and strategic approaches related to ESD. – It is teams who participate in the programme and develop and implement institutional action plans (and not individual champions). – There is institutional buy-in which facilitates the complex process of embedding change in the institution and ensures some legacy after the programme ends. <p>Value for individual staff participating in the programme:</p> <ul style="list-style-type: none"> – Individual staff get to work collaboratively with others from their institution with whom they would not usually engage in progressing SD and ESD – Staff get to learn from the professional exchanges and mentoring processes that connect them with best practice and fresh thinking from other institutions – Staff gain from having time away from routine duties at the workshops to help reflect and plan for change initiatives – Staff are able to develop their understanding and skills in ESD and SD in terms of both teaching and learning issues and institutional change challenges
How is the initiative being funded?	<p>Green Academy I (2011-2012): largely funded by HEA and institutional fees (£1,900).</p> <p>Green Academy II (2012-2014): through institutional fees - for institutions subscribing to the HEA, £3600; for non-subscribing UK institutions, £10,000.</p>
How is the initiative being evaluated? If possible, please share some of the results	<p>The Green Academy is assessed by independent external evaluators. The reports for the two cycles of the Green Academy are available on the HEA website and present an evaluation of effects of the programme in the participating institutions. They:</p> <ul style="list-style-type: none"> – assesses the impact on institutional practice in teaching and learning and curriculum review and development; – evaluates the impact on wider institutional policy and practice;

	<ul style="list-style-type: none"> – evaluates the effectiveness of the Green Academy process in contributing to wider staff participation in the change programme. <p>Information gathering for the evaluations consisted of a site visit to each of the participating institutions. Interviews were conducted with individuals involved in Green Academy residential and team leaders meetings, and with other key individuals involved in the ensuing developments.</p> <p>Results/conclusions outlined in the 2011-2012 report:</p> <ul style="list-style-type: none"> – The Green Academy process armed small groups of individuals with confidence and fresh perspectives that enabled them to return to their institutions and make strategic interventions. The scale of the impacts achieved was remarkable since teams made significant progress in a short space of time and institutions did things more quickly, in different ways, across a broader front, and/or on a bigger scale, depending upon the institution. – The programme gave the impetus to participants to engage strategically with their institutions, getting sustainability embedded within strategic planning where before it had either been absent or confined to a narrower environmental definition. It gave individuals confidence to engage with senior managers, and to implement action plans to stimulate curriculum developments. – Action in some areas did not take place in many institutions. Notably, the question of leadership remained to be fully addressed, with one or two exceptions. Participants at the Green Academy residential meeting were drawn from a wide range of management levels and positions, and vice-chancellors and governing board members were scarcely represented at all. – Evidence also suggests that systematic mapping of sustainability in the curriculum had not been widespread, and, related to this, targets remained underdeveloped. <p>One useful vehicle that emerged from the programme was the development of an informal Green Academy participants' network. A number of the team leaders had been in regular contact to share ideas, barriers, solutions and resources. Although this was not immediately initiated by the HEA, the overall approach, atmosphere and structure enabled this to be an indirect evolution from the programme.</p> <p>Results/conclusions outlined in the 2013-2014 report:</p> <ul style="list-style-type: none"> – The Green Academy has enabled institutions to put in place resilient platforms, giving sustainability greater legitimacy and longevity, upon which many activities have been – and continue to be – built. Secondly, Green Academy has placed the teams leading sustainability implementation in a position to respond positively to events as they unfold. – In the first year of Green Academy-inspired activity there was a strong focus on getting top-level support within universities for sustainability. In year two, depending upon the institutional context, there has either been a burgeoning of innovations at the level of faculties/departments in terms of sustainability modules or an extension or building on an already established base of formal curriculum work, coupled to the development of open access modules and/or of the co-curriculum at institutional level. – Evidence from some members of staff who have taken part in the residential highlights the personal impact made on them. A community of practice is starting to develop among staff in institutions, and to support this some universities are developing web-based platforms. – The information captured suggests the emergence of a gap between the ambitions of strategic plans and the excellent work at programme level. This is
--	--

	the gap where there has been a relative lack of engagement with putting in place objectives in terms of outcomes (actual effects on students and staff) rather than activities (eg module developed) or outputs (eg staff/student participation). Monitoring processes and using quality assurance procedures as tools to embed sustainability in the curriculum are also part of this gap.
Link to website/ references	<ul style="list-style-type: none"> Green Academy: http://www.heacademy.ac.uk/resources/detail/change/GA_ESD_12_13/GA_ESD_info Evaluation of the impact of the Green Academy Programme (2011-12): http://www.heacademy.ac.uk/assets/documents/esd/Evaluation-of-the-Green-Academy.pdf Evaluation of the impact of the Green Academy Programme and case studies (2011-12): http://www.heacademy.ac.uk/assets/documents/esd/Green-Academy-Evaluation-Case-studies.pdf Residential programme 2013: http://lcfgreenacademy.weebly.com/uploads/1/9/4/2/19421451/ga_res_13_final_programme1.pdf Evaluation of the impact of the Green Academy Programme (2011-12): http://www.heacademy.ac.uk/assets/documents/esd/2nd_Green_Academy_Evaluation_2014_FINAL.pdf

UK - EXAMPLE 2	
Title of the professional development initiative	Learning for Sustainable Futures (LFSF) Scheme
Who is the facilitator or leading institution?	Sustainability Team and Academic Development Unit from the University of Gloucestershire
Who participates?	University educators and professional staff
How many people can participate?	Each year around 8 university staff as project leaders or co-ordinating small teams to involve more staff (mostly university educators but also professional staff)
What type of professional development is it?	<input type="checkbox"/> Short course <input checked="" type="checkbox"/> Teaching support initiative <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input checked="" type="checkbox"/> Mentoring/ coaching program <input checked="" type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>): the initiative supports new innovation and development projects in ESD within the institution
When does the initiative take place? (Please only list initiatives since 2005.)	LFSF 2012-13 (pilot): September 2012 – July 2013 LFSF 2013-14: September 2013 – July 2014 LFSF 2014-15: September 2014- July 2015
How long does it take?	Staff lead their funded projects through 1 academic year
What is the purpose and objective?	LFSF is an initiative to develop the capabilities of teaching staff, extend dialogue on sustainability in the curriculum and build the community of thinking and practice in ESD across academic and professional teams at the University.
What is the ambition (idea behind the initiative)?	<p>The ambition is to extend professional learning, pedagogical inquiry and curriculum innovation at the University in ESD through a pedagogical and professional development programme for university educators and support staff.</p> <p>It is also a strategic intervention that fits within the University's overall strategy for embedding ESD into thinking and practice across the institution, as well as the formal curriculum in all subject areas.</p>
What is the professional development initiative about (focus, thematic entry point)?	LFSF provides small grants for University staff and small teams to carry out ESD projects that bring pedagogic innovation into the curriculum or that extend learning support and education practice outside the formal curriculum. Projects awarded can take many different forms, in seeking to connect aspects of education and

	<p>learning work at the University with ESD principles.</p> <p>The awards are given to action inquiry projects leading to changes in curriculum and learning practice, rather than formal research processes.</p> <p>Participation in LFSF provides award holders with:</p> <ul style="list-style-type: none"> – Development funds to release time from teaching duties and work on curriculum innovation. – Guidance and mentoring on ESD as well as opportunities to connect with external experts. – CPD opportunities for professional exchanges and workshops to share new practices. – National showcase for their work at the annual LFSF event with colleagues across the UK. <p>Some examples of 2013-14 awards include:</p> <ul style="list-style-type: none"> – Institute of Education and Public Services: It uses the UNECE ESD competence framework, to embed ESD into the teaching and learning process in Education Studies (ES). Phase 1 in 12-13 mapped and systematically embedded the principles across the ES programme and formalised the changes through the annual review and assurance process. Phase 2 is now focused on the creation of a student portfolio that tracks the development of competencies for the purpose of ongoing professional reflection and aligns this with the formal assessment process and curriculum experienced in the ES course. – School of Sport and Exercise: curriculum development project that draws on the sustainability-related learning and skills developed through the University's successful Sports Malawi project (SM is an overseas outreach programme supporting development projects in Malawi and providing students with experience of working on projects and conducting training with local actors in church, sports, education and development fields). This project has created an ESD pedagogical framework to translate the SM learning into the Sports and Development curriculum and to design linked assessment activities that can be applied in the professional workplaces for students. – Fashion Design: this project is led by the senior lecturer and subject group leader at the School of Art and Design who are responsible for the new course being launched in this subject. This project aims to embed ESD approaches into the design and development process for the new curriculum, creating a programme-wide approach to ESD in Fashion that is subject-specific and connects ESD with industry concerns as well as creativity and business skills.
What is the pedagogical approach?	The LFSF process involves staff in professional development in action learning, critical reflection, participatory learning. Individual projects also provide professional development in specific aspects and pedagogical approaches of ESD.
What has attracted the participants to take part in the initiative?	<p>Project leaders receive funding to release time from existing duties and focus on project development activities, 1-1 mentoring and tailored ESD guidance. They value the internal recognition from being part of an initiative that is centrally funded and seen as important strategically to the institution.</p> <p>Their results and findings are showcased at an annual event with colleagues from the University and institutions across the UK and they are provided with expert mentoring from ESD experts and visiting scholars in their subject area. They also benefit from connections they make through the LFSF network of staff engaged in ESD across the institution and cross-fertilisation this brings to their work.</p>
What is valuable and interesting about this initiative? Why is it worth doing it?	LFSF involves University staff with ESD in new and practical ways, enabling them to forge connections with their subjects, explore ideas with colleagues in other disciplines and engage their teaching teams and heads of department with the aims of ESD. Some of the benefits for project leaders include:

	<ul style="list-style-type: none"> – Support through the process, with advice to help develop project concepts and activities – Activities with other project leaders to enable professional exchanges and share ideas – External mentoring as appropriate from visiting experts and scholars working in the area – Guidance on developing resources, publications, dissemination and further bids
How is the initiative being funded?	The professional departments of the University that co-ordinate the scheme provide funds of £2,500 for each project awarded.
How is the initiative being evaluated? If possible, please share some of the results.	<p>The LFSF scheme has no formal evaluation in place yet but during 2014-15 its processes and outcomes will be assessed by an external evaluator as part of an external evaluation of the University's overall work to embed ESD. Professional reflections are also captured each year at the annual LFSF event to capture the experiences and challenges encountered in embedding ESD and to consider the impacts of projects and how they can develop further.</p> <p>LFSF has been nationally recognised with a Highly Commended position in the Learning and Skills category of the 2013 UK Green Gown Awards. The judges commented on how LFSF has created <i>"a comprehensive and strategic approach to CPD in sustainable development using a modest investment to develop a high impact approach with wide potential transferability."</i></p>
Link to website/ references	<p>LFSF website: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/default.aspx</p> <p>LFSF Projects 2013-14: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/LFSFLiveProjects2013-14.aspx</p> <p>LFSF Projects 2012-13: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/LFSFProjects2012-13.aspx</p> <p>LFSF Event 2013: http://insight.glos.ac.uk/sustainability/Education/learningforsustainablefutures/Pages/LearningforSustainableFuturesEvent2013.aspx</p>

UK - EXAMPLE 3	
Title of the professional development initiative	Sustainability Education Negotiated Study Module
Who is the facilitator or leading institution?	Dr Jennie Winter, Educational Development, Pedagogic Research Institute and Observatory (PedRIO), Plymouth University, UK
Who participates?	Academics
How many people can participate?	The online element is accessible to all. The class sessions are smaller to allow for the experiential element (maximum 30).
What type of professional development is it?	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input checked="" type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others (<i>please specify</i>):
When does the initiative take place? (Please only list initiatives since 2005.)	Annually in the summer term since 2012
How long does it take?	There have been two delivery options. Option 1 – 3hrs one day a week for 5 weeks Option 2 – 2 x 1 day (7hrs per day) separated by an 8 week period
What is the purpose and objective?	To provide an introduction to sustainability education with the opportunity for academics to embed new knowledge in disciplinary practice and make changes to

	what they do.
What is the ambition (idea behind the initiative)?	Research demonstrates that the work of committed individuals is an important driving force in taking sustainability education forward in universities. If this is the case then providing a space where new academics can consider the benefits of sustainability education to their discipline and to the student population are vital. This module does that, encouraging individual interest and a community of practice coalescing around the notion of the sustainable university.
What is the professional development initiative about (focus, thematic entry point)?	The professional development initiative focuses on sustainability education in HE contexts. The premise is that the University is a beacon of good sustainability practice and houses an emergent sustainability community that is embedded across its different dimensions; education, procurement, estates and management. The course attempts to pull these seemingly disparate dimensions together in efforts to reconceptualise and advance sustainability education and literacy.
What is the pedagogical approach?	<p>The module is rooted within interpretivist and socially critical approaches to sustainability education. The teacher is facilitator and participant; the students are knowledge creators and work together to explore ideas. The majority of the declarative content is delivered via an online resource which includes material on:</p> <ul style="list-style-type: none"> – Exploring sustainability and the history of Sustainability Education – Paradigms and positions – Learning theories and sustainability pedagogy – Implementation <p>The in-class sessions are used to foster discussion, to allow deeper explorations of tricky or threshold concepts and to explore the university campus and community. This is done through bringing varied expertise into the classroom; for example, the Head of Education for Sustainable Development, the University Sustainability Manager and committed enthusiast academics. But also, and critically, the campus is explored through tours and ‘walkabout’ explorations. Examples have included guided tour of waste facilities/ energy facilities/ hospitality and catering. Also the Student Union, where academics have had the chance to talk to students about sustainability (education) and garner links between the formal and informal curricula. These experiences support discussions about sustainability education and often result in useful innovations in academic practice.</p>
What has attracted the participants to take part in the initiative?	An interest or curiosity in this area. Prospective participants are presented with a 3 minute video pitch about the module which helps them to decide if they want to get involved.
What is valuable and interesting about this initiative? Why is it worth doing it?	The course provides a comprehensive introduction to the philosophical underpinnings of sustainability education. It adopts the pedagogic principles of sustainability education so teaches through examples and provides an experience which engages its participants with the university community of practice in this area.
How is the initiative being funded?	The module is part of the University’s Post-graduate Certificate in Academic Practice (PGCAP) programme which is funded via a top-slice accrued from the faculties.
How is the initiative being evaluated? If possible, please share some of the results.	The module is subject to the standard quality assurance procedures used by the University, including participant feedback and annual review. Previous feedback has focused positively on the experiential and knowledge transfer elements and the way that understanding emerges collaboratively during the course.
Link to website/ references	<p>Exploring sustainability and the history of Sustainability Education in the UK (HEFCE, CETLS etc): http://xerte.plymouth.ac.uk/play.php?template_id=292 Paradigms and positions: http://xerte.plymouth.ac.uk/play.php?template_id=384 Learning theories and sustainability pedagogy: http://xerte.plymouth.ac.uk/play.php?template_id=417 Implementation: http://xerte.plymouth.ac.uk/play.php?template_id=297</p>

ANNEX 4 – Resources

Denmark	<ul style="list-style-type: none"> • Copenhagen Declaration: http://ufm.dk/uddannelse-og-institutioner/internationalisering/internationalt-samarbejde-om-uddannelse/kobenhavn-processen/kobenhavn-erklaringen/the-copenhagen-declaration?searchterm=education%0A%20%20%20%20%20%20%20%20%20%20%20%20%20%20for%20sustainable%20development • Learning and Education for Sustainable Development - RCE Denmark: http://www.rce-danmark.dk/RCE+Denmark/Foundationpapers+for+RCE+Denmark/ • Problem Based Learning and Sustainability Initiatives: http://www.ucpbl.net/aau-staff-development/pbl-sustainability-initiatives/ http://www.pblee.aau.dk/musli/ • Green Sustainable Economies http://www.ucnorth.dk/Home/Programmes-Courses/Erasmus_IP/Green_Sustainable_Economy.aspx http://www.ucnorth.dk/Home/About_UCN/Partnerships_and_Projects/About_Erasmus_IP.aspx
Estonia	<ul style="list-style-type: none"> • ESF programme documents: “Development of Environmental education”, “Preparation of curricula and conducting the vocational education program for university educators of teacher training” • Action plan for education of teacher training: http://www.hm.ee/index.php?popup=download&id=8782 • Estonian Higher Education Strategy 2006-2015: https://www.riigiteataja.ee/ert/act.jsp?id=12752949
Ireland	<ul style="list-style-type: none"> • http://teachingandlearning.ie/priority-themes/work-plan-201314 • The National Strategy for Higher Education 2030-: https://www.google.ie/#q=national+strategy+for+higher+education+to+2030 • National Forum for the Enhancement of Teaching & Learning in Higher Education Work plan http://teachingandlearning.ie/priority-themes/work-plan-201314 • The National Strategy for Higher Education 2030- • http://www.hea.ie/en/policy/national-strategy • Discussion Paper on the Development of a National Strategy on ESD 2007: http://www.ecounesco.ie/images/esddiscussionpaper.pdf • Re-orienting University Curricula to Address Sustainable Development: http://rucas.edc.uoc.gr/ • Leadership in Sustainable Development: www.ecounesco.ie
Latvia	<ul style="list-style-type: none"> • National Development Plan (2014 - 2020) • Strategy of Sustainable Development 2030 • Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability (2005) Unesco: Education for Sustainable Development in Action, Technical Paper Nr2 • Institute of Sustainable Education at Daugavpils University Development Strategy: http://du.lv/files/000/002/960/III_Strategija.pdf?1349678950 • Baltic and Black sea Circe Consortium (BBCC) Annual international scientific conference: http://ise-lv.eu/index.php?show=49 • SWEDEST: http://swedesd.se/images/stories/PDF/unfolding_the_power_of_esd_lessons_learned_and_ways_forward.pdf • Participatory action research in Higher Education to reorient teacher education towards sustainability: www.du.lv
Lithuania	<ul style="list-style-type: none"> • Law on Higher Education and Research (approved by the order No XI-24230 of Seimas of the Republic of Lithuania of 9 April 2009) • State Program for Studies, Research and Experimental (social, cultural) Development for 2013-2020 (in Lithuanian) (approved by the decision No 1494 of Government of the

	<p>Republic of Lithuania of 5 December 2012).</p> <ul style="list-style-type: none"> • Descriptor of Study Cycles (approved by the decision No V-2212 of the Minister of Education and Science of 21 November 2011) • Methodology for Conducting an Institutional Review in Higher Education (approved by the order No 1-01-135 of the Director of the Centre for Quality Assessment in Higher Education of 25 October 2010): http://www.skvc.lt/en/content.asp?id=86 • Methodology for Evaluation of Higher Education Study Programmes (approved by the order No 1-01-162 of the Director of the Centre for Quality Assessment in Higher Education of 20 December 2010) (available at http://www.skvc.lt/en/content.asp?id=86, accessed 20.04.2014). • The National Reports within the Bologna Process of 2003, 2005, 2007, 2009, 2012 (available on the website of the European Higher Education Area secretariat: http://www.ehea.info/) • Strategic documents and institutional self-assessment reports of the Kaunas University of Technology and 'Kauno kolegija'/University of Applied Sciences; Project Report and Annual Rector's Reports of the Lithuanian University of the Health Sciences. • Baltic University Programme (BUP): http://www.balticuniv.uu.se/index.php/about-us • Implementation of the problem-based learning in Lithuanian University of the Health Sciences (LUHS): http://pm.lsmuni.lt/j156/index.php
Sweden	<ul style="list-style-type: none"> • Gothenburg university Strategic Plan: http://www.mls.adm.gu.se/ • Högskolan i Borås Strategic Plan: http://www.hb.se/Om-hogskolan/ • Linné universitetet Strategic Plan: http://lnu.se/om-lnu/strategi-och-verksamhetsutveckling • Malmö University Strategy 2020: http://strategi2020.mah.se/?page_id=38. • Chalmers and Gothenburg University ESD seminars: http://www.chalmers.se/insidan/sites/tme/aktuellt/kalendarium/sok-kalendariet/seminarium-om-larande http://www.chalmers.se/insidan/sites/arch/aktuellt/kalendarium/sok-kalendariet/hallbar-utveckling • Chalmers University short introduction in sustainability: http://www.chalmers.se/insidan/SV/om-chalmers/miljo/utbildningar/grundlaggande • Learning for sustainable development: www.kth.se/student/kurser/kurs/LH215V?/=en • The Development of a Faculty Specific, Web Based Tool Box Concerning <i>Education for Sustainable Development</i> at the University of Gothenburg: http://libguides.ub.gu.se/ESD
United Kingdom	<ul style="list-style-type: none"> • UK Professional Standards Framework (HEA, 2011): http://www.heacademy.ac.uk/assets/documents/ukpsf/UKPSF_2011.pdf • HEA Strategy: http://www.heacademy.ac.uk/assets/documents/aboutus/strategic-plan-2012-16.pdf • QAA ESD guidance document: http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/education-for-sustainable-development-guidance.aspx • ESD in the UK – Current status, best practice and opportunities for the future (UK National Commission for UNESCO, 2013): http://www.unesco.org.uk/uploads/Brief%209%20ESD%20March%202013.pdf • People and Planet Green League: http://peopleandplanet.org/greenleague • First-year attitudes towards, and skills in, sustainable development (Elisabeth Bone and Jamie Agombar, 2011): http://www.heacademy.ac.uk/assets/documents/sustainability/firstyearattitudes_finalreport.pdf • UNESCO HE Report (2014) – not publicly available • UNECE (2011) Learning for the future: Competences in Education for Sustainable Development, ECE/CEP/AC.13/2011/6; http://www.unece.org/fileadmin/DAM/env/esd/6thMeetSC/Learning%20for%20the%20Future%20Competences%20for%20Educators%20in%20ESD/ECE_CEP_AC13_2011_6%20COMPETENCES%20EN.pdf • LSIS framework: http://www.excellencegateway.org.uk/node/2765