STATE OF THE ART REPORT

Mapping opportunities for developing Education for Sustainable Development competences in the UE4SD partner countries

Marlene Mader, Gerd Michelsen, Clemens Mader and Simon Burandt
(Leuphana University of Lüneburg, Germany)

Daniella Tilbury and Alex Ryan
(University of Gloucestershire, United Kingdom)

Jana Dlouhá, Andrew Barton and Jiří Dlouhý
(Charles Universty Prague, Czech Republic)

David Alba and Javier Benayas
(Autonomous University of Madrid, Spain)

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State of the art report on mapping opportunities for developing Education for Sustainable Development competences in the UE4SD partner countries

How to reference the report?

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The state of the art report is available at www.ue4sd.eu/outcomes.

Contents

List of figures, maps and tables

1. UE4SD – University Educators for Sustainable Development

This report has been developed as part of a three-year project entitled University Educators for Sustainable Development (UE4SD), funded by the European Commission under the Lifelong Learning Programme – Erasmus Academic Networks and led by the University of Gloucestershire (United Kingdom). Project members across Europe are working to locate and capture recent efforts to support the development of education for sustainable development (ESD) competences of university educators. The aim is to draw on best practices, new initiatives, and usable tools for professional development in ESD for university educators.

The project has 54 partners across 33 countries in Europe divided into four regional hubs to ensure that regional scenarios and contexts are visible throughout the project. The North region is coordinated by the University of Gloucestershire (United Kingdom), the West region by Leuphana University of Lüneburg (Germany), the South region by the Autonomous University of Madrid (Spain), and the East region by Charles University Prague (Czech Republic).

UE4SD seeks to establish a leading expert group in education for sustainable development competences in higher education in Europe and will create a platform to combine and share the expertise of network partners so that they can inform policy and practice well beyond the life of the project. Its activities are closely associated with COPERNICUS Alliance – the European Network of Higher Education for Sustainable Development.

1.1. Purpose, process and development of the mapping exercise

The first phase of the project involved each country completing a mapping template to capture the status of ESD in higher education at the national level as well as to identify existing ESD professional development opportunities for university educators. The mapping template included following information:

- Status: captures background information on the status of ESD in higher education at the national level as well as key policies, resources, and initiatives which support its development.
- Initiatives: provide an overview of initiatives at the institutional and at the professional level to support the professional development of university educators in ESD.
- Potential case studies: document two or three key initiatives that directly support the professional development of university educators in ESD. They include details about purpose, focus, pedagogical approach, type of initiative, target groups, and motivations to participate.
- Reflection: provides a short reflective piece on strategies going forward to improve professional development opportunities for university educators.

The template and the guidelines for collecting the information were developed by the regional coordinators and presented to partners in regional meetings during February and March 2014 at the different regional hubs. After the regional meetings in Cheltenham (North), Lüneburg (West), Madrid (South) and Prague (East), national template coordinators worked together with other project partners from the same country to collect the data for the template. National coordinators submitted the completed template to the regional hub coordinators in May 2014; hence the report reflects the national status and initiatives as of May 2014.

The national templates informed one of four regional reports (North, West, South and East Europe) to be compiled by the regional coordinators. This state of the art report is generated by the summaries of the regional reports and reflects opportunities that exist for the development of ESD

competences for university educators at the European level. It also identifies strategies and makes recommendations for progressing this important area of learning. It has to be noted that the data provided does not claim to be complete, neither presents an empirically grounded research, but it reflects estimations of experts in the field of sustainability in higher education from the UE4SD partner countries and presents a snap-shot of ESD professional development opportunities. The information is collectively analysed, nevertheless a comparison between countries proves to be difficult as, depending on the national context, an initiative, guideline or strategy can be perceived as special or exceptional by representatives from one country, while the same case might not even be reported by experts from another country. The outcomes of this review are presented at the annual UE4SD Conference in Prague in October 2014.

Furthermore the state of the art report will inform the second and third phases of the project, which seek to develop a leading practice publication on professional development in ESD for university educators and an online platform of resources to support this important area. These outputs will in turn support the establishment of an Academy for ESD in Higher Education.

1.2. UE4SD partner countries

The UE4SD project consortium is made up of 54 higher education institutions from 33 European countries. The map below shows the UE4SD partner countries in the four regional hubs – eleven partners from eight countries in the North region, seven partners from six countries in the West region, twenty partners from seven countries in the South region, and sixteen partners from twelve countries in the East region. The list of partner institutions, including the country codes of Map 1, can be found in Table 1 below.

As also outlined in Table 1 the mapped countries comprise more than 3,000 higher education institutions with more than 24 million students[1]. These numbers are not exact and are not directly comparable, as some partners provided rounded values while others submitted exact numbers (which have been rounded for this report); additionally the numbers of higher education students were from different years and from different national or European sources. Nevertheless they provide an overview of the higher education landscape.25 UE4SD partner countries are European Union member states, but all 33 countries have implemented the Bologna process and collectively work towards quality in the European higher education area.

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[1] No mapping template was received from the partner institution in Norway; hence unfortunately information from Norway could not be taken into account in this report.

Map 1: Overview of UE4SD partner countries in the four regional hubs

UE4SD partner countries

- ■ Regional partners NORTH
- ■ Regional partners WEST
- ■ Regional partners SOUTH
- ■ Regional partners EAST
- ■ No UE4SD partner
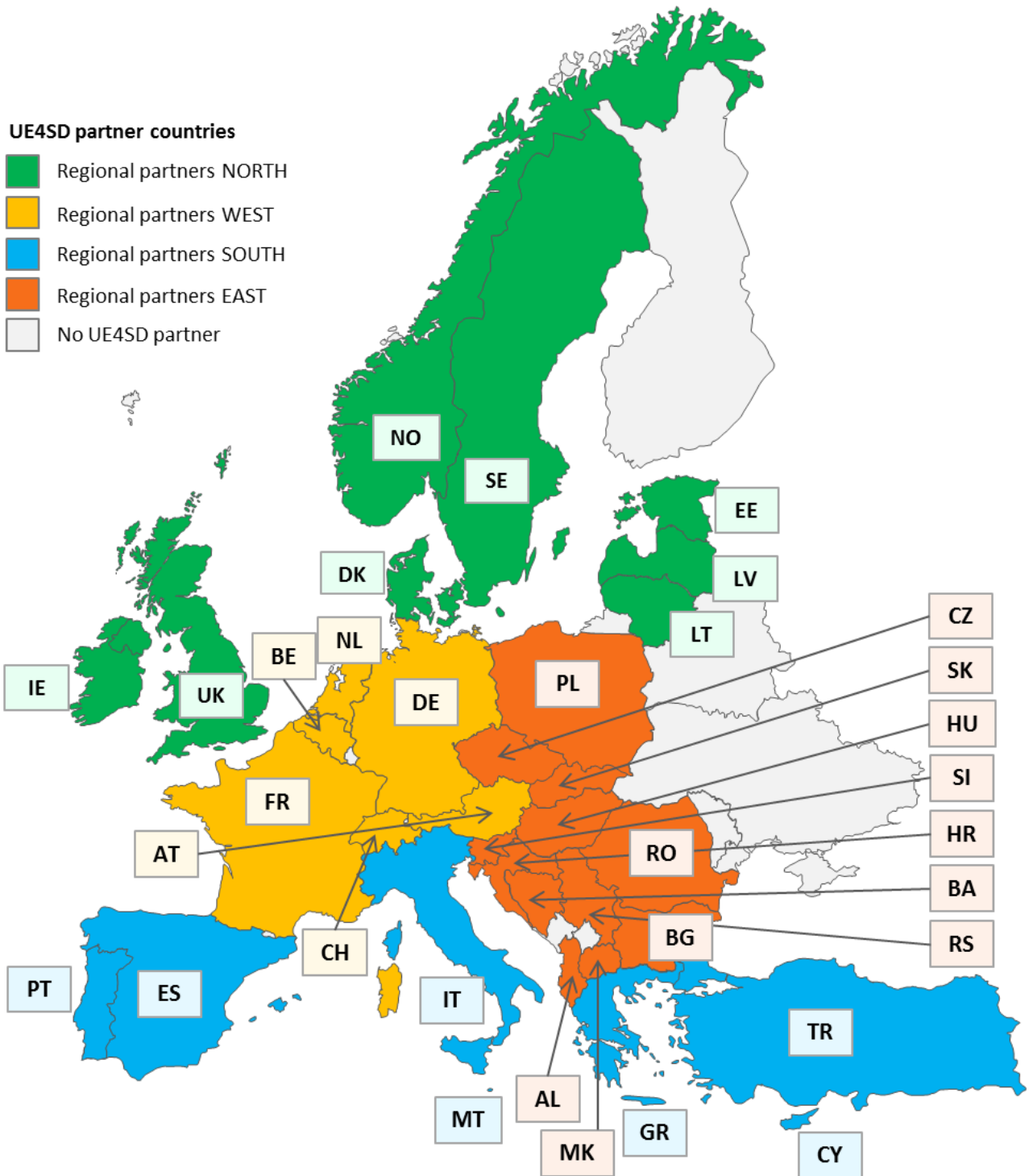
Table 1: UE4SD partner institutions and county totals of higher education institutions and students

Country	Country code	Partner institutions	Number of HE institutions in the country	Number of HE students in the country (approx.)
Denmark	DK	Aalborg University	30	230,000
Estonia	EE	Institute of Ecology Tallinn University	23	65,000
Ireland	IE	ECO-UNESCO	44	165,000
Latvia	LV	Institute of Sustainable Education at Daugavpils University	33	82,000
		Centre for Sustainable Business at SSE Riga		
Lithuania	LT	Vilnius University	47	170,000
Norway	NO	University of Oslo	-	-
Sweden	SE	Malmö University	44	425,000
		Uppsala University		
United Kingdom	UK	University of Gloucestershire	163	2,340,000
		London South Bank University		
Austria	AT	University of Graz	55	350,000
		University of Natural Resources and Life Sciences (BOKU) Vienna		
Belgium	BE	Leuven University College	26	230,000
France	FR	University of Versailles	320	2,387,000
Germany	DE	Leuphana University Lüneburg	415	2,613,000
Netherlands	NL	Open University of Netherlands	52	660,000
Switzerland	CH	University of Basel	43	230,000
Cyprus	CY	University of Cyprus	8	51,000
		Frederick University		
Greece	GR	Mediterranean Information Office for Environment, Culture and SD	37	297,000
		National and Kapodistrian University of Athens		
Italy	IT	University of Bergamo	87	1,710,000
		University of Siena		
		University of Roma La Sapienza		
		University of Palermo		
		University of Roma Tor Vergata		
Malta	MT	University of Malta	2	17,500
Portugal	PT	Portuguese Catholic University	121	371,000
		Aveiro University		
		Minho University		
		Leiria Polytechnic Institute		

Spain	ES	Universidad Autónoma de Madrid	81	1,548,000
		Universitat Autònoma de Barcelona		
		Universitat de Girona		
		Universidad de Granada		
		Universidad de País Vasco		
Turkey	TR	Bogaziçi University	145	5,913,000
Albania	AL	University of Tirana	59	161,000
Bosnia and Herzegovina	BA	University of Bihác	120	116,000
Bulgaria	BG	University of Architecture, Civil Engineering & Geodesy	51	285,000
		University of Forestry		
Croatia	HR	University of Rijeka	137	188,000
Czech Republic	CZ	Charles University Prague	72	381,000
Hungary	HU	Eotvos Loránd University	68	316,000
Macedonia	MK	Ss. Cyril and Methodius University in Skopje	20	57,000
Poland	PL	Adam Mickiewicz University in Poznan	453	1,677,000
		University of Warsaw		
Romania	RO	University of Bucharest	105	465,000
Serbia	RS	University of Niš	226	240,000
Slovakia	SK	Slovak University of Technology in Bratislava	40	201,000
		Comenian University Bratislava		
Slovenia	SI	University of Ljubljana	47	77,000
		University of Maribor		

1.3. Clarification of key terms

Important key terms are briefly defined here in order to clarify the meaning of concepts used in this report.

Education for sustainable development in higher education

"Learning to change for a better world" is the catchphrase most often associated with the term education for sustainable development (ESD). Underpinning this education movement is a commitment to rethinking the purposes of education and to transforming curriculum frameworks and pedagogical practices. One of the optimum "moments" for engaging learners in sustainable development is through higher education as this is for many the place where they encounter systemic and critical thinking.

ESD in higher education is not simply about an 'add-on' of new information or issues in the content of what is already being taught so that students can learn 'about sustainability'. It is much more ambitious in scope as it focuses on how we 'do' education, on how we respond to sustainability

imperatives by rethinking our methods, revising our courses, recasting our priorities, and reorienting our communities of practice.

ESD has the potential to enrich learning experiences through transdisciplinary, inclusive, and participatory teaching approaches. These changes are needed to address social injustice, health and wellbeing, environmental quality and the economic challenges that face our communities today.

ESD competences for university educators

In order to be able to reorient curriculum and learning frameworks at higher education institutions towards sustainability, university educators need to be engaged and enabled through skills and capabilities. By strengthening the capacity of educators to achieve systemic changes, act as learning facilitators for ESD, and hence equipping learners with the capabilities they in turn need if they are to contribute to a sustainable development, higher education has a particular responsibility and role to play.

An expert group convened by UNECE identified key competences for educators in ESD (UNECE, 2011). These involved:

a. Following a holistic approach which seeks integrative thinking and practice;
b. Envisioning change which explores alternative futures, learns from the past, and inspires engagement in the present; and
c. Achieving transformation which serves to change the way people learn and the systems in which they learn.

UNECE recommends that educators develop these competences in order to be able to influence three levels: practice, pedagogy as well as people engagement.

University educator

A "university educator" is a person who has teaching responsibility in a higher education institution, which covers universities, universities of applied science and institutes or colleges of higher education. This project is relevant to university educators from all disciplines and departments.

Professional development

"Professional development" is understood here as both formal as well as non-formal learning opportunities that foster capability levels. Formal initiatives may include interactive settings such as short courses, teaching support initiatives, seminars, staff induction, and in-house certification for new teaching staff. Non-formal initiatives may involve mentoring and coaching programmes, academic working groups for university educators, or work shadowing.

1.4. Methodological approach of collecting and validating the data

The national mapping templates were filled with data by the national UE4SD partners. The different approaches of collecting and validating the respective data are outlined in Figure 1 below, while information at a country level can be found in Table 2 below. The information has been adopted from the four regional reports.
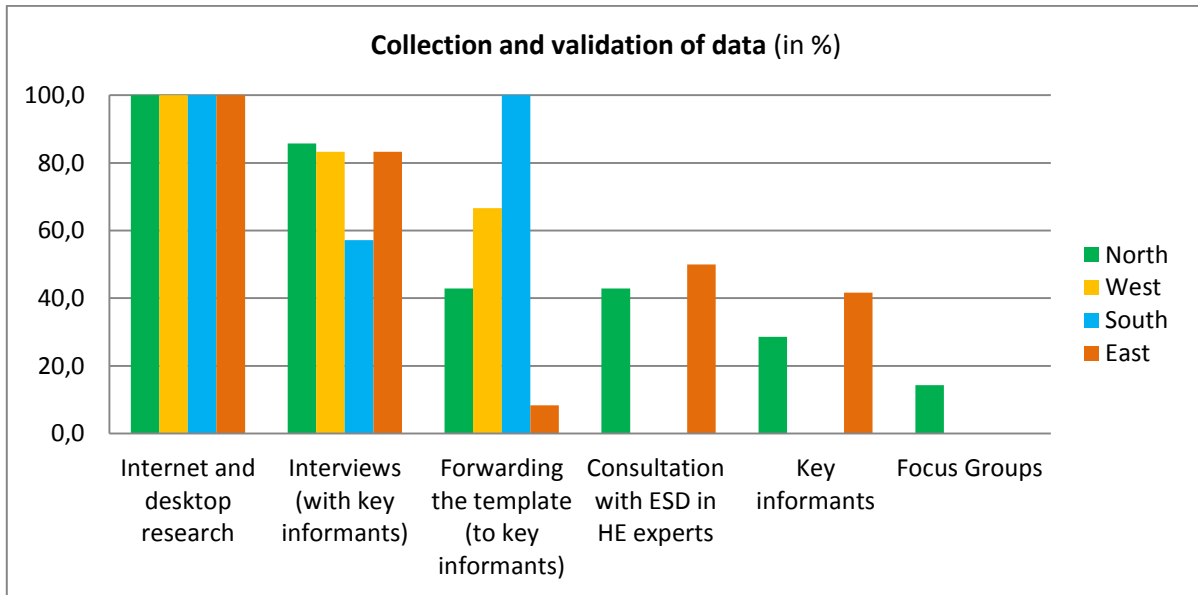
Figure 1: Overview of data collection and validation for completing the national reports in the four UE4SD regional hubs (in per cent)

For the collection of data, all countries report that they conducted internet and desktop research, which were followed by interviews with key informants (in all countries except United Kingdom, Austria, Bosnia and Herzegovina, Poland, Cyprus and Malta). The interviews took place face-to-face or via the phone. Forwarding the template to key informants via e-mail and asking them to fill out specific parts of the template or consulting them regarding specific information was common practice in the West and South regions (except in France and Switzerland). With Ireland, Latvia, and Sweden three Northern European partners also used this approach, while in the East region only Slovenia forwarded the template.

Regional coordinators from the North and East region have additionally mapped if the partners consulted ESD experts in higher education, key informants, or focus groups. Three countries from the Northern region (Ireland, Sweden and United Kingdom) and six out of the twelve countries from the Eastern region (Albania, Czech Republic, Macedonia, Romania, Serbia, Slovakia) report that they consulted experts to collect data for the national mapping exercise. With Denmark and United Kingdom two partners from the North as well as five partners from the East – namely, Albania, Czech Republic, Macedonia, Poland and Slovenia – involved key informants. Only Latvia involved focus groups in their data collection and validation.

In most of the UE4SD partner countries the information was validated through reviews by key informants, which were conducted via interviews; in several cases the completed template was sent to the key informants, who then provided their feedback. Some partners also used the approach of comparing their information from interviews with published literature and official documents.

Table 2: Overview of data collection and validation in the UE4SD partner countries

	Internet/ desktop research	Interviews	Forwarding the template	Consultation with ESD in HE experts	Key informants	Focus groups
Denmark	✓	✓			✓	
Estonia	✓	✓				
Ireland	✓	✓	✓	✓		
Latvia	✓	✓	✓			✓
Lithuania	✓	✓				
Sweden	✓	✓	✓	✓		
United Kingdom	✓			✓	✓	
Austria	✓		✓	*These aspects have not been explicitly mapped for the West region.*		
Belgium	✓	✓	✓			
France	✓	✓				
Germany	✓	✓	✓			
Netherlands	✓	✓	✓			
Switzerland	✓	✓				
Cyprus	✓		✓	*These aspects have not been explicitly mapped for the South region.*		
Greece	✓	✓	✓			
Italy	✓	✓	✓			
Malta	✓		✓			
Portugal	✓		✓			
Spain	✓	✓	✓			
Turkey	✓	✓	✓			
Albania	✓	✓		✓	✓	
Bosnia and Herzegovina	✓					
Bulgaria	✓	✓				
Croatia	✓	✓				
Czech Republic	✓	✓		✓	✓	
Hungary	✓	✓				
Macedonia	✓	✓		✓	✓	
Poland	✓				✓	
Romania	✓	✓		✓		
Serbia	✓	✓		✓		
Slovakia	✓	✓		✓		
Slovenia	✓	✓	✓		✓	

2. The status of ESD in higher education at the national level

This section provides a general view about the integration of ESD in higher education in the UE4SD partner countries, with an emphasis on the issue of professional development opportunities for university educators to improve ESD competences. The information has been compiled from the four regional reports, which include more detailed information at the country level as well as regional characteristics. It does not claim to be exhaustive, but draws a general picture of ESD in higher education by reflecting perspectives of national ESD experts.

2.1. National strategies, policies, and legislation which recognise ESD in higher education in the partner countries

As presented in Figure 2 below, national strategies, legislation, and policies that recognise ESD in higher education exist in varying degrees in the UE4SD partner countries in the four regional hubs North, West, South, and East. It should be noted that the category "development plan for higher education" has only been reported for the North and East regional hubs and not for West and South; and partners from the South region have also not listed "national legislation" as a category.

With 16 mentions, half of the 32 European countries report that national strategies or action plans on sustainable development or education for sustainable development exist at the national or province level, which include all six countries from the Western hub, five out of seven countries from the Southern hub, three out of seven countries from the Northern hub, and two out of twelve countries from the Eastern hub. In several countries these documents focus on general ESD strategies, without emphasising ESD in higher education in particular. Some countries additionally mention that these strategies are informed by international ESD declarations and guidelines, such as the implementation of the UN Decade on Education for Sustainable Development (2005-2014) or the UNECE strategy on ESD.

Thirteen countries have higher education acts that address ESD, which for instance encourage higher education institutions to include ESD in their competency profiles, call for the institutions to develop sustainability concepts, or address the importance of continuing education for their academic staff. Five countries from the West, three each from the North and the East and one country from the South have such higher education acts. In eleven countries there is national legislation that addresses ESD in higher education, including six countries of the East region, two countries from the North and West region and one country from the South. While the legislative documents in the Eastern region often follow international trends, incorporate sustainability issues in different environmental sections, and are often more formal statements that are not implemented in practice, the legislative documents identified in the North and West explicitly address ESD in higher education.

In eight countries (three each in the North and the East and two in the South) ESD is reflected in sustainability strategies or Agenda 21 plans, and two countries from the East and one country from the North incorporate ESD in development plans for higher education.

As shown in the figure below, Slovakia and United Kingdom stand out as ESD is supported in their countries through various strategies and policies. In Slovakia legal documents, national sustainability strategies, and different action plans targeting sustainable development, ESD, and global education have been developed by government institutions. The situation in the United Kingdom varies considerably, with each country being responsible for the development and implementation of ESD in higher education. Different strategies have evolved, but all are supported by a national Higher Education Academy, which actively promotes ESD in teaching and learning.

Five countries (two from the South and three from the East) state that they are not aware of any strategy or policy that recognises ESD in higher education.
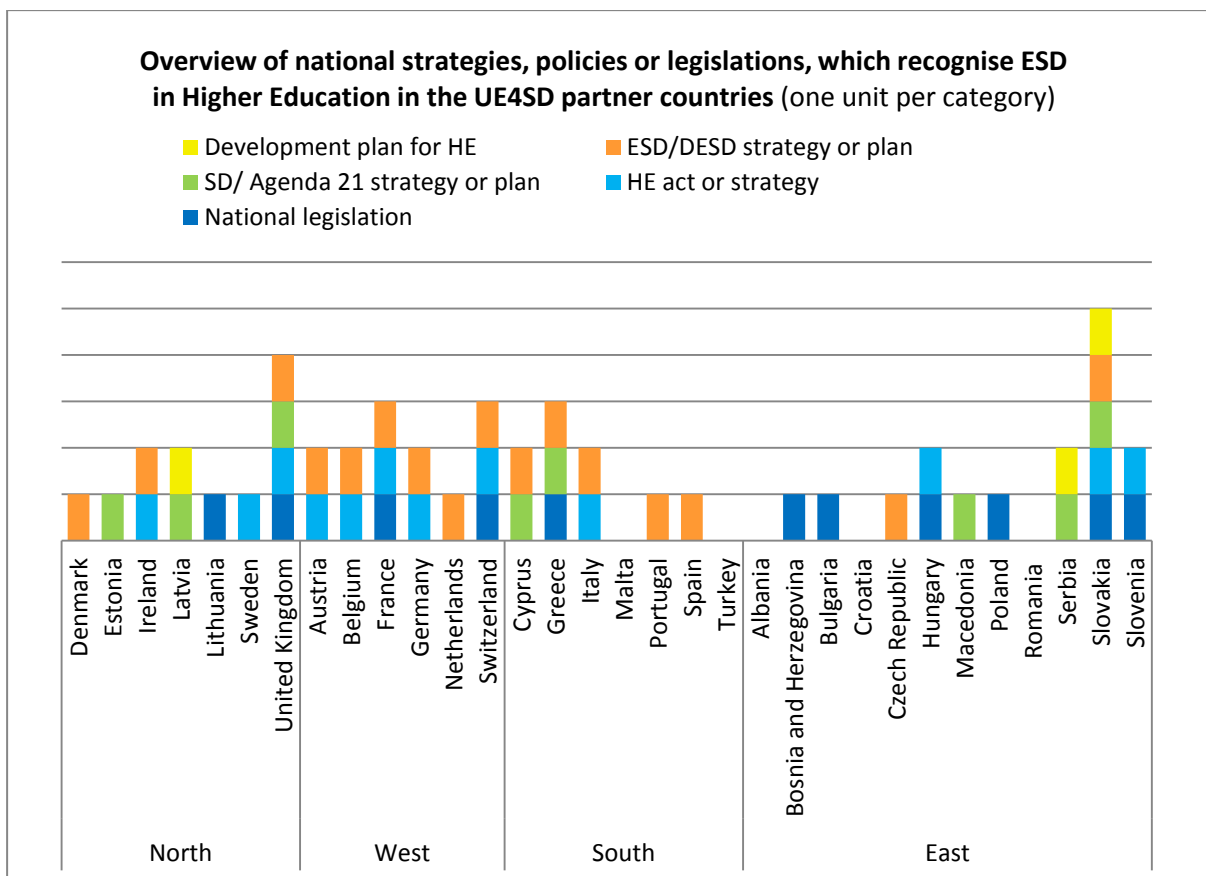
Figure 2: Overview of national strategies, policies, or legislation which recognise ESD in higher education in the UE4SD partner countries

2.1.1. ESD processes and approaches that are promoted in national strategies

The national strategies and policies described in the previous question are being investigated at a more detailed level by trying to identify the ESD processes and approaches that are promoted in these strategies. Figure 3 shows the key principles and approaches in ESD, which refer to the literature on the UN Decade on ESD. For the West region that categorisation has not been carried out as the documents do not provide such detailed information so that findings about ESD principles – such as systemic, critical or future-oriented thinking – could not be drawn.

Five countries from the North region, five from the South, and one country from the East recognise ESD approaches in their national ESD strategies, legislation, and policies. The data suggests that strategic and systemic approaches are most common and there is an understanding in these countries that ESD is about cross-curricular educational change instead of treating sustainability as a special subject. A whole-of-institution approach appears in the Southern European cases as well as in the United Kingdom, which highlights the necessity of implementing ESD in research, teaching, and the operational dimensions of higher education.

In the ESD strategies of five countries from the South, four countries from the East and two countries from the North, various ESD principles are found, mainly emphasising partnerships and participatory learning (nine mentions) and systemic thinking (six mentions). Action learning as well as critical and creative thinking are only mentioned three times each, while none of the documents addresses future-oriented thinking. Although not specifically referring to ESD principles, partners in the West region report that some countries aim at promoting ESD in all levels of the education system – on the one hand addressing a whole-of-institution approach and on the other referring to the integration of

ESD in formal, non-formal and informal education. The importance of networking and collaboration is highlighted in several strategies as well.

What is furthermore reflected by the UE4SD partners from the Eastern and Southern hubs is the fact that many of these countries have a long tradition in environmental education and hence substantial innovations would be required to systematically implement ESD approaches.
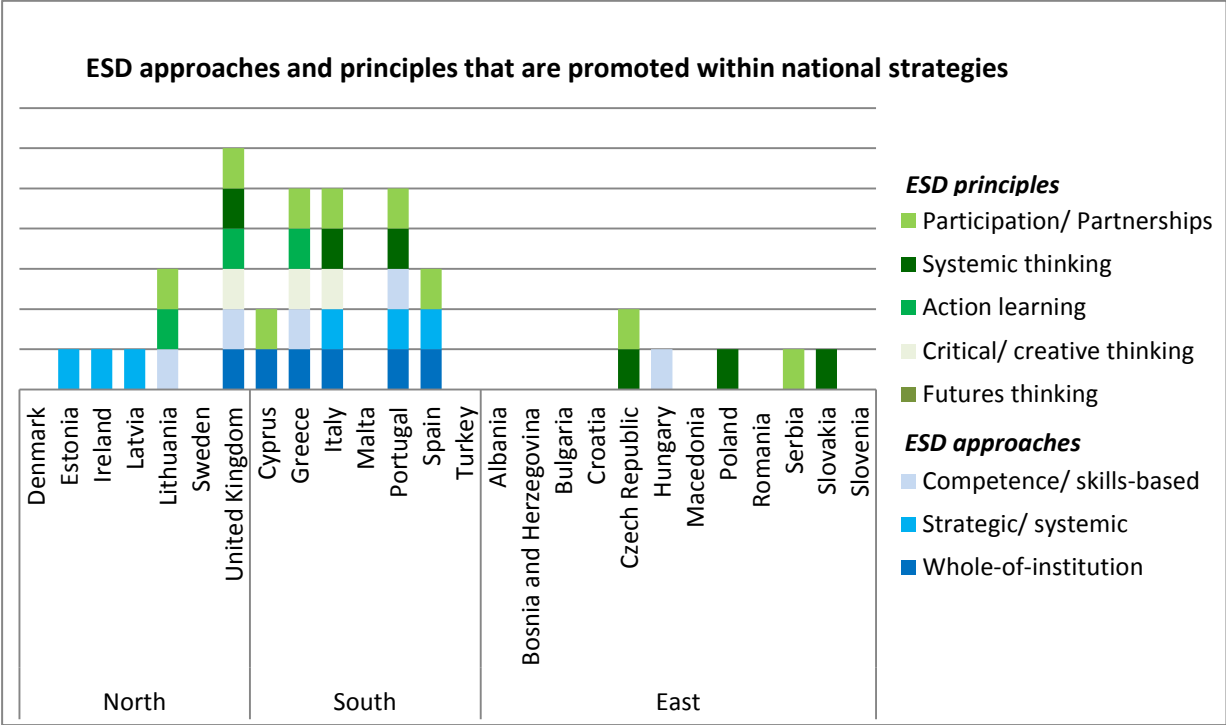
Figure 3: Overview of ESD approaches and principles that are promoted in national ESD strategies

2.1.2. Reference to ESD professional development for university educators in national strategies

Although most of the UE4SD partner countries report that there are national strategies that refer to sustainability or ESD in higher education, the strategies of only nine countries explicitly call for professional development for university educators to develop ESD competences – three each from Southern Europe (Cyprus, Greece, Spain) and Eastern Europe (Serbia, Slovakia, Slovenia), two from Northern Europe (Ireland, United Kingdom) and one country from Western Europe (Belgium). These documents highlight the need for initial and continuing education for sustainable development to equip educators with the skills needed to help students learn about sustainability. Policy documents especially encourage higher education institutions to further educate their academic staff. In some other countries sustainability and ESD strategies refer to the development of ESD competences or to the importance of continuing education for educators, but do not explicitly mention university educators or a special focus on teacher training.

In 23 countries the need for ESD professional development for university educators is not explicitly recognised in national ESD strategies, policies, or legislative documents.

2.2. National initiatives on ESD professional development for university educators

The response from the partners concerning initiatives on ESD professional development opportunities for university educators at the national or regional level is with only seven mentions relatively limited. As this question is linked with the identification of higher education networks and partnerships in this area, it is addressed in more detail in Section 2.6.

From the East region four out of twelve countries (Albania, Czech Republic, Macedonia, Slovakia) state that there are national initiatives in their countries which focus on ESD professional development for university educators, whereby these initiatives mainly concentrate on curricular changes towards ESD or present events or strategies that aim at building awareness of the need for ESD professional development opportunities. Two out of seven countries from the South region (Greece, Spain) outline national ESD initiatives fostering professional development. Both cases refer to declarations by the national conferences of rectors encouraging activities to improve the ESD competences of university educators, whereby the Charter of Greek universities for sustainable development explicitly calls for a whole of institution approach that integrates ESD professional development of university educators. Although from the West region only one country (Belgium) explicitly emphasises ESD professional development initiatives for university educators at the provincial level of Flanders, interesting initiatives have also been described by the other partners. Although there are a variety of initiatives to embed ESD in higher education, only very few focus on developing the competences of university educators. The North regional report contains information about several specific national initiatives for university educators in the field of teacher education. It only presents one significant national initiative for educators in all subjects, which is led by the UK Higher Education Academy and is one of the good practice examples from the United Kingdom (Section 3.1, Table 3).

2.3. Strategic plans and guidelines of higher education institutions to promote ESD

While the previous questions have focused on the national and regional level, the following questions provide insights into the integration of ESD in higher education at the institutional level.

The UE4SD partners were asked to provide estimations of how many of their national higher education institutions have strategic plans or guidelines promoting ESD (see Map 2 below). As the data is based on individual estimations, a comparison has to be treated with caution. To summarise, partners from the West region are the most positive in their estimations (one mention for many higher education institutions, four for several, and one for few), followed by the North region (one mention each for many and several, and five mentions for few institutions), and the partner institutions from the South and the East regions mostly estimate that only a few of their higher education institutions have strategic plans to promote ESD (for the South one institution mentions many, three few, and three none, while for the East one estimates several, four few, and seven none).

As mentioned, one country each from the North, the West and the South regions perceive that many of their higher education institutions have strategic ESD plans. The United Kingdom reports that a growing number of higher education institutions are making commitments to integrating ESD, which is supported by policy frameworks and national higher education funding bodies. According to a study assessing the progress in ESD at UK higher education institutions, 80% of the institutions have included ESD in their environmental and sustainability policies, 46% have integrated ESD into their teaching and learning strategies, and 35% have included ESD in their corporate or strategic plans. In the Netherlands many universities have included ESD in their mission statements and strategic plans, which cover all areas of higher education, and Spain reports that an estimated three-quarters of the

Spanish universities are committed to integrating sustainability management into their operational activities and have developed ESD programmes. However many of these are at the non-formal level, but which could lead to embedding sustainability at the curriculum level.

Map 2: Estimation of the occurrence of ESD strategic plans and guidelines of higher education institutions in the UE4SD partner countries
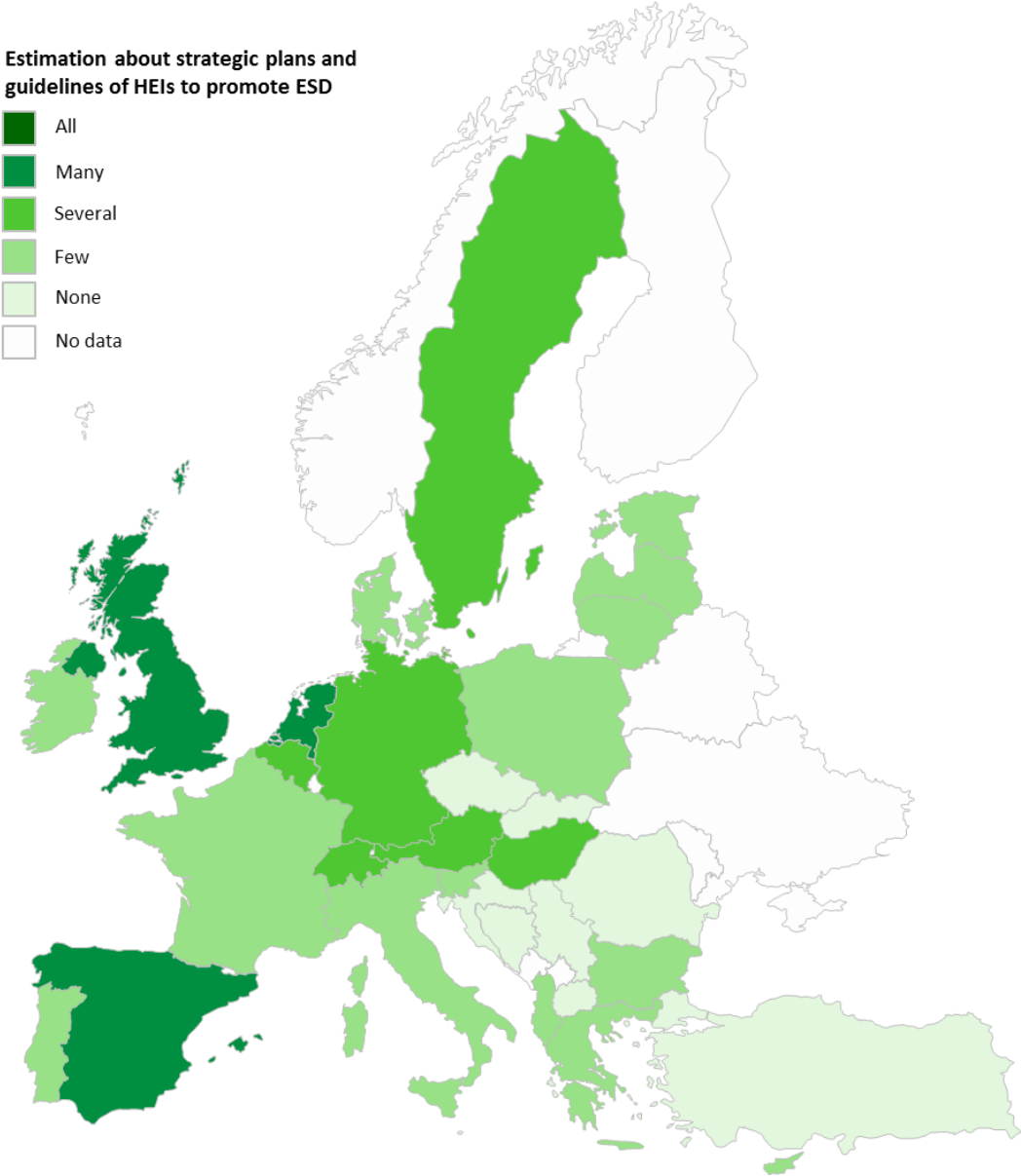
Six countries think that several of their higher education institutions have strategically integrated ESD in their plans and mission statements, whereby in many cases sustainability coordinators have been appointed to foster the implementation processes and act as an institutional ESD contact person, including Sweden, Austria, Belgium, Germany, Switzerland, and Hungary. Additionally some institutions do not explicitly mention ESD but commit to sustainability issues like social responsibility or environmental protection measures.

While partners in 14 countries perceive that at least a few higher education institutions have ESD strategies and plans (Denmark, Estonia, Ireland, Latvia, Lithuania, France, Cyprus, Greece, Italy, Portugal, Albania, Bulgaria, Poland, Slovenia), a further nine partners think that their higher

education institutions totally lack plans to promote ESD (Malta, Turkey, Bosnia and Herzegovina, Croatia, Czech Republic, Macedonia, Romania, Serbia, Slovakia). For instance many partners from the East region mention that there are no requirements for developing such ESD strategies at higher education institutions, which indicates the role of a top-down approach for such systemic changes. Others report that although some institutions have strategic guidelines that promote ESD, they are not being implemented in practice. Some Southern countries have little experience in strategically integrating ESD in their higher education institutions; nevertheless there are a variety of individual initiatives that might inspire other higher education institutions to follow. For instance Greek universities have adopted a Charter that calls for further development, promotion and strengthening of ESD.

2.4. Initiatives of higher education institutions to support the professional development of university educators in ESD

As in the previous question on strategic guidelines of higher education institutions to promote ESD, this question also addresses the level of higher education institutions, but focuses on information of concrete initiatives that support the professional development of university educators in ESD. As can be observed in

Map 3 below the possibilities of professional development for university educators in ESD in the UE4SD partner countries are still quite rare.

Out of 32 countries, 24 estimate that few or none of their higher education institutions provide initiatives which support the ESD professional development of their university educators. Six countries think that several higher education institutions offer such development opportunities, and only in two countries do many higher education institutions tend to support the development of the ESD competences of their university educators. The latter is the case in Latvia and Slovakia. For Latvia the partners report that there are various types of ESD professional development opportunities, which for instance involve the possibility for academic staff to participate in projects or conferences focusing on ESD. At Slovakian higher education institutions several bottom-up initiatives are emerging which aim at raising awareness and developing ESD skills and which are often informed by international trends such as global education. However professional development is hardly systemically embedded in the higher education institutions.

Two countries each from the South and the East regions (Greece, Spain, Albania, Bosnia and Herzegovina) and one country each from the North and the West regions (United Kingdom, Belgium) estimate that several institutions support the professional development of university educators. Experiences from the South region refer to PhD and master courses, post-graduate programmes or capacity building initiatives where students and academic staff can acquire ESD skills. In the East region some initiatives address sustainability courses, mainly focusing on ecological issues, but without explicitly addressing university educators. The example from the West region describes a variety of initiatives, such as training programmes but also conferences, workshops, online resources and publications that are supported by sustainability coordinators, or the participation in ESD projects which foster the ESD competences of academic staff. The North region provides explicit examples of the kinds of ESD professional development available in universities, including embedding ESD into in-house academic staff training and induction sessions or the development of frameworks and guidelines to improve understanding of ESD and its pedagogies.

Map 3: Estimation of the occurrence of initiatives of higher education institutions to support the ESD professional development of university educators in the UE4SD partner countries
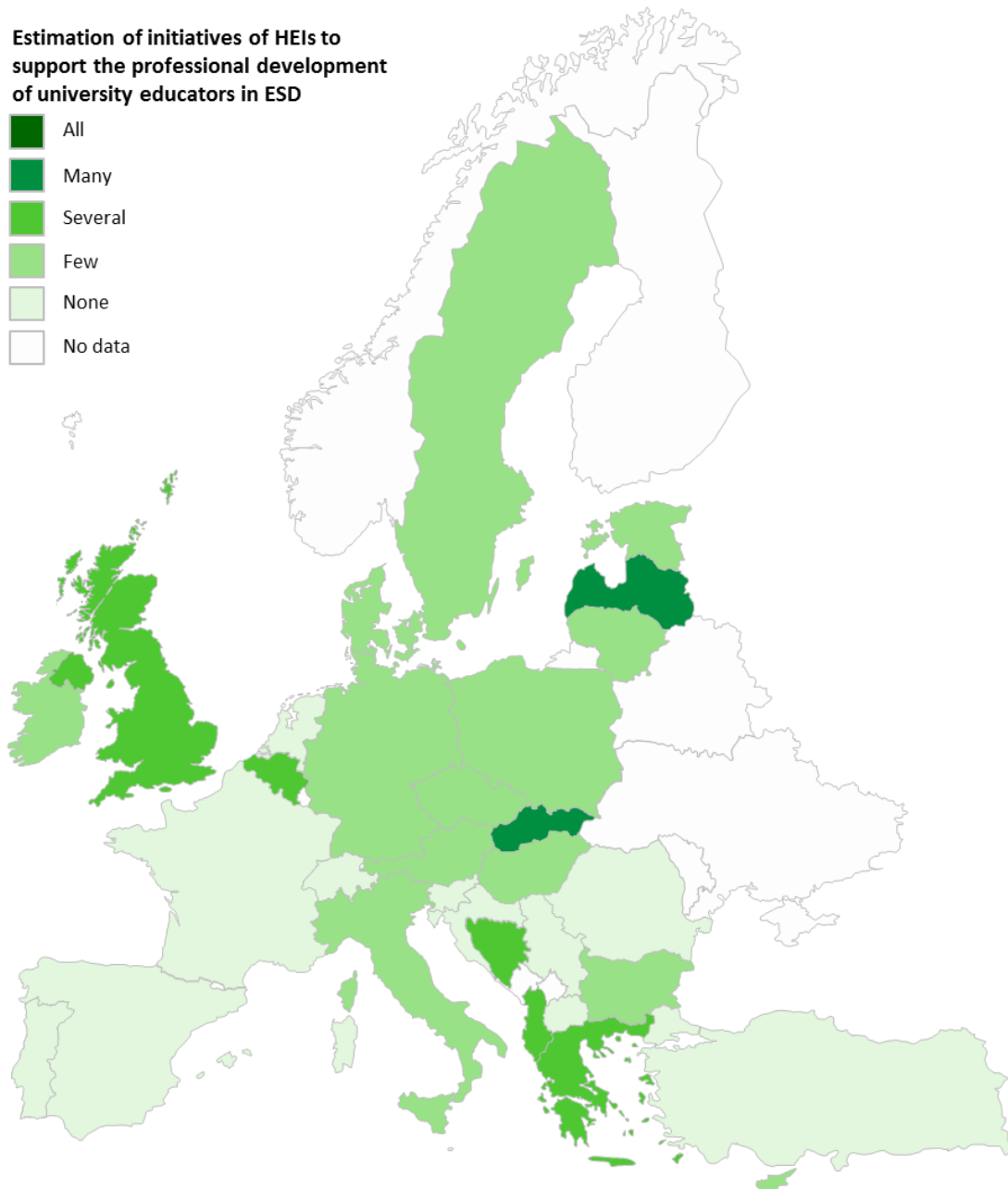

Estimation of initiatives of HEIs to
support the professional development
of university educators in ESD

- All
- Many
- Several
- Few
- None
- No data

2.5. ESD as a part of quality assurance and accreditation processes of higher education institutions

Besides ESD in strategic guidelines and the support of higher education institutions to provide professional development opportunities in ESD, information about the integration of ESD in quality assurance and accreditation processes is of further interest as it provides insights into the process of the institutionalisation of ESD in higher education institutions. For most of the UE4SD countries ESD has not been integrated into the quality assurance and formal accreditation of higher education institutions so far.

As can be seen in Map 4 no partner country from the South and the East regions reports that ESD is included in quality assurance and accreditation processes at their higher education institutions.

Three countries from the North region have taken some initial steps in this area and the United Kingdom is the only example where ESD is referenced in national quality frameworks that concern all universities. Three countries from the West region (Belgium, the Netherlands, Switzerland) refer to ESD in their quality management.

Map 4: Overview of the role of ESD in quality assurance processes in higher education in the UE4SD countries

Is ESD a part of quality assurance and accreditation processes of HE?

- Yes
- No
- No data
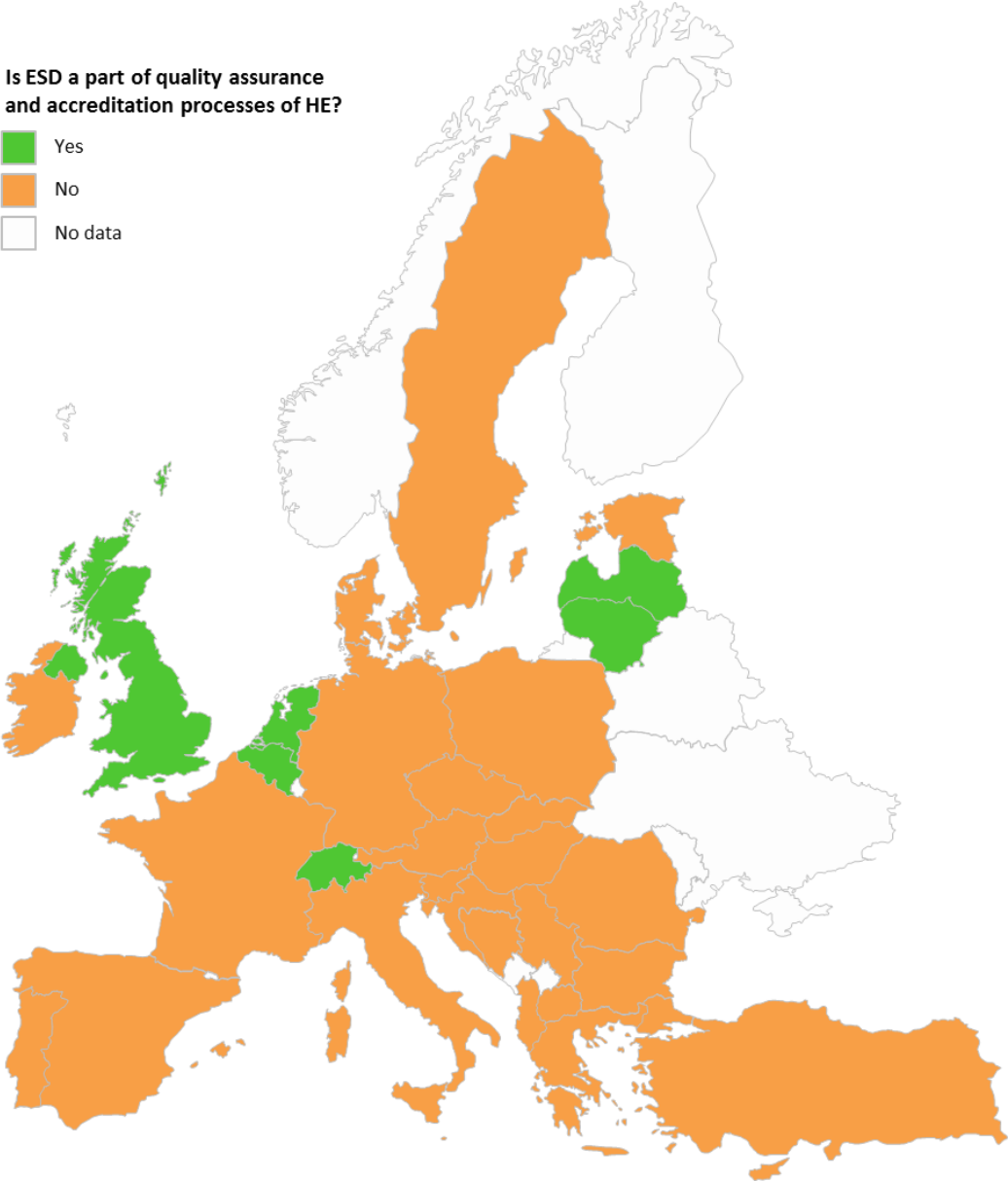
Related to the integration of ESD in the national accreditation frameworks, partners report that in one country it is a requirement, while in two countries higher education institutions are not required but have the opportunity to report on sustainable higher education in the national accreditation framework, by using the Auditing Instrument for Sustainability in Higher Education (AISHE). In another country ESD is not explicitly addressed in the national evaluation framework but building student capabilities is being emphasised. Further cases indicate that ESD can also be embedded in the quality development of higher education institutions by accrediting doctoral programmes with the aim to bring young researchers to the ESD agenda, or by integrating ESD in curriculum approval and review processes of national projects focusing on improving quality in higher education.

2.6. Higher education networks, partnerships, and the main drivers supporting the professional development of university educators in ESD in the partner countries

With regards to Section 2.2, which deals with national initiatives on ESD professional development for university educators, this question identifies important higher education networks, partnerships, and the main drivers in the field of ESD in higher education. Approximately eighty different networks or partnerships have been identified by the UE4SD partners in total, although several address ESD in higher education, but do not especially focus on developing the ESD competences of university educators. As presented in Figure 4 the networks identified by the partners from the four regional hubs have been clustered into:

- local and national networks
- local and national associations, NGOs, and foundations
- international networks, and
- external and nationally funded collaborative projects.

It can be observed that the occurrence of higher education partnerships in these four categories is more or less balanced in all regional hubs; except for the West region where the category of external collaborative projects does not apply, and in the South region where local and national associations, NGOs, and foundations are hardly represented. Eighteen countries have identified local and national networks and sixteen countries have identified international networks which are active in ESD in higher education and support the professional development of university educators. Twelve countries mention local and national associations, NGOs, and foundations, and ten countries map external and nationally funded collaborative projects.

As an international driver, the COPERNICUS Alliance has been emphasised by several partners to be an important driver in supporting the ESD professional development for university educators, especially in the UE4SD project. Further international networks comprise specific partnerships and the collaboration of a few countries, a UNESCO chair, and regional networks covering the Mediterranean and the Baltic countries, such as MedUnNET. Different Regional Centres of Expertise on Education for Sustainable Development have been mentioned as important networks at the local and national but also international level (Denmark, Ireland, United Kingdom, Austria, Portugal, Albania). Specific collaborative ESD projects, funded by national or EU programmes, play an important role as well in supporting the professional development of university educators. Regional and national associations, NGOs, and foundations also include policy institutions such as conferences of university presidents, government institutions, NGO-driven initiatives, and a commission for UNESCO and UN Global Compact. In the West region further partnerships have been identified which fit into the categories of "networks at higher education institutions" as well as "consulting agencies".

Seven countries mention that there are no relevant networks or partnerships in this regard, including Estonia from the North region, Malta from the South region, and from the East region Bosnia and Herzegovina, Croatia, Macedonia, Romania, and Serbia.

Figure 4: Overview of higher education networks and partnerships supporting the professional development of university educators in ESD in the UE4SD partner countries
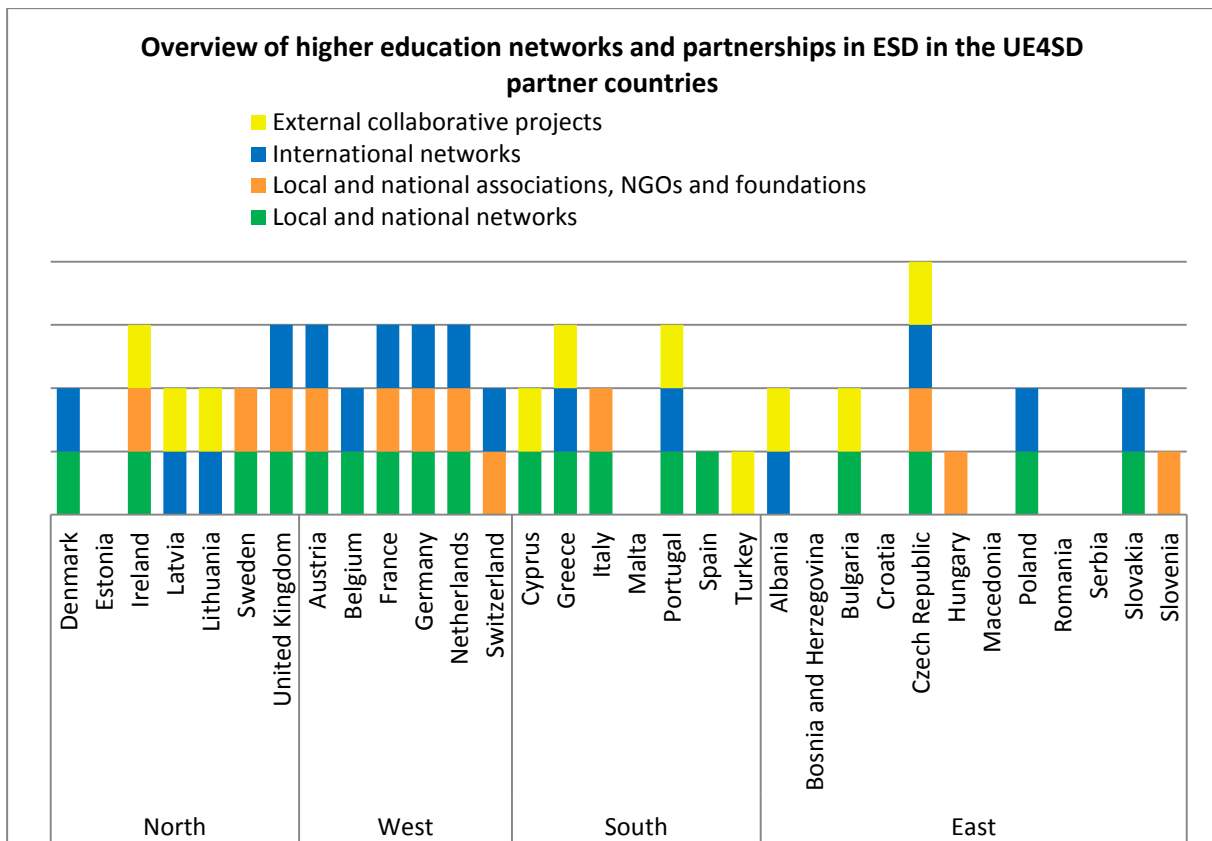
2.7 Development of higher education initiatives in response to the UNECE ESD competence framework

As the mapping exercise, in particular the identification of ESD professional development opportunities for university educators, is inspired by the UNECE ESD competence framework for educators (2011), this question provides insights into whether higher education initiatives in the UE4SD partner countries have been developed in response to this UNECE framework.

As can be observed in Map 5 below eleven out of 32 countries state that national higher education initiatives have been inspired by the UNECE ESD competences, involving two countries from the North (Sweden, United Kingdom), two from the West (Belgium, Switzerland), three from the South (Cyprus, Malta, Portugal) and four from the East (Albania, Bulgaria, Czech Republic, Hungary). The initiatives comprise projects at higher education institutions focusing on academic staff training, professional development, and curriculum change initiatives (United Kingdom, Belgium, Switzerland) or the development of a master's programme in ESD (Malta). Furthermore a toolkit has been developed with the aim of supporting and enabling faculty to develop key competences for teaching sustainable development to their students (Belgium), a teacher training programme has been initiated focusing on the need to develop the ESD competences of educators (Sweden), ESD quality criteria for schools have been developed (Portugal), and an internal academic working group has been established focusing on implementing ESD in university courses (Cyprus). A national journal has taken up the UNECE framework, initiated a wider discussion on ESD competences, and published articles in this regard (Czech Republic) and another case reports that the framework has been used as a reference document for a project proposal (Albania).

Further countries mention that the framework has been at least translated into the national language, but with a focus on developing ESD competences for teachers and not university educators.

Map 5: Overview of HE initiatives developed in response to the UNECE ESD competences framework in the UE4SD partner countries
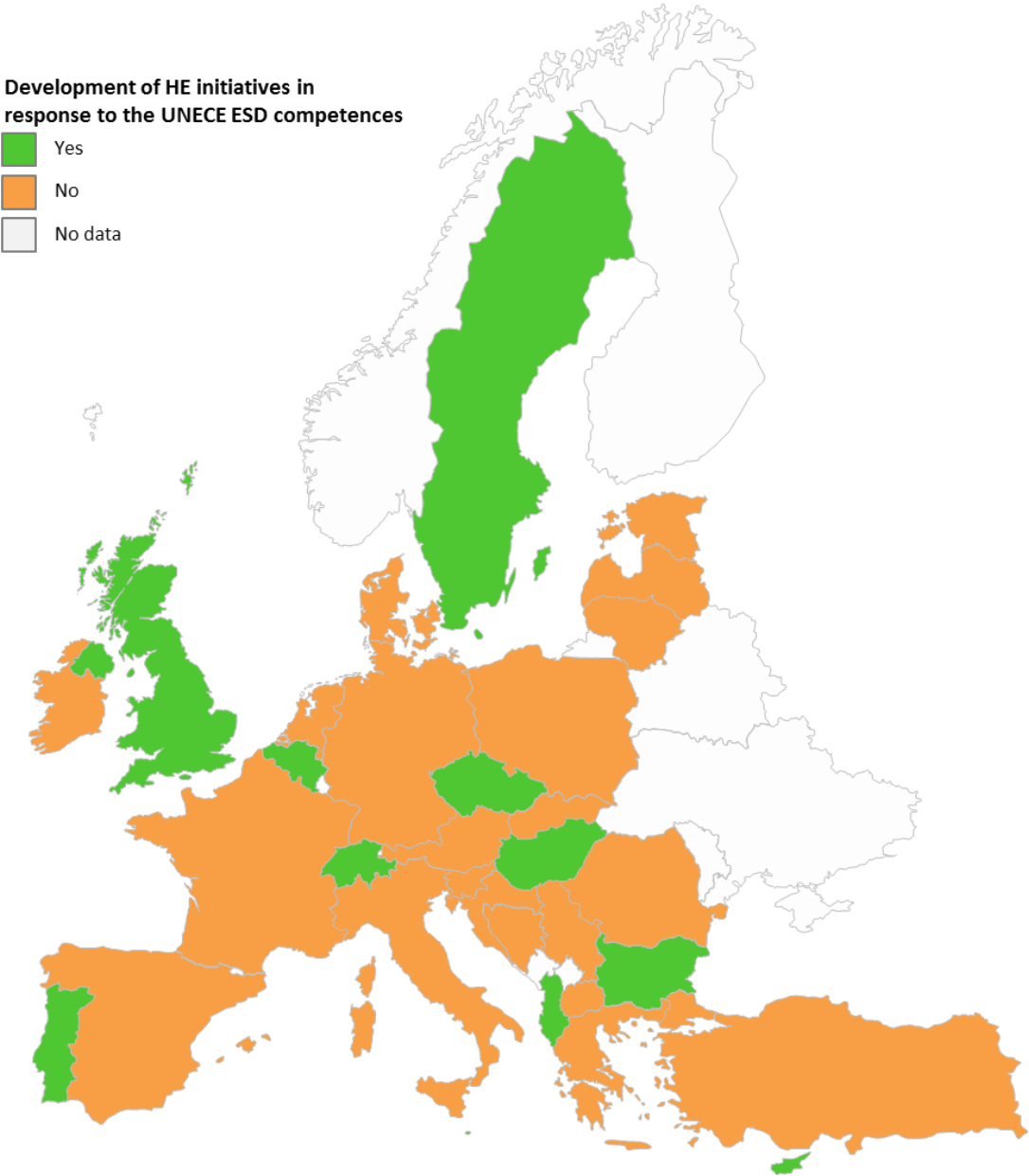
3. Professional development opportunities in ESD for university educators

After gaining insights into the integration of education for sustainable development in higher education in the partner countries in Section 2, this part of the report provides an overview of concrete examples of ESD professional development opportunities for university educators in the UE4SD partner countries. Each partner was asked to provide detailed information on up to three key professional development opportunities in their countries which target university educators and how they can gain ESD competences and strengthen their ESD teaching and learning experiences. The present report looks for professional development opportunities that require some kind of interaction, and as a result do not include educational resources or toolkits as such.

The mapped examples have been clustered by the regional coordinators (University of Gloucestershire for the North, Leuphana University of Lüneburg for the West, Autonomous University of Madrid for the South, and Charles University Prague for the East) into three categories:

- Good practice examples with a clear focus and approach to developing the ESD competences of university educators,
- Interesting examples with a less clear focus, which do not meet all requirements but still represent interesting initiatives,
- Examples which do not meet the requirements or do not provide sufficient information (i.e. as the initiatives are still in the planning phase).

This state of the art report only highlights those professional development examples that were chosen by the respective regional coordinators as good practices in their regions. One of the criteria for being a good practice is an explicit focus on the professional development of university educators for developing ESD competences. No claim is being made that this is a complete list. Moreover the selection cannot be fully objective as it was carried out by four different regional coordinators whose decisions may have been affected both by comparison with other examples in an individual's own region as well as their not knowing examples from the other regions.

3.1. Investigation of examples of professional development opportunities in ESD for university educators

The following investigation is based on the good practice examples of ESD professional development opportunities that were mapped by the national UE4SD partners after thorough research and being selected as good practices by the regional coordinators.

In total 69 ESD professional development opportunities for university educators were identified by the national UE4SD partners – 13 examples from the North region, twelve examples from the West region, 16 examples from the South region, and 28 examples from the East region. Of this total, 27 examples were recognised as good practices by the regional coordinators and are further described in this report – nine examples from the North, four from the West, six from the South and eight from the East (see Figure 5 below). Three examples were identified by the United Kingdom, two from Sweden, Greece and Spain, and one example each from Denmark, Estonia, Ireland, Latvia, Austria, Belgium, France, Germany, Cyprus, Italy, Albania, Bulgaria, Czech Republic, Hungary, Poland, Serbia, Slovakia, and Slovenia.
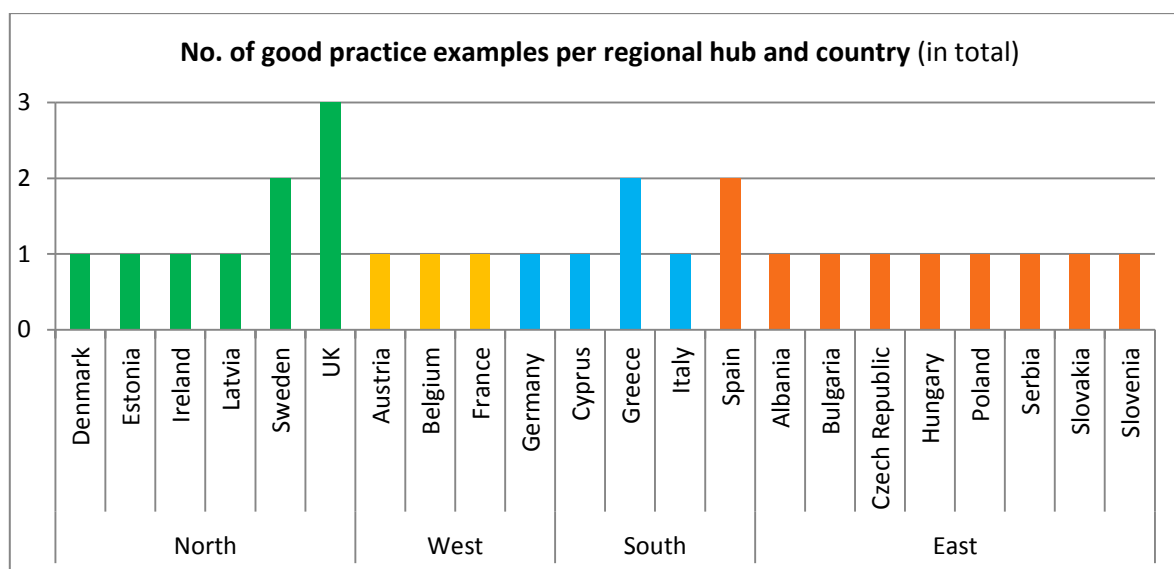
Figure 5: Number of good practice examples per regional hub and country

Brief descriptions of the 27 good practice examples can be found in Table 3 below:

Table 3: Brief descriptions of the good practice examples of ESD professional development opportunities for university educators in the UE4SD partner countries

Good practice examples of ESD professional development opportunities	
Country	**Brief description**
Denmark	**Problem Based Learning (PBL) and Sustainability initiatives**
	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 objective 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.
	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 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.
Estonia	**ESF Programme: Development of Environmental Education: Preparation of curricula and conducting the vocational education programme for university educators of teacher training**
	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.
	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, the environment, and the economy) and works with educators to embed sustainability in their courses and to introduce them to approaches linked to ESD such as active learning.
Ireland (see Greece)	**Reorienting University Curricula to Address Sustainability (RUCAS)**
	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.
	The course aimed to enable staff to understand the concepts, contexts, principles, and practices of ESD and to guide them towards embedding sustainability in 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.
Latvia	**Participatory action research in higher education to reorient teacher education towards sustainability**
	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 (Bachelor's, Master's 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.
	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 working with transformative learning approaches.
Sweden	**National seminars on Education for Sustainable Development and Global Challenges**
	From November 2006 to May 2007, Den Global 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.
	The aim of these seminars was to train teacher trainers in 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 in participating universities.
Sweden	**Learning for sustainable development**
	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.
United Kingdom	**Green Academy**
	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.

	Every year, between 8-10 universities can apply to participate in the Academy, which involves a two-day residential training, face-to-face meetings, and on-going 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.
United Kingdom	**Learning for Sustainable Futures (LSF) Scheme** 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. 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.
United Kingdom	**Sustainability Education Negotiated Study Module** 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 in that practice. 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.
Austria	**University Course: ESD Innovation in Teacher Education** The four-semester course ESD Innovation in Teacher Education at the Alpe Adria University Klagenfurt targets university teacher educators. The aim is for participants to acquire subject-related as well as didactic competences for the organisation of teaching and learning processes in ESD, and become qualified for the planning, realisation, and documentation of research projects. The course comprises the following modules: - concepts of sustainable development, topics of ESD, research methods, conception of own project and research plan - didactic strategies in ESD and research methods - research methods; visualisation and presentation techniques; cooperative further education.
Belgium	**Learning networks – Ecocampus** The teaching-support initiative Ecocampus targets educators from higher education institutions as well as professionals from the profit and non-profit sector. The aim of this initiative is to embed SD in Flemish higher education on a more structural basis: - by offering the knowledge educators need to implement SD in their courses; - by presenting some good practices/practical examples (with special focus on didactic approaches to facilitate SD in the classroom; especially in the network for teacher trainers); - by exchanging experiences with experts and colleagues. The initiative comprises four different learning networks in the areas of social work, teacher training, business studies, and engineering.

France	**The process of elaboration of a reference document on sustainable development competencies for Higher Education**
	The Conference of University Presidents (CPU) and the Conference of High Schools (CGE) in France have installed an open working group with the aim of producing a reference framework of sustainable development competences for higher education. Stakeholders (e.g. students and professional organisations) and university staff from a variety of disciplinary backgrounds met several times to discuss relevant ESD skills and competences for educators, which resulted in a collective learning experience. This case focuses on the value of the process in developing such a reference framework.
Germany	**Teaching for the Leuphana Semester**
	This teaching support initiative targets university educators at the Leuphana University of Lüneburg who hold lectures in the first semester. The seminar focuses on ESD connected with undergraduate research. The participants learn about the requirements, aims, and challenges of a first-semester module called Responsibility in Science. During this semester students experience a research cycle while working in interdisciplinary teams. The seminar for university educators deals with: - sustainable development and responsibility in science - sustainability and action-oriented teaching - undergraduate research as a didactic concept - exchange, peer learning, and consulting.
Cyprus	**Education for Sustainable Development as an induction framework for novice teachers: Quality Educators for Quality Education**
	Through the context of ESD, we provided focused training and developed mentoring partnerships between tertiary education educators (university academics and teacher trainers) and primary school teachers for the implementation of ESD projects, thus creating professional communities of learning for ESD. With an international team, they have developed different activities (courses and seminars, induction, and mentoring programmes) in a two-year programme.
Greece (see Ireland)	**Reorienting University Curricula to Address Sustainability (RUCAS)**
	The goal of this programme was to reorient the curricula of the participating universities in order to address sustainability and integrate sustainable development topics and principles. The key question is how, given the regional priorities and the need to modernize curricula, to best advance curriculum change towards ESD. The Project initiates a wide range of activities to develop resources, revise, and develop new curriculum initiatives, build capacity, and strengthen national and regional networks. In this programme different universities from a number of European and Mideastern countries were involved. An ESD student competency framework was developed, validated, and surveyed among undergraduate students across different disciplines. Then, appropriate resources were developed, such as an ESD Curriculum Review Toolkit, Virtual Centers for Curriculum Reform in every partner HEI, and workshops to prepare university staff for curriculum review and the development of syllabuses/modules addressing ESD. ESD curriculum revision in the nationally/regionally prioritized disciplines were implemented and institutionalized in every partner HEI to ensure continuity. The project has been funded by the European Commission (TEMPUS Programme).
Greece	**A Mediterranean Initiative on Professional Development Opportunities in ESD for University Educators (MedUnNET)**
	The Network of the Mediterranean Universities for Sustainable Development focusing on Education for Sustainable Development (MedUnNET) runs capacity building initiatives among its 20 member universities. These include seminars, workshops and educational materials with the aim to foster ESD competences of university staff and promote the whole-of-institution approach. Amongst others professors and lecturers are being trained by international experts in the background, principles and the pedagogies of ESD; gain insights in the theoretical and practical foundations of ESD in higher education; are introduced in the concept of the sustainable university/whole of institution approach and its requirements;

	and, share experience and successful practices in the field of ESD with colleagues. The capacity building initiatives are based on the UNECE competence framework for educators.
Italy	**Self-training in the Interdisciplinary Research Institute on Sustainability** This initiative consists of an academic working group for university educators from three Italian universities and one Scottish university. Their purpose is that of developing a research environment where disciplinary experts from different fields of research could acquire multi- and transdisciplinary competencies and could share personal experiences and reflections on issues of sustainability.
Spain	**Curricula and Sustainability Working Group** This working group from the Spanish Universities Conference of Rectors (CRUE) involves academic staff from 17 universities concerned with the promotion of actions for introducing EDS in Spanish university curricula. It was one of the first working groups created in the framework of CRUE's Sustainability Commission (CADEP-CRUE). In fact, they elaborated the first statement of CADEP-CRUE about curricula greening in 2005. Since then they have implemented different initiatives, including the preparation of an updated statement, Sustainability and Curricula, which has been distributed among the Rectors of all Spanish universities. They have designed a training course for university educators, Introduction of Sustainability in University Teaching, with the support of different activities including meetings, seminars, a blog, videos, as well as disclosure and guidance documents for ESD at the university.
Spain	**Innovation Projects on Sustainability** The Basque government published a call for innovations in sustainability, which focuses on the integration of sustainability into university curricula and the establishment of a learning network. The aim is to rethink how to include sustainability issues into each subject (curriculum) by action-research projects related to sustainability that each member of the working group teaches.
Albania	**Connecting Science-Society Collaborations for Sustainability Innovations Project** This project will deliver structured workshops and trainings for science-society collaborations to strengthen the connection and collaboration of higher education institutions, research, and practice, as well as to promote mutual learning and innovative sustainability issues and methods (funded by TEMPUS). The specific objectives of the project are to identify regional stakeholders in the field of higher education, research, and practice for sustainable development; to establish a science-society network for sustainability innovations; and to develop innovative teaching materials and methodologies for higher education institutions. Establishing a regional science-society network (bringing together higher education and research academics with practitioners) for sustainability innovations in Albania and Kosovo. Part of the project strategy is for this network to address higher education institutions (especially lecturers, researchers, and students), research institutions and regional stakeholders (such as enterprises, NGOs, regional development agencies, and policy makers).
Bulgaria	**Initiative for SD Education (ISDE)** An academic working group for university educators was established to identify existing interests and teaching capacities; mutual support in teaching and autonomous learning; coordination between faculties and disciplines. It is aimed at building a value-based professional community of teachers at the university to enhance the interdisciplinary professional knowledge needed for the implementation of SD in practice and to counteract limited technocratic approaches to the sustainable development concept. It should build a framework for the effective interaction of academic educators in building teaching capacity to meet the challenges of the SD concept in the professional field. Its work includes information exchange, professional debate, the organisation of joint interdisciplinary teaching events; and the development of a postgraduate programme for practicing professionals at UACEG based on the lifelong learning concept. The important aspect is building awareness and understanding for the urgency of building interdisciplinary capacity for SD, which is still strongly missing in the country; the initiative addresses the need for

	mutual support in introducing new approaches and developing/translating SD-related terminology in the particular professional field. Its popularity in UACEG is growing.
Czech Republic	**ENOAT (European Network Organic Agriculture Teachers)** A seminar is held once a year to mutually exchange, discuss, and practice innovation in teaching methods related to joint projects on sustainable development in the fields of agriculture, food production, landscape management etc. Curriculum development for organic agriculture was the starting point of an Erasmus group of seven universities from 1995 till 1998. Recently this cooperation was renewed in order to continuously improve the inter-university exchange of experiences on teaching methods and encourage the dissemination and implementation of innovative organic agriculture practices together with the competences to teach them. Formerly this initiative served mainly for the training of the CEE countries; recently new countries have been involved in a flexible manner. The initiative is based on an identified need to transform curricula and teaching approaches (not a top-down mandatory requirement). This need for curricular change is associated with the overall transition from agriculture "as usual" towards agro-ecology which is occurring in the discipline. Research on teaching practices is carried out and results are shared in the institutions involved. Members of the network also offer joint courses which capitalize upon these experiences with innovative teaching methods.
Hungary	**National meetings of university educators involved in environmental protection** This teaching support initiative is organized by the Society for Dissemination of Scientific Knowledge in Bács-Kiskun County (TIT) for environmental educators and students. The Society initiates regular meetings of professionals to improve the knowledge of the educators and sensitization with cultural events and field programs. The focus of these meetings is changing each year; but is aimed at providing diverse impulses to the involved participants, raising opportunities to create personal connections, and is focused on exchanging knowledge and experiences through interesting presentation of famous experts.
Poland	**Series of open lectures: Selected topics in environmental protection – Sustainable development in theory and in practice** Thirteen seminars on a range of environmental topics – one in every week of the semester – have been held on an annual basis since 1997 for students, university educators, and various stakeholders outside academia. Every year different aspects of sustainable development (such as biodiversity, climate protection, sustainable cities etc.) are promoted. The participants are provided with knowledge and examples of good practices since the lecturers invited to the seminars are academic scientists as well as top-level practitioners, representatives of business, government agencies, and NGOs. The idea is to advance and to disseminate knowledge about solutions promoting social and economic development in harmony with the environment, and to provide good examples of how sustainable development can be incorporated in different subjects of teaching in higher education. These lectures represent a unique opportunity to gather a broad spectrum of specialists with whom the participants can discuss and learn different points of view, and to gather university scientists from different departments and specialists from outside the university. Each year it attracts a large number of participants – particularly a non-student audience.
Serbia	**Event: University and Sustainable Development: Sustainable development in Serbia: Comparison of British and Serbian models and the influence on higher education for the environment** A one-day workshop to discuss the problems of higher education for sustainable development and to contribute wider implementation of SD ideas at Serbian universities is running under the project: "Sustainable development in Serbia: Comparison of the British and the Serbian models and the influence on higher education for environment". The main purpose was to discuss the problems of higher education for sustainable development and to contribute to the wider implementation of SD ideas at Serbian universities through the comparison of ESD state-of-the-art in the Serbian HE area with experiences from some developed countries, primarily the UK. The event was built around the idea to open the discussion about HESD, given the fact that academic community had remained very "quiet"

	concerning SD after passing The National Sustainable Development Strategy in 2008. HESD concepts, especially professional development in higher education institutions, were underdeveloped and not in the focus of the academic community in Serbia. This workshop was more focused on a situation analysis concerning SD concepts and the position of HESD in the curricula, and less on specific initiatives on professional development. It was the first ever grass-rooted discussion on HESD in Serbia initiated by the academic community and not imposed by the government.
Slovakia	**Seminar: Education and teaching for sustainable development at the HEIs in Slovakia** One-day seminar with the following goals: - assess the current state of art in the education and teaching for sustainable development at the HEIs in Slovakia, - prepare measures for its improvement, - present the best examples of integrative curricula dealing with sustainable development, - assess institutional capacities for implementation of the UNO strategy for education for sustainable development, discuss goals relevant for the development of sustainable universities/HEIs in Slovakia - create an informal network of the representatives of particular HEIs responsible for the education and teaching of SD in Slovakia. More than 50 participants participated in the seminar, representing six Slovakian universities. Through brainstorming, discussions, and dialogue participants were able to: - develop skills and abilities with the goal to sustain, actualise, improve, and complete professional expertise needed for pedagogic performance and in the development of faculties and universities - develop the communication skills and abilities to innovate content, methods, approaches in the realisation of the education and teaching for SD - initiate the research activities on education for SD across all HEIs in Slovakia (the survey was commissioned by the Ministry of Education between December 2008 and February 2009 and its results were used by the Ministry in the interim report on the realisation of the strategy of education and teaching for SD in Slovakia)
Slovenia	**Sustainable and Socially Responsible University of Maribor** Staff induction aimed at the creation of an innovative environment and an effective organisation contributing to the balanced, sustainable, and socially responsible development of the University. Its aim is to raise awareness about sustainable development in all its three pillars and provide deeper understanding of the interaction between the environmental, economic, social, and ethical dimensions of sustainable development. The project aims to create an innovative environment and an effective organisation and convince other public, private, governmental, non-governmental, and industrial organizations to follow its lead.

The mapping of ESD professional development opportunities for university educators requested detailed information of the professional development, such as the purpose, focus, and pedagogical approach, the type of initiative, target groups, and motivations to participate, which are outlined below. Except for the type of professional development, the template only included open questions. The following analysis is based on clustering the qualitative answers of the 27 selected good practice examples.

3.2. Analysis of the 27 selected good practice examples

Type of ESD professional development opportunity and facilitator

The national mapping template differentiated between the following types of professional development opportunities: short course, teaching support initiative, seminar, staff induction, in-house certification for new teaching staff, mentoring/ coaching programme, academic working group for university educators, and work shadowing. Nine partners have stated that several types applied to their mapped professional developments. With ten mentions each, teaching support initiatives and seminars were given most often (see Figure 6 below), followed by short courses with nine times, academic working groups for university educators (eight times), staff induction (four times), mentoring and coaching programmes (four times), and in-house certification for new teaching staff (two times). Other types (such as workshops or awareness raising campaigns) were mentioned a total of four times.

A majority of two-thirds (18 cases) of the professional development opportunities are led and facilitated by higher education institutions, in four cases public institutions are involved in the facilitation and seven other facilitations have been reported, such as higher education networks, research institutions or conferences of university rectors.

Type of ESD professional development opportunity

Type	
Teaching support initiative	10
Seminar	10
Short course	9
Academic working group for university educators	8
Staff induction	4
Mentoring and coaching program	4
In-house certification for new teaching staff	2
Others	4

n=27
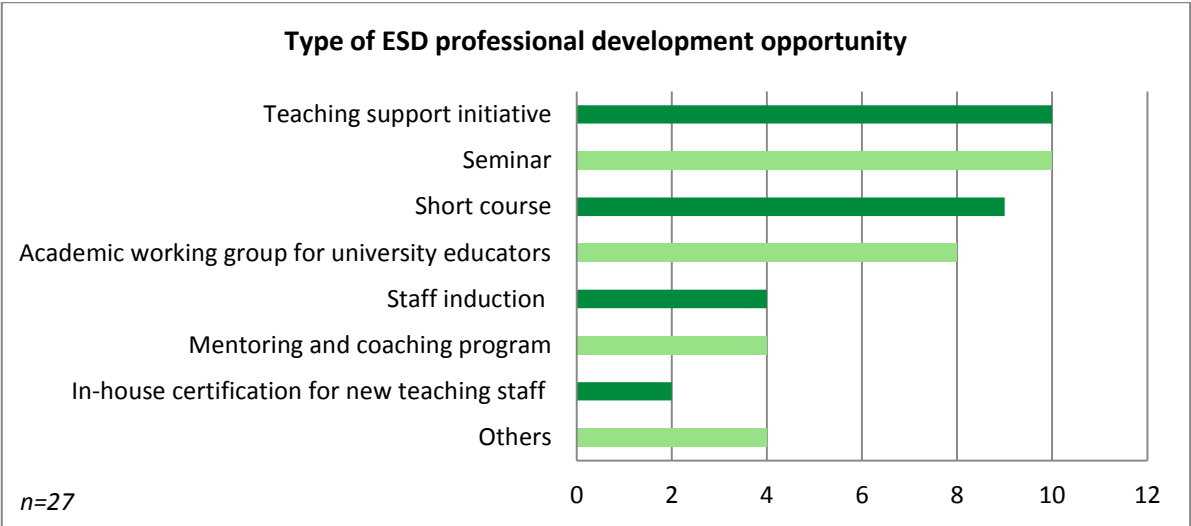
Figure 6: Type of ESD professional development opportunity (in absolute numbers; multiple answers possible)

Target groups

The question concerning the participants of professional development opportunities aims at gathering information whether the opportunities specifically and exclusively addressed university educators or whether the target group was defined in a broader sense. With 15 mentions just over half of the 26 good practices of ESD professional developments name university educators as their target group (including cases from Denmark, Estonia, Ireland, Latvia, Sweden, United Kingdom, Austria, Belgium, France, Germany, Cyprus, Spain, Bulgaria, Poland, Serbia). In five six only university educators could attend the professional development opportunity, while the target groups of the other nine examples included other participants such as students, teacher trainers, other academic staff, external stakeholders, and teachers from lower levels of education.

One case targets teams of higher education institutions, composed of at least one senior management, one student, one operational staff and one academic staff (United Kingdom). Two examples target academic staff without distinguishing between researchers and university educators (United Kingdom, Spain); two other professional development examples are offered as part of network initiatives and hence especially address members of their respective networks (Italy, Czech Republic). One example targets environmental educators and students (Hungary), while five other examples mention universities as their target group without further specification (both cases from Greece, Albania, Slovakia, Slovenia), whereby one example additionally addresses external stakeholders as well.

Besides the target groups, the number of people who can attend the professional development opportunities varies as well. In four cases up to 20 people could participate, seven cases welcomed 20 to 40 people, six cases 41 to 60 people, and in six cases more than 60 people could participate. In four cases no information was provided.

Duration and continuity of the professional development opportunity

This question aims to provide insights into how comprehensive and detailed the professional development opportunity is (concerning ESD knowledge and competences) by asking whether the opportunities are being offered on a continuous basis or were held only once.

Ten examples of the 27 mapped professional development opportunities lasted less than one week in total, whereby six cases lasted approximately one day, with follow-up meetings in two cases. Two cases each took two to three days, respectively six days (split into three times two days). Three cases took place several times over a time period of up to one semester, four cases lasted one year respectively two to three years, while six cases represent on-going activities. One example stated that it lasted 4.5 ECTS, without mentioning the time span.

Of the 27 ESD professional development events, 21 happen on a continuous basis. Seven cases take place annually or several times a year, four cases are on-going, two cases took place for two or three years, and in one case three professional development courses have taken place since 2005. One case of the good practice examples happened only once, for five cases no information is available.

Many of those good practice examples were initiated recently – in fact ten cases started after the year 2010, ten cases between 2006 and 2010, two cases between 2000 and 2005 and only one case was initiated before 2000 (but still takes place every year).

Purpose and objectives

The purpose and objectives of the 27 good practices of ESD professional development opportunities can be clustered into four areas, whereby most of the cases comprise several objectives (see Figure 7). They focus on:

- ESD in teaching and addressing the individual level of the participants,
- exchange and networking,
- the holistic integration on ESD in higher education and addressing the institutional level, and
- the collaboration with actors outside the higher education community.

Purpose and objectives of the professional development

Focus on ESD in teaching	
Focus on exchange and networking	
Focus on on the holistic integration on ESD in HE	
Focus on collaboration with external actors	

n=27

0   4   8   12   16   20   24
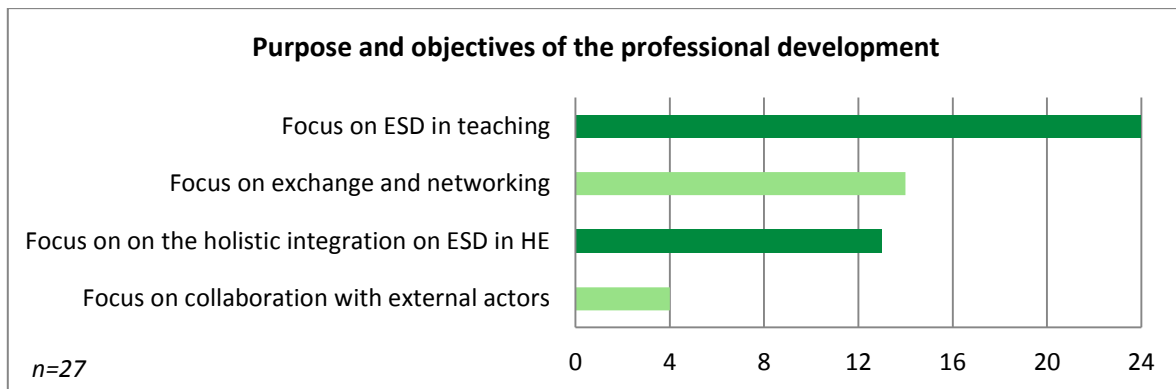
Figure 7: Clustered answers on the purpose and objectives of the professional development opportunity (in absolute numbers; multiple answers possible)

As the mapping aimed at identifying professional development opportunities for university educators to develop ESD competences, it is therefore not surprising that the purpose of fostering ESD in teaching was mentioned 24 times. Eight cases outline the acquisition of didactic ESD competences and the development of the capabilities of university educators as specific objectives, six further cases aim at imparting theoretical and methodological knowledge of ESD. The individual level of the participants was also addressed with the aim of preparing them to integrate ESD into their own courses (five mentions) and to highlight existing teaching practices and good examples in ESD (five mentions).

The purpose of exchanging and networking is mentioned 14 times. In nine cases the partners highlight the opportunity to exchange and share knowledge and experiences with colleagues as an important aspect of professional development. The coordination between faculties, disciplines, different higher education actors, and hence the possibility for interdisciplinary exchange is mentioned three times, while in two cases self-training and mutual learning represent the purpose and objective.

Addressing the institutional level and how ESD can be integrated into higher education institutions represents the objective in 13 cases. Embedding ESD on a holistic and structural basis was mentioned five times, whereby one case specifies this objective by mentioning the objective to support HEIs to achieve lasting sustainability change with a positive impact on the curriculum and student experience. Five cases aim at providing opportunities for the participants to discuss and learn how to reorient study programmes and curricula in order to integrate ESD, two cases address the discussion about the current state of the art in sustainability in higher education in their countries as an objective, and one case focuses on quality development in higher education. In four professional development opportunities the collaboration with actors outside higher education institutions represents a further objective. Two cases aim at equipping educators with the knowledge to implement ESD in school curricula, another case aims at developing mentoring partnerships between university educators and primary school teachers in ESD, and one case aims at establishing a science-society network for sustainability innovations.

Focus and topic

The question "What is professional development about?" provides insights into the thematic foci and entry points. The answers can be clustered into the following aspects (as outlined in Figure 8). They focus on:

- capacity-building and imparting methods and skills,
- concepts of sustainable development,
- the integration of ESD into higher education, and
- implementing own projects.

Focus and topic of the professional development

Capacity building and methods	12
Knowledge building	9
Integration of ESD in HE	8
Implementation of own projects	3
Others	3
No information	2

n=27   0 2 4 6 8 10 12 14
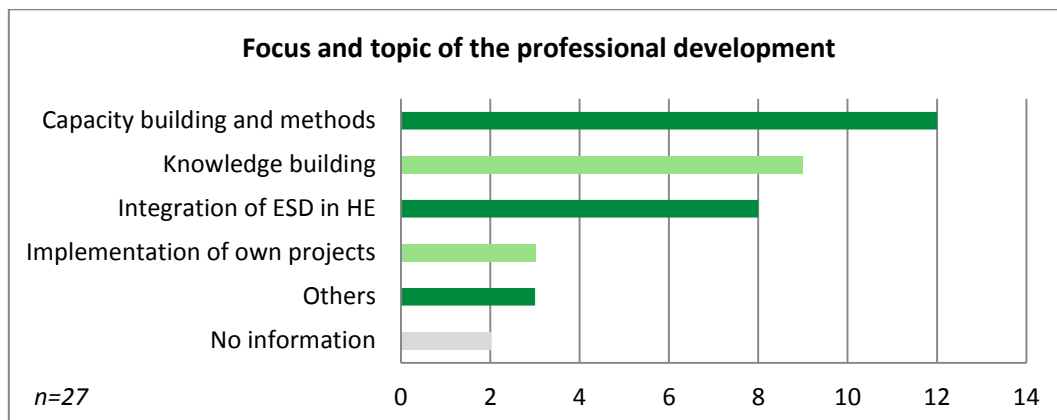
Figure 8: Clustered answers of the focus and topic of the professional development (in absolute numbers; multiple answers possible)

The capacity-building of university educators in ESD in order to meet the challenges of both integrating sustainability aspects into teaching as well as facilitating institutional change is mentioned in twelve of the 27 good practice examples of professional development opportunities. Related to this aspect, eight mentions address the acquisition of methods and skills, including action competence and critical perspectives, innovative teaching practices, didactic and communication skills, as well as the ability to implement ESD in their further teaching.

The focus on building knowledge in the field of sustainable development has been highlighted nine times. In five cases the professional development opportunities deal with specific sustainability topics which change from year to year or describe thematic learning networks which address issues such as agriculture, food production, biodiversity, climate change, social work, teacher training, business, or engineering.

ESD in higher education represents a further topic of the good practice examples and is mentioned eight times as well. The list ranges from imparting knowledge about ESD concepts, didactic strategies, and research methods, to integrating ESD in university courses, study programmes and learning environments in general, presenting on-going ESD projects and situation analyses, or initiating an interdisciplinary dialogue on ESD in higher education.

Furthermore three examples focus on the implementation of individual projects which include the initiation of research activities on ESD in higher education, the conception of ESD projects, and the preparation of curricula including sustainability issues in the field of teacher education.

Two other cases mention the creation of (transdisciplinary) sustainability networks as their topic; one case especially focuses on teacher education, and two cases have not provided any information.

Pedagogical approach

The question about the pedagogical approaches of the mapped professional development opportunities has resulted in various types of answers. Interactive methods such as discussions, team and group works, the World Café, brainstorming, or field trips are reported nine times. In three cases structured workshops took place; four cases focus on, amongst others, knowledge-building and so included theoretical parts, one of which also included online study. In two cases good practice examples were presented, one case mentioned that diverse impulses were provided, and another case provided a conference-type approach.

More concrete approaches were reported 26 times, whereby several examples mentioned more than one approach. These involve participatory learning and research, action learning (five mentions each), critical reflection (four mentions), applied learning based on the institution's own case studies, experiential and transformative learning (three mentions each), problem-based learning and service learning (two mentions each), interpretivist and socially critical approaches to sustainability education (one mention), and addressing the UNECE competence framework for educators (one mention). Self-training aspects, peer learning and mentoring were stated four times, and the development of a professional community of learning was stated once. In one case no information was received.

The special value of the professional development opportunity

The special values that were mentioned by the partners can be clustered into four categories:

- the integration of ESD in higher education, with a focus on teaching,
- exchange and networking,
- external value, and
- knowledge-building.
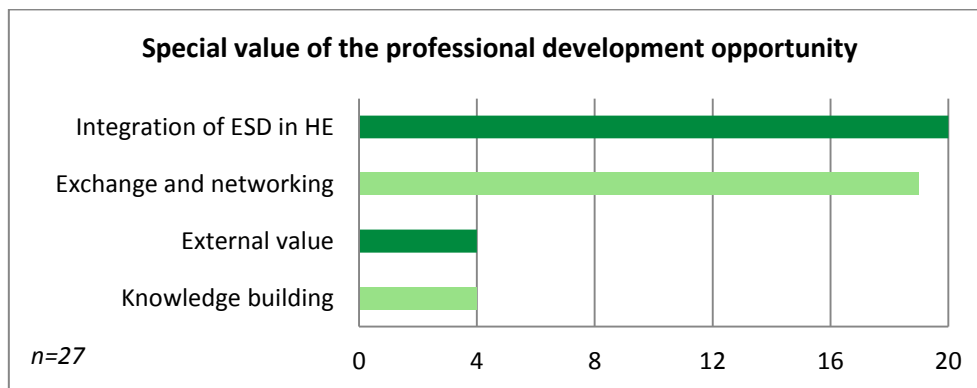
Figure 9: Clustered answers of the special value of professional development (in absolute numbers; multiple answers possible)

As already discussed, the integration of ESD in higher education is also emphasised in this regard with 20 mentions in total. In five cases building interdisciplinary capacity for sustainable development is seen as a special value, three cases mention professional development for university educators for sustainability and how they can be prepared for integrating ESD in their teaching, one of them focusing on teacher education. In two cases the identified need to transform the higher education curricula and teaching approaches and to be able to better respond to real-life challenges are seen as benefits, while two other cases focus on the combination of ESD and research in specially developed projects. Two cases highlight the opportunities for higher education institutions to

implement a more holistic and strategic approach of ESD and the developing of change agency in this regard, and three further projects see the value in their "pioneering" role, as they are the first ESD experts among educators or as their initiative started early during the UN Decade on ESD (2005). The benefit of professional development opportunities is also seen in meeting the demand of embedding ESD in university courses due to an increasing interest of students in sustainability issues (two mentions).

The special value of providing opportunities for mutual exchange and networking is mentioned 19 times. The exchange of experiences among colleagues, discussions, and reflection are perceived as beneficial in four cases, four cases mention the possibility of engagement with the sustainability community at university or the creating of a learning community in ESD, while three cases highlight the bottom-up approach of the initiative and the informal learning setting. The opportunity to meet experts from the field (two mentions), the international network of higher education institutions in sustainability and external stakeholders (two mentions) as well as the possibility to work together with people from other universities who share the same interests and challenges (one mention) are of further value. Another example highlights the fact that teams, instead of individuals, participate in professional development in order to integrate different sustainability perspectives.

In four cases the value of professional development is seen in external stakeholders. Two cases are policy driven and can provide valuable insights for policymakers as well as for other stakeholders such as public, private, non-governmental, or business institutions. The outcomes of one case may have important implications for lifelong learning approaches in ESD, and another example reports that the presence of the national University Conference of Rectors in their initiative has been of high value as they could provide institutional coverage of the planned actions.

Disseminating ESD knowledge is perceived to be of value in four cases. Partners emphasise the comprehensive introduction to the philosophical underpinnings of sustainability education, deepening their knowledge of ESD, conceptualising sustainability in relation to different disciplines in order to make it relevant for the academic staff to integrate it in their own work, and the possibility to exchange good practices and visit organisations that integrate sustainable development in their daily practice.

Aspects that have attracted participants to attend professional development opportunities

Another question in the mapping template addresses similar aspects as the special value of professional development opportunities (see section above), but is designed to capture more detailed information about what attracts participants to attend a professional development opportunity. The answers can be clustered into following aspects (see Figure 10 below):

- the opportunity of professional development in ESD,
- the overall concern about ESD,
- financial or institutional support and recognition,
- the possibility for exchange,
- institutional development, and
- the seminar location.

Aspects that have attracted participants to attend the professional development

Overall concern about ESD	14
Professional development in ESD	13
Exchange and networking	6
Financial or institutional support and recognition	6
Institutional development	4
Seminar location	2

n=27
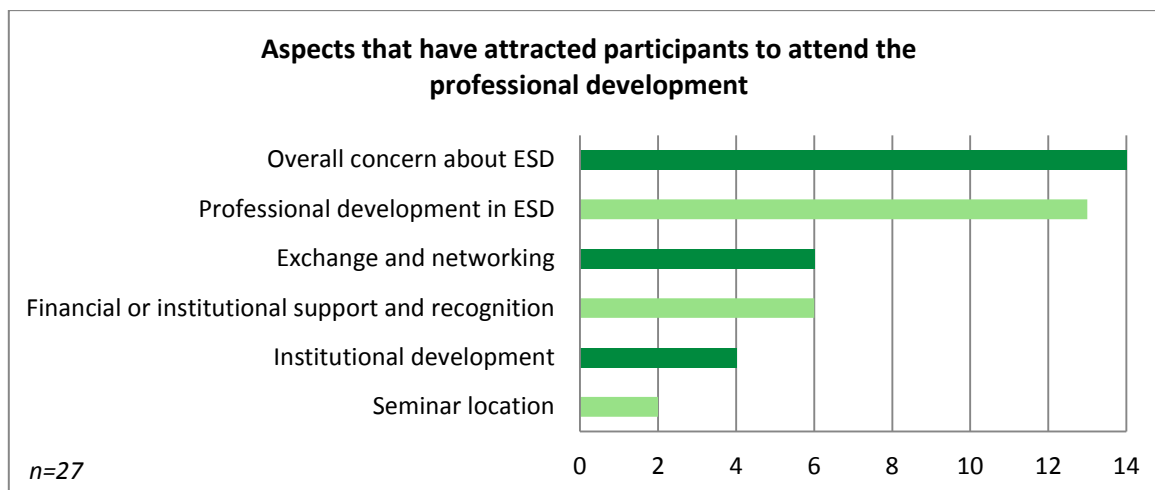
Figure 10: Clustered answers of the aspects that attract participants to attend professional development opportunities (in absolute numbers; multiple answers possible)

The overall concern about ESD was attractive for participants in 14 cases, which was explicitly mentioned in three cases. Five cases emphasised the personal interest of participants in ESD and didactic innovations, in two cases participants were interested because they wanted to develop student competences in sustainable development. The clarification of one's own views and enriching one's perspective through discursive participation and mutual reflection was attractive as well (two mentions). One case, addressing a networking initiative, was attractive because it addressed the specific needs of educators in higher education from various disciplines in an informal and easily accessible context. Another case highlighted the synergy of individual ESD activities in higher education focusing on capacity building.

In 13 cases the statements relate to the opportunity to attend an ESD professional development opportunity. In three cases participants attended because of the need to improve their individual competences in ESD and receive some support in implementing ESD in their university courses. Two cases are attractive because of interesting presentations by well-known experts, who also addressed practical solutions. One case reports incentives that include mentoring by experts and tailored guidance, as well as understanding how to build interdisciplinary capacity in ESD through professional development.

What was emphasised as well by the partners is institutional or financial support and recognition (six mentions). One case mentioned support from the management level in general, in one case project leaders who attended the professional development opportunity received funding to take time from existing duties and focus on ESD project development activities, and in another case the university educators received some funding for the project activities. In one case the findings were showcased and awarded at an annual event with colleagues from the university as well as other national higher education institutions, another case presented a prestigious programme with an institutional buy-in for universities to be able to participate, and one case was attractive for participants just because there was no participation fee.

Six cases highlighted the possibilities for exchange, e.g. to be able to share common concerns and interests with people from different disciplines and/or institutions (four mentions), to engage in a regional ESD network (one mention), and in the case of a networking initiative the personal relationships and related projects in this network were highlighted.

In four cases the institutional development motivated participants to attend professional development opportunities. Two partners mentioned institutional commitments, one highlighted the possibility to create an innovative environment for ESD and effective organisation, and in one

country professional development enabled the first national dialogue on ESD in higher education that was initiated by the academic community and not by the government.

Two further initiatives outlined that the pleasant workshop location and relaxing atmosphere was an important point for attracting participants to attend.

Funding

Higher education institutions themselves provide important sources for funding ESD professional development opportunities for university educators, as outlined in Figure 11 below. In six out of the 27 cases, higher education institutions were the sole financial supporter; in six further cases they were one of several funding sources. Four cases were financed by European Union funds (in three cases by Tempus funds and in one case by the European Social Fund), three cases received project funding from other sources than the EU, three cases were solely publicly funded (by a provincial government or the Ministry of Education), and one case was financed by the participants themselves. In eight cases there were mixed forms of funding. As mentioned above, in six cases higher education institutions were involved, two times a participation fee was charged, and public institutions, NGOs, research funding organisations, or the UNDP provided financial support as well.
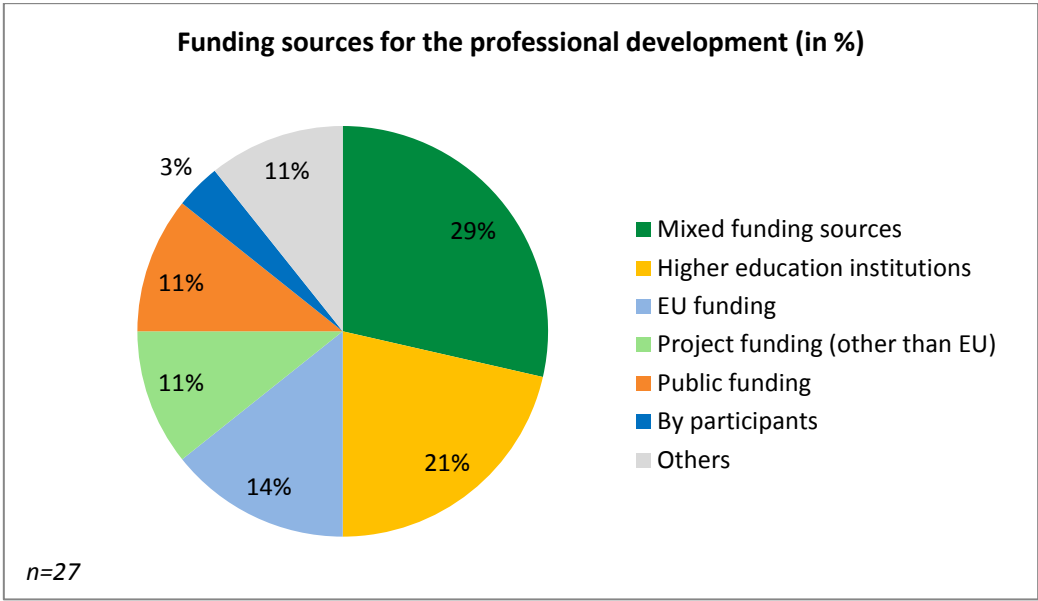
Figure 11: Funding sources of professional development opportunities (in per cent)

Evaluation

The question whether the professional development opportunity was evaluated resulted in answers which are difficult to cluster. It can be stated however that 13 examples received feedback from their participants, which was structurally analysed in six cases. Two cases reported comprehensive and multi-phase evaluation with the outcomes being published. The evaluation mainly focused on the outcomes of professional development (six mentions) rather than on the process (one mention). In five cases external evaluations took place, especially in those examples that received project funding, such as from the EU. Four cases stated that they internally evaluated the professional development opportunity. In three cases the findings and outcomes of the professional development opportunity were published or presented at conferences. Five cases did not mention any type of evaluation.

3.3. Characteristics of the ESD professional development opportunities in the four regional hubs

This section aims to characterise the ESD professional development opportunities for university educators in the four regional hubs – North, West, South and East.

North region

The nine good practices of ESD professional development that were identified by UE4SD partners from the North region present a broad range of innovative and interesting approaches for university educators. The types of professional development opportunities range from short courses, teaching support initiatives to academic working groups, and mentoring programmes. In more detail they include:

- seminar and academic working group for university educators (Denmark)
- nationally funded short course for training and curriculum development (Estonia)
- intensive short course and online resource linked to European network (Ireland)
- action research programme to support curriculum embedding (Latvia)
- national cross-institutional training seminars (Sweden)
- subject-specific short course to support curriculum embedding (Sweden)
- training academy process for higher education institutional staff teams (United Kingdom)
- professional support scheme providing project grants and mentoring (United Kingdom)
- optional unit in mainstream academic staff training courses (United Kingdom).

The good practice examples are characterised by a strong involvement of higher education institutions or key agencies in higher education and sustainability, which act both as facilitators as well as financial supporters. Two initiatives additionally gained EU project funding. Two-thirds of the examples explicitly target university educators, and most of these initiatives are open to academic staff from any subject area. Some examples focus on academic staff from specific faculties or fields, in one case academic staff teams are the target group for an initiative focusing on institutional change. The good practices from the North region are very diverse when it comes to their duration and continuity. They range from one-day events, courses over several weeks to initiatives that last one year. Some of them take place several times a year, while others are annual events and one case is an on-going initiative. The mapped examples in particular represent recent initiatives which started after 2010; only one took place between 2006 and 2007.

Professional development addresses participants at an advanced level and mainly focuses on developing ESD competences in higher education teaching and capacity building. Several initiatives also aim at fostering the integration of ESD in higher education at the institutional level. Learning about sustainable development is the exception. Concerning the pedagogical approach, detailed information is provided to support professional development processes, including action learning, participatory and collaborative learning, and constructivist approaches to learning. Some cases also more generally outline interactive methods like discussions, field trips, and in one case online resources. There are many reported benefits of professional development, but they mainly focus on the integration of ESD in higher education and the opportunity of professional development as such, which also attracts higher education actors to participate. The North region is the only region which mentions financial or institutional support and recognition as factors that attract participants to attend. The possibility for exchange with other colleagues tends to be less important.

Seven out of the nine good practice cases were evaluated, three cases did not analyse the feedback received by the participants, and one case reported comprehensive and detailed evaluation efforts at several levels.

West region

From the Western UE4SD partners, four cases are identified as good practice examples, which vary in their scope and purposes. They comprise:

- four-semester course for educators to develop ESD teaching competences (Austria)
- thematic learning networks to support implementing ESD in university courses (Belgium)
- process approach of developing a reference document on ESD competences (France)
- seminar for university educators of a specific sustainability module (Germany).

All four examples target university educators in particular, whereby one case also welcomes teachers from lower levels of education and two cases are open for external stakeholders, such as students or representatives of the conference of university presidents. They have in common smaller groups with a maximum number of thirty participants. Two cases are facilitated by higher education institutions, one by a government institution and one by the conference of university presidents and conference of high schools, with matching sources of funding; i.e. the case facilitated by a public institution is publicly funded, while the case facilitated by the higher education institution is financed by the same. The other case facilitated by a higher education institution shows a mix of funding sources, including the university, public funding, and participation fees.

The examples last from three days to four semesters and take place annually, several times a year, or in time periods of two to three years. Despite these differences, three cases started more than six years ago and hence show continuity and many years of experience, while the development process of a reference document on ESD competences is a recent initiative.

The good practice examples aim at imparting ESD didactic competences for teaching and learning processes, with one example especially focusing on undergraduate research. Debating concrete methods, study courses, and projects as well as the continuous exchange among participants contribute to these aims. One example has the purpose to increase understanding on how to integrate ESD in higher education on a structural basis, not only in the field of education, but institutionally. Participants learn how to become change agents for sustainability, gain theoretical and methodological knowledge, and learn about good practice examples. In another case the conception and implementation of a group's own ESD projects play a role as well. Information about a pedagogical approach enabling these objectives to be achieved is not provided in the same detail as it is for the Northern European examples. Structured workshops including theoretical and interactive elements are reported, as well as applied learning methods in one case, and mentoring and consulting approaches in another.

The partners describing these professional development opportunities see their value in the exchange of knowledge, experiences, and good practices with colleagues. One case highlights the possibility to acquire ESD skills and learn innovative teaching approaches. Participants are attracted to attend professional development opportunities because of their overall concern about ESD, whereby one case emphasises the possibility to improve individual ESD competences, in one case exchange and networking plays an important role, one case highlights the fundamental discussion opportunity about sustainability principles and relevant ESD competences for university educators, and in another case the nice and relaxing seminar location is seen as an important point of attraction.

While two of the cases receive feedback from the participants but do not structurally analyse them, one case comprehensively evaluates the professional development opportunity, and one case has not included evaluation yet.

South region

The six good practices of the South region include mixed types of ESD professional development opportunities, including short courses involving teaching support initiatives, four academic working groups, and one in-house certification initiative for new teaching staff. In detail the examples are:

- quality development initiative for ESD between higher education and schools (Cyprus)
- international project on reorienting university curricula for sustainability (Greece)
- ESD capacity building by a Mediterranean university network (Greece)
- self-training initiative by an interdisciplinary sustainability network (Italy)
- academic working group focusing on sustainability and curricula change (Spain)
- innovative projects on sustainability by governmental funding opportunities (Spain).

Three of the cases are facilitated by higher education institutions, whereby two of them are funded by European Union project funds, with one additionally financed by a national research foundation. One case is facilitated by the national University Conference of Rectors and funded by the higher education institution itself, one case is facilitated by a university in cooperation with a higher education network and shows a variety of funding sources, and the fifth example is held by a research institute focusing on sustainability and interdisciplinarity and also shows mixed forms of funding, including public and project funding as well as participation fees.

The good practice examples do not exclusively target university educators but address universities in general, members of an interdisciplinary sustainability network, academic staff, and in one case university educators, academic staff, teacher educators, as well as teacher from lower levels of education. They involve groups of 20 to 70 participants, the case of the international project reports that 200 staff members and 5000 students participated. The ESD professional development opportunities of the South region present long-term initiatives, with three being on-going initiatives, two of them taking place over a two to three year period, and one example lasts one academic year. One example takes place several times a year and started in 2003. From the other examples no information about their continuity is available; one example started in 2003, one took place in 2010 and two between 2010 and 2013.

The possibility for exchange and networking plays an important role in these good practice examples. Implementing ESD in higher education by reorienting university curricula is furthermore seen as an objective, while developing individual ESD teaching competences is mentioned as an explicit aim by one example. Nevertheless, capacity building of university educators is mentioned, as well as ESD in higher education, and engendering an interdisciplinary dialogue on sustainability and teacher education. Compared to the examples of the other three regional hubs, disseminating concepts of sustainable development does not play a role. Related to the pedagogical approaches the good practices use, detailed information has been provided which ranges from participative and experiential learning, transformative pedagogy, to problem-based learning or service learning. Self-learning processes and mentoring play an important role as well (three mentions). The Mediterranean case uses the UNECE competence framework as a basis for developing ESD competences of university staff.

The special value of the professional development opportunities is emphasized in various ways, including the need for interdisciplinary collaboration and exchange with colleagues from other universities, responding to the need to be able to address real-life sustainability issues in teaching, or in one case the presence of the national University Conference of Rectors in providing institutional coverage of their actions. Aspects that attract participants to attend professional development opportunities also include the overall concern about ESD and the possibility to exchange experiences with colleagues from other backgrounds, institutional commitments to foster ESD, and the possibility of professionally developing ESD competences.

In two cases the initiatives were assessed by external project evaluators, whereby one had additional internal evaluations, two cases structurally analyse the feedback of the participants, and the other two cases mention that they did not systematically evaluate the professional development opportunities but presented the outcomes in publications or at conferences.

East region

From the Eastern region eight professional development opportunities are identified as good practices and include:

- European project addressing the collaboration between science and society (Albania)
- academic working group for university educators of different faculties (Bulgaria)
- annual seminars on innovative teaching practices in the field of agriculture (Czech Republic)
- national meetings of university educators in environmental protection (Hungary)
- one-semester seminars of environmental protection for a broad target group (Poland)
- one-day event about challenges in sustainability in higher education (Serbia)
- one-day seminar and ministerial meetings for ESD in higher education (Slovakia)
- staff induction for a sustainable and socially responsible university (Slovenia).

The most common professional development opportunities are workshops or seminars (four mentions), followed by teaching support initiatives (two mentions), as well as one staff induction and one academic working group on ESD. The initiatives are mainly facilitated by higher education institutions (seven out of eight cases), one in cooperation with a public institution and one facilitated by a research institute. There are many funding sources, ranging from project funding (e.g. by EU or UNDP), public funding (e.g. by the Ministry of Education), to funding by participants or small grants from NGOs. Only in three cases did higher education institutions contribute to financing the professional development opportunity.

In many cases the initiatives are open and, besides university educators and academic staff, diverse stakeholders including policy makers and students can participate. Only one case exclusively targets university educators. The number of people who can participate is larger than in other regions with three cases of 50 to 100 participants, one case of 30 participants, one networking initiative is open but consists of 15 people so far, and three cases without any information provided. The majority of the good practice examples from the East region last less than three days; two cases are on-going, one takes place over three years and one covers one semester. Three examples take place annually and one was held only once. Three initiatives started quite recently (since 2011), two between 2006 and 2008 and an annual initiative has been active since 1997.

The purpose of the good practices can be found in all four categories – focusing on ESD in teaching, on exchange and networking, on the integration of ESD into higher education and on collaboration with external stakeholders. Nevertheless capacity-building and developing sustainability competences in higher education can be seen as the primary goals, which in some cases are not explicitly mentioned but can be considered a by-product of the discussion and learning processes. Several initiatives are oriented towards the implementation of sustainability oriented curricular change or quality development. A few good practices also focus on disseminating sustainability knowledge, such as the integration of the three pillars of environment, society and economy. Some initiatives are policy driven, i.e. aim at the implementation of international and national strategies while others initiate interdisciplinary programmes – from the bottom-up or as a result of project implementation. The professional development opportunities do not provide detailed information about the pedagogical approaches, but describe them more generally, including the application of interactive methods such as brainstorming, team and group works, the presentation of good

practices, but also a conference type approach, professional debates, and the possibility to informally exchange knowledge and experiences.

The value of the professional development opportunities is especially seen in exchange and networking (five mentions), emphasising the possibilities to engage with key experts, international networks or internal bottom-up initiatives to foster ESD. Another benefit lies in initiating a dialogue about the identified need to transform curricula and teaching approaches towards ESD. External factors are of further importance for the East regional examples, including the aim to convince policymakers and other stakeholders about the need to foster ESD in higher education. Another attractive reason for participants to attend is to professionally develop ESD competences and deepen their knowledge. The possibility to engage in network activities, build an innovative-learning environment, or participate in the first national bottom-up discussion on ESD initiated by higher education institutions and not by the government are of further value. An overall concern about the importance of ESD is mentioned less often than in the other regional hubs.

Concerning evaluation, two out of the eight good practice examples received feedback by the participants, but did not structurally analyse it, while two further cases published their learning outcomes and four cases were not evaluated.

3.4. Competences for educators to be developed through ESD professional development opportunities

Through the collection of good practice examples of ESD professional development for university educators, the project consortium also aims at identifying key competences being addressed during the professional development opportunities. The basis for this analysis is the competence framework for educators in ESD developed by an expert group by UNECE (2011). This framework identifies a comprehensive list of key competences in the categories of "a holistic approach", "envisioning change" and "achieving transformation" in regards to the pillars of learning by Delors (1996), namely learning to know, learning to do, learning to live together, and learning to be.

Partners were asked to list the competences being developed during the professional development opportunity. Many partners only provided information based on the original UNECE framework by deleting those competences that did not fit their examples. Some partners, especially from the West region, also used this framework, but added further aspects considered to be important for the specific professional development opportunity. Nevertheless, these competences were inspired by the UNECE framework as well, while further partners, especially from the South and the East regions, added very specific competences to the list. Table 4 shows the competence framework for university educators in ESD, identifying competences in the three categories of "holistic approach", "envisioning change" and "achieving transformation", which are further divided into the four pillars of learning. In total data from four cases from the West region, four cases from the South region and eight cases from the East region is presented in the table. Information from the nine good practice examples from the North region and two cases from the South region are not considered in this table, as they did not report information about ESD competences related to the UNECE framework.

It can be observed that developing knowledge and skills for ESD (as reflected in learning to know and learning to do) is particularly pronounced and can be seen as the starting point for the further acquisition of more transformative ESD competences. Concerning the individual statements, in many cases competences were understood to be sustainability competences instead of ESD competences, a fact which is especially reported by the East region.

As to some extent also emphasised in the description of the good practice examples (see Sections 3.1 to 3.3), there are many competence objectives of the professional development opportunities for

university educators. Based on the competence framework, important areas address the clarification of one's own values, learning to appreciate other perspectives and expertise, acquiring a holistic understanding of sustainable development, learning to understand complex interrelations and to apply knowledge in different contexts, developing strategic forward-oriented and systemic thinking, engaging in inter- and transdisciplinary collaboration and mutual learning, critically assessing processes of change and envisioning sustainable futures, and the importance for innovation and transformative change towards sustainable development.

Table 4: Overview of competences being developed through the good practice professional development opportunities, based on the UNECE framework (2011)

Note: in the brackets the colour-specific letters (W, S, E) refer to the regional hubs West, South, and East; while the numbers refer to the total good practice examples that mentioned a particular competence. Additional aspects that were mentioned are listed under "others" in italics.

Holistic approach. Integrative thinking and practice

Learning to know. *The educator understands….*

- the basics of systems thinking (W: 3), (S: 1), (E: 2)
- ways in which natural, social and economic systems function and how they may be interrelated (W: 3), (S: 1), (E: 4)
- the interdependent nature of relationships within the present generation and between generations, as well as those between rich and poor and between humans and nature (W: 3), (S: 1), (E: 1)
- their personal world view and cultural assumptions and seek to understand those of others (W: 3), (S: 3), (E: 2)
- the connection between sustainable futures and the way we think, live and work (W: 3), (S: 2), (E: 4)
- their own thinking and action in relation to sustainable development (W: 3), (S: 2). (E: 3)

Others:
- *holistic concepts of sustainable development and ESD (W: 1)*
- *responsibilities of science (W: 1)*
- *relevance of sustainability issues in their institution (W: 1)*
- *ESD context and practical implementation, and ways for ESD integration in their area of specialization (S: 1)*
- *how the holistic principle is embedded in the broad theoretical & practical foundations of organic farming (E: 1)*
- *how relationships and interdependencies are primary; objective phenomena are secondary (E: 1)*
- *how the material world meets philosophy and religion in this field (E: 1)*
- *special environmental issues and procedures (E: 1)*
- *role of stakeholders in science and civil society regarding SD (E: 1)*
- *importance of science-society networking for sustainability innovations (E: 1)*
- *great potential for sustainability research, education, and innovation if there is networking (E: 1)*
- *complex interactions of mankind and nature (E: 1)*
- *integrative power of the cultural context (E: 1)*
- *interaction of global-local interactions (E: 1)*
- *different aspects of sustainable development from theoretical and practical perspectives (E: 1)*

Learning to do. *The educator is able to….*

- create opportunities for sharing ideas and experiences from different disciplines/ places/ cultures/ generations without prejudice and preconceptions (W: 2), (S: 3), (E: 3)
- work with different perspectives on dilemmas, issues, tensions, and conflicts (W: 3), (S: 2), (E: 2)
- connect the learner to their local and global spheres of influence (W: 3), (S: 2), (E: 3)

Others:
- *apply undergraduate research and link it to ESD (W: 1)*
- *work in groups and courses together with people from different disciplines and with different perspectives*

(W: 1)
- *integrate SD issues in their teaching practice (S: 1)*
- *bridge the frontiers between different disciplines (S: 1)*
- *plan innovation (cooperative) that leads to discussions, a "clash" of approaches (E: 1)*
- *learn for practice: agronomy, food production (E: 1)*
- *understand the importance of the collaboration of science institutions with civil society organizations and/or other types of organizations. (E: 1)*
- *creatively adapt theoretical knowledge to a particular context (E: 1)*
- *interpret SD principles in the particular professional areas and teaching modules (E: 1)*
- *implement rules of sustainable development in professional and everyday life (E: 1)*

Learning to live together. *The educator works with others in ways that….*

- actively engage different groups across generations, cultures, places, and disciplines (W: 2), (S: 2), (E: 4)

Others:
- *show concepts and methods how students can work together are directly being tested during the seminar (W: 1)*
- *engage and motivate students (W: 1)*
- *provide the opportunity to integrate issues of cultural diversity in their activities (S: 1)*
- *facilitate the exchange of learning, teaching, and research (S: 1)*
- *involve a new generation of experts in the network – intergenerational learning (E: 1)*
- *increase knowledge about others' expertise and experience. (E: 1)*
- *integrate the knowledge, skills and solutions of others in integrated approaches. (E: 1)*
- *rely upon varied professional competences (E: 1)*
- *respect equally local and professional knowledge (E: 1)*
- *develop the unique specifics of a cycle of seminars: broad spectrum of lecturers and audience (academic lectures, students, and persons of different professions outside the university) provide the sense of acting together and being engaged for a sustainable future (E: 1)*

Learning to be. *The educator is someone who….*

- is inclusive of different disciplines, cultures, and perspectives, including indigenous knowledge and worldviews (W: 4), (S: 1), (E: 3)

Others:
- *seeks support from peers, shares their knowledge, expertise and is open to peers' knowledge and expertise (S: 1)*
- *learns from anthroposophy, biodynamic agriculture and other groups (E: 1)*
- *supports the development of pro-environmental behaviours through various channels (E: 1)*
- *knows the importance of professional development in SD (E: 1)*
- *know his/her limits (E: 1)*
- *acknowledges the variety of viewpoints and approaches (E: 1)*

Envisioning change. *Past, present and future*

Learning to know. *The educator understands….*

- the root causes of unsustainable development (W: 2), (S: 2), (E: 2)
- that sustainable development is an evolving concept (W: 4), (S: 2), (E: 1)
- the urgent need for change from unsustainable practices towards advancing quality of life, equity, solidarity, and environmental sustainability (W: 3), (S: 3), (E: 2)
- the importance of problem setting, critical reflection, visioning and creative thinking in planning the future and effecting change (W: 3), (S: 2), (E: 3)
- the importance of preparedness for the unforeseen and a precautionary approach (W: 3), (S: 2), (E: 2)
- the importance of scientific evidence in supporting sustainable development (W: 3), (S: 2), (E: 3)

Others:
- *urgent need for equity and responsibility in science (W: 1)*
- *future-oriented character of ESD through actions that aim to raise knowledge and awareness of the SD issues for a better future (S: 1)*
- *principle of education: methods of agricultural production are innovated and/or modified to comply with SD requirements (E: 1)*
- *aim of environmentally friendly agriculture, and the replacement of technocratic approaches (E: 1)*
- *multifunctional and socially relevant agriculture (E: 1)*
- *projects of innovative agricultural system and methods of assessment (E: 1)*
- *projects for the analysis of consultancy in different countries – comparative studies (E: 1)*
- *how the project aims to support pro-environmental changes with ideas, information, and relationships (E:1)*
- *analysis of current sustainability collaboration and expertise means identifying regional stakeholders in the field of higher education, research and practice for sustainable development. (E: 1)*
- *how to share knowledge with others (E: 1)*
- *the importance of critically estimating the accumulated human experience (E: 1)*
- *how past and present knowledge could influence the future towards SD. (E: 1)*

Learning to do. *The educator is able to….*

- critically assess processes of change in society and envision sustainable futures (W: 3), (S: 2), (E: 2)
- communicate a sense of urgency for change and inspire hope (W: 2), (S: 1), (E: 2)
- facilitate the evaluation of potential consequences of different decisions and actions (W: 3), (S: 3), (E: 1)
- use the natural, social, and built environment, including their own institution, as a context and source of learning (W: 4), (S: 2), (E: 1)

Others:
- *put students in close contact with nature – hands-on, experiential learning (E. 1)*
- *develop new methods to raise quality of product and process (E: 1)*
- *use tools and methods to deal with whole systems, uncertainty, change (E: 1)*
- *understand the hidden relations of complex environmental systems (E: 1)*
- *understand the real situation, identify specific problems and elaborate possible solutions for them (E: 1)*
- *conceptualize the long-term effects of the action undertaken (E: 1)*
- *estimate various professional contributions to the educational process (E: 1)*
- *develop criteria and methods for evaluating the importance of environmental and socio-cultural dimensions of development (E: 1)*

Learning to live together. *The educator works with others in ways that….*

- facilitate the emergence of new worldviews that address sustainable development (W: 4), (S: 3), (E: 2)
- encourage negotiation of alternative futures (W: 4), (E: 2)

Others:
- *allow people of different ages and backgrounds to work collectively for a common purpose and learn together (S: 1)*
- *further the exchange of innovative practice (mutual learning) (E: 1)*
- *enable the disabled to work in biodynamic farms – therapy through agricultural praxis (E: 1)*
- *create a team-building result (E: 1)*
- *critically assess processes of change in society and envision sustainable futures (E: 1)*
- *facilitate the evaluation of potential consequences of different decisions and actions (E: 1)*
- *empower all participants in an open dialogue (E: 1)*
- *coordinate joint action and collaboration (E: 1)*
- *learn and discuss current trends in policy and practices; encourage participants to plan change together. (E: 1)*

Learning to be. *The educator is someone who….*

- is motivated to make a positive contribution to other people and their social and natural environment, locally and globally (W: 4), (S: 1), (E: 5)
- is willing to take considered action even in situations of uncertainty (W: 4), (S: 1), (E: 1)

> *Others:*
> - *becomes a visionary (S: 1)*
> - *has the needed motivation and interest for a change of perspective (principle of agro-ecology) (E: 1)*
> - *develops and implements a clear overall vision of needed action, risks, and possible outcomes (E: 1)*

Achieving transformation. *People, pedagogy and education systems*

Learning to know. *The educator understands….*

- why there is a need to transform the education systems that support learning (W: 3), (S: 2), (E: 2)
- why there is a need to transform the way we educate/learn (W: 4), (S: 3), (E: 2)
- why it is important to prepare learners to meet new challenges (W: 4), (S: 3), (E: 2)
- the importance of building on the experience of learners as a basis for transformation (W: 3), (S: 2), (E: 1)
- how engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice (W: 4), (S: 3), (E: 1)

Others:
- *activities founded on the principals of ESD and use appropriate child-centered teaching techniques that promote critical systemic thinking, problem solving, value analysis and development (S: 1)*
- *need for change in agricultural practices – and for university transition (E: 1)*
- *integration of teaching and research (E: 1)*
- *transdisciplinary strategy for education that involves experiential learning (E: 1)*
- *how to go beyond skills and knowledge to higher order issues (application in complex situations) (E: 1)*
- *how philosophy is an implicit (and sometimes explicit) part of teaching and transition (E: 1)*
- *how to change environmental attitudes and behaviours with cultural sensitization and field programmes (E: 1)*
- *how direct target groups are higher education institutions (esp. lecturers, researchers and students), research institutions and regional stakeholders such as businesses, NGOs and regional development agencies (E: 1)*
- *how policymakers benefit indirectly (E: 1)*
- *importance of education as a transfer of cultural codes and values (E: 1)*
- *broader social and cultural dimensions of technical knowledge and of the engineering profession (E: 1)*
- *how academic teachers are able to cross barriers in the teaching of their discipline and incorporate a holistic sustainable development approach (E: 1)*

Learning to do. *The educator is able to….*

- facilitate participatory and learner-centred education that develops critical thinking and active citizenship (W: 4), (S: 3), (E: 2)
- assess learning outcomes in terms of changes and achievements in relation to sustainable development (W: 4), (S: 3), (E: 1)

Others:
- *become familiar with techniques and is confident when using them; acknowledges their importance for achieving change (S: 1)*
- *combine academic and practical experience (E: 1)*
- *appreciate the idea of transformation, defined as a systemic change that addresses a certain ecological problem in an agricultural system (E: 1)*
- *encourage pro-environmental behaviors in an university context (E: 1)*
- *facilitate participatory and learner-centred education that develops critical thinking and active citizenship (E: 1)*
- *assess learning outcomes in terms of changes and achievements in relation to sustainable development in a regional context (E: 1)*
- *identify and follow clear educational aims related to SD in all professional fields at the University (E: 1)*
- *enrich their educational methods by learning from best practice and incorporate them in own lectures, seminars, and workshops with students (E: 1)*

Learning to live together. *The educator works with others in ways that….*

- challenge unsustainable practices across educational systems, including at the institutional level (W: 3), (S: 1), (E: 2)
- help learners clarify their own and others worldviews through dialogue, and recognize that alternative frameworks exist (W: 3), (S: 3), (E: 2)

Others:
- *further participatory and social learning – ways to achieve transdisciplinary dimension (E: 1)*
- *live together in harmony not only with other humans, but also with the non-human world – the discipline as a whole "learns" to be in harmony (E: 1)*
- *encourage change in behaviour, attitudes and the curriculum (E: 1)*
- *mobilize positive energy and create synergies (E: 1)*
- *enable closer professional interaction (E: 1)*
- *respect personal values and points of view in an on-going professional debate (E: 1)*
- *require student feedback and discussion; show that learning about sustainable development is not an unidirectional process (from lecturer to students) (E: 1)*

Learning to be. *The educator is someone who….*

- is willing to challenge assumptions underlying unsustainable practice (W: 3), (S: 1), (E: 2)
- is a facilitator and participant in the learning process (W: 4), (S: 2), (E: 3)
- is a critically reflective practitioner (W: 3), (S: 2), (E: 1)
- inspires creativity and innovation (W: 4), (S: 1), (E: 5)
- engages with learners in ways that build positive relationships (W: 4), (S: 1), (E: 5)

Others:
- *takes initiatives that lead to change (S: 1)*
- *is a mentor in the learning process (W: 1), (S: 1)*
- *develops creative approaches as a result of challenging pertinent unsustainable paradigms in agriculture (E: 1)*
- *supports pro-environmental behaviours in an university context (E: 1)*
- *provokes and encourages critical and creative thinking (E: 1)*

4. Reflection and outlook

This state of the art report analyses and draws conclusions from the four regional reports of the UE4SD North, West, South and East regions, which in turn present summaries of the national mapping reports that were conducted by the 54 UE4SD partner universities from 33 countries across Europe. They provide information about the status of ESD in higher education as well as existing ESD professional development opportunities for university educators at the national level and represent an area with more than 3,000 European higher education institutions and more than 24 million students. The data situation is based on regional analyses of comprehensive national studies. Nevertheless it again needs to be underlined that the data provided does not claim to be complete, but it is based on estimations and perspectives of various experts in ESD in higher education from the UE4SD partner countries. Analysis of the national and regional reports show that it is impossible to draw valid conclusions for all participating European countries about the integration of ESD in higher education or the ESD professional development opportunities for university educators, as experiences and perspectives are too varied and context specific. Nevertheless some trends and tendencies can be observed:

1. **ESD is gaining importance in higher education.**

It can be stated that in almost all UE4SD partner countries guidelines or legislation exists at the national and/or regional level that recognize the importance of ESD in higher education. A majority of countries (especially from the North and the West regions) furthermore reports that higher education institutions have developed guidelines and mission statements that promote sustainability and ESD. Nevertheless it has to be noted that the existence of guidelines or a strategy does not automatically mean that its objectives have also been implemented, as was mentioned by several Eastern European partners.

The concepts, approaches, and understanding of ESD in higher education differ among the countries. While some countries, like United Kingdom or Belgium, tend to have a holistic perspective of ESD in higher education and pursue a whole-of-institution approach, other countries, especially from the East and the South regions, tend to be involved in initial academic discussions about the understanding and possibilities of integrating ESD in higher education institutions, and the need for a more extensive implementation of transdisciplinary programmes. Although many countries recognise the systemic approach of ESD in their policy documents, they often do not focus on higher education in particular or provide explanations about processes of implementation. Of course these are generalisations and many exceptions can be found.

2. **In many countries university educators lack ESD professional development opportunities.**

As the UE4SD project aims to develop an Academy for ESD in higher education, it has been of great importance to identify existing ESD professional development opportunities for university educators. Only a few countries have significant programmes oriented to this aim – United Kingdom is an outstanding example – and in many countries little attention is being paid to the ESD professionalization of university educators.

Only a few countries have comprehensive and mandatory programmes for university educators to acquire teaching competences, which would present a favourable context for integrating ESD aspects into professional development programmes. On the contrary, in most countries there are no professional requirements for university educators. As a result it is completely up to the interest and conviction of the individual educator if they will attend professional development opportunities in ESD. This in turn means that both leadership and personal commitment are required for creating

good practices and inspiring other educators to professionally develop their ESD competences. Whether ESD professional development programmes met with acceptance by university educators depends to a great extent on the cultural and personal context (is it a top-down initiative or an informal bottom-up movement?), the benefits of participation (is it recommended for the career development of young researchers, or is it only their personal interest?), and its participation status (is it mandatory or voluntary?). Besides the ESD professional development opportunities, to a certain extent academic staff also has the possibility to acquire ESD competences through other sustainability activities, such as institutional change processes.

3. University educators address sustainability issues, but do not reflect on their pedagogical approaches.

It seems to be common for university educators to be aware of the importance of sustainable development, and possibly conduct research across many disciplines about sustainability issues or address sustainability topics in their teaching, but without critically reflecting on their own pedagogical approaches or questioning their own ESD competences. However it is crucial for university educators to recognise that ESD must involve both content and pedagogy. In order to be able to develop pedagogical as well as transformational capabilities for ESD among educators, professional development opportunities need to support them in connecting aspects of content and pedagogy.

4. National and regional drivers for ESD in higher education can be identified in the partner countries.

A variety of national, regional, and international networks and partners are active in supporting the integration of sustainability into higher education, which in general is more often the case in the North and the West than in the South and the East regional hubs. Although many of these networks do not explicitly address ESD professional development, they represent or provide important platforms for initiating discussions about ESD in higher education and offer opportunities for exchange.

Some of the national reports indicate that nation-wide debate has only just begun and the main goal at this stage is to involve key stakeholders such as university leadership, policymakers, and ESD experts who could support changes in the HE system. Further research and policy actions would be required. Other national reports show that there are efficient programmes or projects (as well as other opportunities) for the development of educators' competences. Sometimes bottom-up initiatives are the driving forces for change (Bulgaria, Slovakia, Hungary), while in others (United Kingdom, Germany, Austria, Belgium, Spain) national higher education networks successfully contribute to implementing ESD.

5. University educators need ESD competences.

There is no doubt that university educators need ESD competences, but the national reports do not provide clear information what these competences should be or how they should be acquired. In this regard some partners have questioned the practicability of the UNECE competence framework for educators (which served as a basis for the national mappings of professional development opportunities) as it appeared to be too complex for practical application. Some countries from the South region see the opportunity for the exchange of experiences among colleagues as a crucial aspect for the ESD development of university educators. Raising awareness for ESD and initiating discussions in higher education are also important, while in other countries, especially from the

North region, initiatives address more advanced levels of ESD implementation, i.e. aiming towards a whole-of-institution approach or imparting specific pedagogical concepts.

Although a variety of mapped examples of ESD professional development target educators from specific disciplines, many voices are demanding transdisciplinary approaches that more closely react and contribute to social development and a wider involvement of stakeholders.

Outlook and way ahead

The results of the mapping exercise described in this state of the art report set the stage for further activities in the UE4SD project. It has been demonstrated that the integration of ESD in higher education and even the understanding of ESD professional development opportunities varies according to the cultural and institutional context in the 33 UE4SD European partner countries. This report has tried to respond to this diversity of perspectives, contexts, and initiatives and has attempted to extract the benefits of different approaches. It has selected a number of good practices which could serve as an overview of existing methods to achieve desired goals in the EU context and which will be included in a joint platform of resources to be developed and used by all involved partners.

For the UE4SD publication, which will include leading practices of ESD professional development in the four regional hubs, one task will be to clarify a common understanding among UE4SD partners of what ESD competences are needed for university educators and additionally to identify the requirements of such professionalization.

For the development of an Academy for ESD, it will be a challenge to account for the different institutional and cultural contexts and meet the different demands and objectives of the partners. It is questionable whether a single model of ESD professional development could be applicable in all partner countries or whether a modular approach that can be adapted to each country is a more realistic possibility. However, one desired learning outcome for the Academy will be to build the capability of educators to move from knowledge and vision to implementation and hence to an active contribution to a transformational development towards ESD in the European higher education area.

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