



**University Educators for Sustainable Development (UE4SD)**

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

### **TEMPLATE**

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## General information

### Lead person completing the template

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### Country information

Country	ITALY
Number of Higher Education institutions in the country	87 Universities – included private and distance learning ones
Number of Higher Education students in the country	Year 2012-2013, 1.709.408 students in total, 972.090 women, 737.318 men, <a href="http://statistica.miur.it/">http://statistica.miur.it/</a>
UE4SD region	<input type="checkbox"/> Northern Europe <input type="checkbox"/> Western Europe <input checked="" type="checkbox"/> Southern Europe <input type="checkbox"/> Eastern Europe

## **Part A –**

### **The status of ESD within Higher Education at the national level**

This section aims at gathering a general view about the integration of ESD within Higher Education in the UE4SD partner countries, with an emphasis on the issue of professional development opportunities for university educators to develop ESD competences.

#### **1. Are there any national (including regional jurisdictions such as cantons, states, provinces, etc.) strategies, policies or legislations, which recognise ESD in Higher Education? (If yes, please provide details. Max. 400 words.)**

While in Italy we do not have an explicit national strategy, or policy, for ESD in higher Education, the need for educators competent in ESD also at Higher Education level is implicitly foreseen in several national documents:

- a) In Italy, we have a National System, the INFEA – Environmental Information, Training and Education - National system, which links together, and asks for a common planning in ESD, the Ministry of the Environment and the Regional Offices responsible for the regional plans for Information, Training and Education in the field of Sustainability. The INFEA System has also the aim of pursuing the involvement of Higher Education Institutions in ESD. This has been achieved mainly through funding of Master courses, and a few Doctoral Thesis, on Environmental Education and on ESD. The INFEA National System has been very active for 6-8 years, focusing its activities mainly on formal Education (primary and secondary schools), and on training of teachers and environmental educators. The system was running out of steam over the last 5-7 years because of the complete stop of funding, and the evident lack of political interest. Only a few regions continue to launch and support initiatives but none of them is oriented to the professional development of higher education staff.
- b) A new national curriculum, with clear references to ESD, to be taught in primary and lower secondary schools was adopted in September 2012. In 2010 also the curriculum for upper secondary schools has been changed and, in some disciplines and orientations, topics related to ESD have formally been introduced (as Green Chemistry...). These documents should be known by university educators preparing school teachers (University Courses for Primary school teachers, and Disciplinary University courses + the induction year, for secondary school teachers).
- c) Several guidelines for Environmental Education (EE) and ESD have been produced by the Ministry of Education, University and Research (MIUR) in agreement with the Ministry of Environment (MATTM) in order to introduce ESD in school curricula. The last ones – not necessarily the best that have been formulated – have been signed in December 2009 and give a special stress to ‘Education to Legal behaviours’ as a fundamental component of ESD. In these last guidelines, Universities are explicitly quoted only in one sentence where it is asked “*to foster specific projects and initiatives in order to promote among University students an environmental awareness, and ecocompatible practices and lifestyles*”.

#### **1. If yes, what ESD processes and approaches do these promote? (Max. 200 words.)**

The last Guidelines signed by the two ministries (Education and Environment, 2009) make explicit reference to the UNECE strategy and to the approach the strategy proposes: education is ‘a

prerequisite for achieving sustainable development', it is 'a continuous learning process', fostering a 'holistic approach to problems and the use of reflection and systemic thinking'. The Guidelines stress the importance of information and training for ESD educators but never explicitly name higher educators.

In theory, all university educators should adapt their teaching to these new requests coming from the guidelines and the new school curricula, but the effective change has never been evaluated (and the feeling is that nothing has changed so far).

It has to be noticed that the 'Chart of principles for an EE oriented to sustainability' signed in 1997 by the two Ministries had a far more advanced educational approach proposing: a care for 'the values building processes' and 'a culture' oriented to future, the fostering of 'dynamic qualities' and of 'responsible attitudes and behaviours', the 'capability of decision making in fuzzy and difficult situations', the attitude for planning 'wise actions in uncertainty conditions', the fostering of the 'sense of limits' together with the competences in 'participation' and in 'conflicts management'.

**2. If yes, do these documents refer to ESD professional development for university educators (as like asking for skills and capabilities)? (If yes, please provide details. Max. 200 words.)**

No. The focus of the Italian higher education system is on research and on scientific publications, not on teaching competencies. This relates to all disciplines: recently, an important component in the selection process for becoming university teachers – that is, to give a lesson on a topic chosen by the evaluation commission – has been eliminated. University Educators' professional development has been never evaluated based on their teaching competencies, but only on research results.

**2. Are there any national (including regional jurisdictions such as cantons, states, provinces, etc.) initiatives (projects, programmes, etc.) on ESD professional development for university educators? (If yes, please provide details. Max. 400 words.)**

NO, a survey made specifically for this project by Palermo University on funding given to projects and initiatives related to ESD in the last 5 years by the Ministry of Education, and by other main National Research Institutions, gave a negative result.

**3. Do Higher Education institutions have strategic plans or guidelines to promote ESD? (Please tick the box regarding your estimation of the situation in your country and provide an overview, not specific details. Max. 400 words.)**

- None
- Few
- Several
- Many
- All

Some higher education disciplines have recently introduced Environmental Education or ESD in their teaching plan: as an example, Environmental Education is formally one of the topics taught within "Ecology" courses (scientific disciplinary sector BIO/07) in many Italian universities.

Some universities have started to include SD in their strategic plans (for example Siena University has included a sustainability focus in its three-years Plan, involving higher education, research and also administrative staff). Few Universities have recognized working groups dealing with ESD (such as IRIS, involving educators from the University of Turin, Brescia and Aosta), or having ESD as one of their

focus (such as IASS, an interuniversity association) and consequently reflecting on how to promote ESD and how to create professional competencies of University educators.

**4. Do Higher Education institutions have initiatives (projects, programmes, etc.) to support the professional development of university educators in ESD? (Please tick the box regarding your estimation of the situation in your country and provide an overview, not specific details. Max. 400 words.)**

- None
- Few
- Several
- Many
- All

The few universities named before have implemented networks and working groups (such as NESSO. Network Siena Sostenibilità, and IRIS, in Turin, Aosta and Brescia) aimed to professional exchange of educational experiences and competencies.

**5. Does ESD form part of the quality assurance and accreditation processes of Higher Education institutions?**<sup>1</sup> (If yes, please provide details. Max. 400 words.)

no

The new Evaluation system proposed by the National Institution for the Evaluation of Research, (ANVUR), considers mainly the effectiveness of research achievements, and evaluates educational effectiveness only through evaluation by the students. No quality criteria or evaluation principles are indicated. The term 'sustainability' is mentioned in ANVUR document only to indicate the sustainability of educational staff when compared with the number of students and courses. Research carried out in ESD is not currently recognized by ANVUR system (as in many other new or hybrid research fields) also because of the lack of International Magazines accredited by the Quotation Index System.

A new field for evaluation recently introduced by ANVUR, and where rising awareness on ESD could be considered, is the 'third University mission' that means the 'services for the community', but it is not clear which indicators/results/achievements will be taken in consideration.

**6. Are there any Higher Education networks, partnerships or main drivers (public, private, NGOs) that support the professional development of university educators in ESD in your country? (If yes, please provide details. Please note that networks at the local but also global level might be relevant. Max. 400 words.)**

Yes. Some professional associations and/or scientific societies; an example is the Italian Ecological Society (SItE) working on ESD since 2011 with a permanent university educators and school teachers working group (DEA) (<http://www.ecologia.it/>). Also the Environmental Sociologists working group has a focus on education.

In the last 10 years the UNESCO DESS National Committee has invited in many occasions university educators to discuss about of the competencies needed to teach ESD and to plan their own professional development. Moreover, the Italian network linked to WEEC (World Environmental Education Congress), and the journals "Eco, l'educazione sostenibile" and "Culture della sostenibilità" (the last one devoted to Educational Research in ESD) are fostering the reflection among University Educators about their role and their competencies for ESD .

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<sup>1</sup> In countries where there is a formal accreditation process of staff, please indicate if ESD is taken into consideration in this process and how.

Other initiatives and networks supporting the professional development of University Educators are described in detail in part B as leading practices in the country - IRIS, NESSO and IASS –.

**7. Are there any higher education initiatives or projects developed in response to the UNECE ESD competences<sup>2</sup>? (If yes, please provide details. Max. 400 words.)**

No, the UNECE strategy is rarely known by Italian educators in general (even if it is named in the 2009 Ministerial guidelines) and especially by University educators. The UNECE document about ESD competences (“Learning for the future: Competences in Education for Sustainable Development”) has not been disseminated neither translated in Italy.

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<sup>2</sup>UNECE (2011) Learning for the future: Competences in Education for Sustainable Development, ECE/CEP/AC.13/2011/6;

[http://www.unece.org/fileadmin/DAM/env/esd/6thMeetSC/Learning%20for%20the%20Future\\_%20Competences%20for%20Educators%20in%20ESD/ECE\\_CEP\\_AC13\\_2011\\_6%20COMPETENCES%20EN.pdf](http://www.unece.org/fileadmin/DAM/env/esd/6thMeetSC/Learning%20for%20the%20Future_%20Competences%20for%20Educators%20in%20ESD/ECE_CEP_AC13_2011_6%20COMPETENCES%20EN.pdf)

## **Part B –**

### **Professional development opportunities in ESD for university educators**

This section seeks to collect national professional development opportunities for university educators to develop ESD competences. Please identify two to three leading practices of ESD professional development opportunities in your country and describe them in detail.

<b>EXAMPLE 1</b>	
<b>Title of the professional development initiative</b>	<b>Self-training within the Interdisciplinary Research Institute on Sustainability.</b>
<b>Who is the facilitator or leading institution?</b>	<b>IRIS –Interdisciplinary Research Institute on Sustainability. A partnership between the Universities of Torino, Brescia and Aosta.</b>
<b>Who participates?</b>	IRIS members. Many members of IRIS although not all of them have been university lecturers or are currently employed within an University
<b>How many people can participate?</b>	IRIS currently comprises of 13 University lecturers from three Italian Universities (TO, BS, AO) plus one Scottish University (Aberdeen); in addition, there are about 10 contract lecturers who have worked in various Italian Universities (TO, BS, AO, Trento-Bressanone).
<b>What type of professional development is it?</b>	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input checked="" type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others ( <i>please specify</i> ):
<b>When does the initiative take place? (Please only list initiatives since 2005.)</b>	The initiative of self-training began when the Centre was first set up. IRIS was originally constituted in 2003 as an Interdisciplinary unit within the University of Torino. In 2006, IRIS became an Inter-University centre bringing together three Universities plus an affiliated institution outside Italy.
<b>How long does it take?</b>	The desire for sharing perspectives and knowledge amongst researchers involved in sustainability research from different disciplines gave life to the centre. In this view, the process of self-training sat at the core of the establishment of IRIS and it is still ongoing.
<b>What is the purpose and objective?</b>	The purpose of IRIS has always been 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. The idea of mutual learning originated from the

	<p>recognition that sustainability research can grow from dialogue and integration of multiple perspectives.</p> <p>The process of self-training was perceived as being integral to the aim of the centre. The formation of Iris stemmed from the recognition that a) dialogue across disciplines required new skills and competencies; and that b) our practice would impact both on teaching and research at University level.</p> <p>The activities conducted within IRIS included over the years:</p> <ul style="list-style-type: none"> <li>-empirical, interdisciplinary research projects carried out by small teams of IRIS members.</li> <li>- design and evaluation of educational materials and courses on topics of sustainability .</li> <li>- development of seminars and workshops to support internal collaboration and self-training.</li> </ul> <p>All these different types of initiatives have provided significant opportunities for mutual learning within ESD for all members regardless of their specific teaching responsibilities.</p>
<b>What is the ambition (idea behind the initiative)?</b>	<p>The aim of IRIS was to bring together researchers from different disciplinary fields into dialogue, in order to enrich one's own knowledge and competencies when dealing with issues of sustainability. We held the belief that knowledge of the natural systems can be enriched by means of sharing knowledge specialisms with other scientists but also by means of integrating the scientific, analytical approach with other approaches bringing qualitative and reflective dimensions.</p> <p>In this view, the real force keeping IRIS researchers together is the perception of having much to learn from one another and that no single perspective can be considered to be sufficient, superior or on the contrary, without something legitimate to offer. The presence of experts drawn from Economics, Physics, Biology, Sociology, Linguistics, Natural Sciences, Education, Psychology allows to pursue an important objective: to bring into conversation different knowledges and different views and to activate dialogue between realms of knowledge which are rarely brought into contact with one another and often lack the instruments to understand one another.</p> <p>When such dialogue happens it is then possible to devise conceptual tools for the study of sustainability themes; it is also possible to elaborate educational opportunities for a professional education promoting the idea of human beings as self-aware and reflexive beings, who are able to observe themselves and the course of their own evolution. By virtue of this ability, it is also possible to conceive new relational models between the socio-economics and socio-ecological systems in which human beings are located.</p>
<b>What is the professional development initiative about (focus, thematic entry point)?</b>	<p>It was recognised that issues of sustainability are often defined as being 'intractable' due to the diversity of foci and languages adopted by different disciplines as well as the often contrasting foci for theory and practice. The initiative was focussed on the development of opportunities for engendering interdisciplinary dialogue on issues of sustainability. The network provided a platform for engaging people from different walks of life: academics, theorists, practitioners, artists, researchers etc. The IRIS members have been involved in a number of</p>

	<p>different activities which ranged widely from the sharing of practices through internal workshops, to joint research, co-writing and co-presenting at conferences and various fora for public communication, as well as in schools. All these opportunities provided members with the chance of appreciating and joining together the multiple facets of sustainability: an understanding of ecological systems goes hand in hand with an attention for our relationships, languages, values and visions for the future.</p>
<b>What is the pedagogical approach?</b>	<p>All the initiatives organised by IRIS are included in the process of self-training and self-education based on the principle of dialogue, narration and sharing of experiences as well as building shared experiences. Through dialogue, and sometimes with some difficulties, we tried to share something from the linguistic point of view as we believe that behind expert disciplinary knowledge one may find implicit values which make mutual understanding and acceptance of the other a difficult process.</p> <p>In all our activities we endeavored to promote active participation and interdisciplinarity. More specifically, courses on fundamentals of sustainability have been offered to beginning teachers (both primary and secondary), civil servants, doctoral students. In every occasion, the interdisciplinary dimension was highlighted by:</p> <ul style="list-style-type: none"> <li>-co-teaching, with IRIS members from different disciplinary fields.</li> <li>- choice of complex and controversial socio-environmental issues, often proposed by means of simulation scenarios (e.g. role-plays);</li> <li>- active reflection and communal evaluation of the learning opportunities;</li> <li>- practice of participatory action-research</li> </ul>
<b>What has attracted the participants to take part in the initiative?</b>	<p>IRIS grew from people coming together with the shared perception that no one single approach or perspective is sufficient when dealing with the systemic nature of change required for sustainability and that we all have much to learn from other people. IRIS lists members from a range of very different disciplinary sectors across the Sciences and the Humanities. Over time, new members have joined IRIS bringing an open disposition towards this model of working. Equally however the more traditional wings of the academic community felt alienated by the model of interdisciplinary dialogue pursued by IRIS. While IRIS is institutionally recognised as a University centre, we cannot say that it has been legitimated and recognised within the Italian academic community. Also the presence of many IRIS members who do not hold an academic position has equally attracted some members and alienated some others.</p>
<b>What is valuable and interesting about this initiative? Why is it worth doing it?</b>	<p>There is an increasing attention also in the University environment towards the need for 'contamination' between different disciplinary sectors. This process is essential when dealing with issues of sustainability yet the interdisciplinary approach is also recognised as being valuable for dealing with a range of other topics and problems. With respect to this trend, IRIS, which originated more than 10 years ago, was ground-breaking and innovative.</p> <p>Another interesting and specific aspect of the self-training process was its informal and unstructured nature. The organic nature of IRIS allows for flexibility and responsiveness to needs and situations which enabled participation to last over a long period of time. Paradoxically</p>

	<p>however an organic unit may not hold the level of consistency required to guarantee continuity and speed (e.g. in applying for grants).</p> <p>Another interesting feature (and at the same time a potential point of weakness) is that while IRIS is a properly constituted academic centre, it operates with rules and modalities which are different from those that are normally adopted by the Italian academy.</p> <p>Nevertheless, the value of IRIS and its members lies with the possibility to create new approaches, and stimulate thinking across boundaries to pursue creative and desirable futures within a view of sustainability. To this effect, IRIS has pursued with some effort and some difficulties the idea of a new research journal - 'Visions of Sustainability' - which would welcome and include new and unconventional methodological approaches, while operating within an academic system.</p>
<b>How is the initiative being funded?</b>	The initiative was originally set up with funding held by the individual members. Subsequently, an official request for funding was made to the Principal of the University of Torino to appoint a dedicated team to support IRIS. The application was configured under the strategic plan of the University but it was never approved and financial support had never been granted by the University. Nevertheless the various initiatives promoted by IRIS and which contributed to the self-training process, such as the workshops - received small financial support from the local authorities and especially from the Regione Piemonte. A large research project involving 10 IRIS members was funded by the San Paolo bank. Other applications for funding addressed to International bodies (e.g. Arts and Humanities Research Council) have not been successful so far.
<b>How is the initiative being evaluated? If possible, please share some of the results.</b>	<p>The informal and organic nature of the initiative does not lend itself to be measured and monitored through systematic evaluation models. We do have however a large number of documents describing and articulating the range of our experiences according to aims and methodologies as well as reflections which have been shared by members in the writing of the IRIS website (e.g. the homepages); the proceedings of the IRIS workshops; the reports written for the funders; the number of different academic papers and conference presentations. In addition, the editorial of the new journal 'Visions' contains an extensive account of the principles, practices and outcomes of the self-training initiative; the journal is a means to engage the extended international community with the aims, ideas and practices promoted by IRIS.</p> <p>In addition, empirical research was conducted through action-research in Initial teacher education courses and a formal evaluation of the IRIS training course for doctoral researchers was conducted by a designated evaluator. In all courses, data was gathered by means of accurate documentation of the educational process, including the reflections of the lecturers and the responses of the students to the educational units that were being offered. We can confidently say that each researcher/teacher has widened their perspective by means of the degree of personal involvement and engagement with other people. Given that IRIS comprises members with specific educational interests, we anticipate that participating in IRIS has increased the</p>

	level of pedagogical competence. In addition, the shared activities have produced changes at the relational level with different outcomes for each participant. Perhaps also the awareness of being part of a self-training process has favored and promoted the results that each member has obtained within their specific realm of academic teaching.
<b>Link to website/ references</b>	<a href="http://www.iris-sostenibilita.net/iris/index_sm1.asp">http://www.iris-sostenibilita.net/iris/index_sm1.asp</a>

## Competences for educators in education for sustainable development

Please complete this grid for each good practice you describe. Reflecting the good practice, please fill the blank fields by reflecting competences that are being developed through the initiative (and/or by describing concrete activities that promote the development of competences). The grid is based on the UNECE ESD Competences for Educators (2011); the framework can be found in the annex to this document.

Please note that a facilitator or participant of the professional development initiative might need to support the answering of this grid.

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to know</b>  <i>The initiative offers an opportunity for the educator to understand....</i>	<ul style="list-style-type: none"> <li>the basics of systems thinking</li> <li>ways in which natural, social and economic systems function and how they may be interrelated</li> <li>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</li> <li>their personal world view and cultural assumptions and seek to understand those of others</li> <li>the connection between sustainable futures and the way we think, live and work</li> </ul>	<ul style="list-style-type: none"> <li>the root causes of unsustainable development</li> <li>the urgent need for change from unsustainable practices towards advancing quality of life, equity, solidarity, and environmental sustainability</li> <li>the importance of problem setting, critical reflection, visioning and creative thinking in planning the future and effecting change</li> <li>the importance of preparedness for the unforeseen and a precautionary approach</li> <li>critical reflection on scientific knowledge</li> </ul>	<ul style="list-style-type: none"> <li>why there is a need to transform the education systems that support learning</li> <li>why and how there is a need to transform the way we educate/learn</li> <li>why and how it is important to prepare learners to meet new challenges</li> <li>the importance of building on the experience of learners as a basis for transformation</li> <li>how engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice</li> </ul>
<b>Learning to do</b>  <i>The initiative offers an opportunity for the educator to be able to....</i>	<ul style="list-style-type: none"> <li>create opportunities for sharing ideas and experiences from different disciplines/places/cultures/generations without prejudice and preconceptions</li> <li>work with different perspectives on dilemmas, issues, tensions and conflicts</li> <li>connect the learner to their local and global spheres of influence</li> </ul>	<ul style="list-style-type: none"> <li>critically assess processes of change in society and envision sustainable futures</li> <li>facilitate the evaluation of potential consequences of different decisions and actions</li> <li>use the natural, social and built environment, including their own institution, as a context and source of learning</li> </ul>	<ul style="list-style-type: none"> <li>facilitate participatory and learner-centred education that develops critical thinking and active citizenship</li> <li>assess process and outcomes of learning in terms of changes and achievements in relation to sustainable development</li> </ul>
<b>Learning to live together</b>  <i>The initiative offers an opportunity for the educator to work with others in ways that....</i>	<ul style="list-style-type: none"> <li>actively engage different groups across cultures and disciplines</li> <li>facilitate the exchange of learning, teaching and research</li> </ul>	<ul style="list-style-type: none"> <li>facilitate the emergence of new worldviews that address sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>help learners clarify their own and others worldviews through dialogue, and recognize that alternative frameworks exist</li> </ul>

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to be</b>  <i>The initiative offers an opportunity for the educator to be someone who....</i>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• is willing to take considered action making reversible choices</li> </ul>	<ul style="list-style-type: none"> <li>• is a facilitator and participant in the learning process</li> <li>• is a critically reflective practitioner</li> </ul>

EXAMPLE 2	
<b>Title of the professional development initiative</b>	NESSO
<b>Who is the facilitator or leading institution?</b>	Prof. Tania Groppi
<b>Who participates?</b>	Educators and technicians
<b>How many people can participate?</b>	Around 40
<b>What type of professional development is it?</b>	<input checked="" type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input checked="" type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input checked="" type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others ( <i>please specify</i> ):
<b>When does the initiative take place? (Please only list initiatives since 2005.)</b>	Started in 2011 it holds one meeting every month. It organizes initiatives all year around
<b>How long does it take?</b>	It is a continuous effort
<b>What is the purpose and objective?</b>	Connecting all the competences on the different aspects of sustainability for developing research and teaching for mutual exchanges of ideas and joint efforts for projects. In particular one of the initiatives is the organization of a course on "Sustainability" that aims at teaching sustainability from all viewpoints.
<b>What is the ambition (idea behind the initiative)?</b>	Make economists, "strong" scientists, experts in law, social sciences etc. work together transdisciplinarily obtaining a result that is much larger than the sum of the parts. With the course on "Sustainability" the ambition is to train students and educators (as well all the other interested participants) to think in sustainability terms, in all senses.
<b>What is the professional development initiative about (focus, thematic entry point)?</b>	Spreading the sectorial knowledge that is present within the University: working with experts of other fields enlarges the viewpoint on sustainability of every participant
<b>What is the pedagogical approach?</b>	The discussion is led by the rector himself and by the experts on a certain fields. The others offer a contribution from their field of expertise. The roles change every time. In particular for the course on "Sustainability" the educator responsible of the course involves in the teaching other educators from different fields. University Educators are at the same time teachers and students of the course.
<b>What has attracted the participants to take part in the initiative?</b>	Interest in the field and will to improve and expand their preparation discussing with experts of other fields
<b>What is valuable and interesting about this initiative? Why is it worth doing it?</b>	The integration of knowledge. The course on "Sustainability" forces each educator to a strong effort to understand and consider other viewpoints on sustainability.
<b>How is the initiative being</b>	The course is funded with the fees obtained by the enrolment of non-

*This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.*

<b>funded?</b>	students (external people) to this particular activity
<b>How is the initiative being evaluated? If possible, please share some of the results.</b>	t is not evaluated yet. But the number of new papers published by scientists of different Departments of the University could be used as an indicator of success, as well as the number of projects on sustainability involving more than one Department. The course will be evaluated by all the students and non-students enrolled. Results are not available yet, since this is the first year
<b>Link to website/ references</b>	<a href="http://www.unisi.it/ateneo/nesso">www.unisi.it/ateneo/nesso</a> ; <a href="http://www.dsfta.unisi.it/it/didattica/sostenibilita">http://www.dsfta.unisi.it/it/didattica/sostenibilita</a>

## Competences for educators in education for sustainable development

Please complete this grid for each good practice you describe. Reflecting the good practice, please fill the blank fields by reflecting competences that are being developed through the initiative (and/or by describing concrete activities that promote the development of competences). The grid is based on the UNECE ESD Competences for Educators (2011); the framework can be found in the annex to this document.

Please note that a facilitator or participant of the professional development initiative might need to support the answering of this grid.

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to know</b>  <i>The initiative offers an opportunity for the educator to understand....</i>	<ul style="list-style-type: none"> <li>the basics of systems thinking</li> <li>ways in which natural, social and economic systems function and how they may be interrelated</li> <li>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</li> <li>their personal world view and cultural assumptions and seek to understand those of others</li> </ul>	<ul style="list-style-type: none"> <li>the urgent need for change from unsustainable practices towards advancing quality of life, equity, solidarity, and environmental sustainability</li> <li>the importance of problem setting, critical reflection, visioning and creative thinking in planning the future and effecting change</li> <li>the importance of scientific evidence in supporting sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>how engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice</li> <li></li> </ul>
<b>Learning to do</b>  <i>The initiative offers an opportunity for the educator to be able to....</i>	<ul style="list-style-type: none"> <li>create opportunities for sharing ideas and experiences from different disciplines/places/cultures/generations</li> <li>work with different perspectives on dilemmas, issues, tensions and conflicts</li> <li>connect the learner to their local and global spheres of influence</li> </ul>	<ul style="list-style-type: none"> <li>critically assess processes of change in society and envision sustainable futures</li> <li>communicate a sense of urgency for change and inspire hope</li> <li>use the natural, social and built environment, including their own institution, as a context and source of learning</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Learning to live together</b>  <i>The initiative offers an opportunity for the educator to work with others in ways that....</i>	<ul style="list-style-type: none"> <li>actively engage different groups across generations, cultures, places and disciplines</li> <li>facilitate the exchange of teaching and research</li> </ul>	<ul style="list-style-type: none"> <li>facilitate the emergence of new worldviews that address sustainable development</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to be</b>  <i>The initiative offers an opportunity for the educator to be someone who....</i>	<ul style="list-style-type: none"> <li>• is inclusive of different disciplines, cultures and perspectives</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

<b>EXAMPLE 3</b>	
<b>Title of the professional development initiative</b>	Self-training and experiences exchange within the Italian Association for Sustainability Science
<b>Who is the facilitator or leading institution?</b>	Italian Association for Sustainability Science. A national network gathering researchers from 11 Italian Universities, Interuniversity Centres, and National Research Centres, as well as experts working in ESD field.
<b>Who participates?</b>	IASS members. Many members of IASS, although not all of them, have been university lecturers or are currently employed within an University, or work on Education at various levels
<b>How many people can participate?</b>	IASS currently comprises 19 founding members. However, a larger network promoted by IASS through a series of events the Association has organised, can be involved in this initiative
<b>What type of professional development is it?</b>	<input type="checkbox"/> Short course <input type="checkbox"/> Teaching support initiative <input type="checkbox"/> Seminar <input type="checkbox"/> Staff induction <input type="checkbox"/> In-house certification for new teaching staff <input type="checkbox"/> Mentoring/ coaching program <input checked="" type="checkbox"/> Academic working group for university educators <input type="checkbox"/> Work shadowing <input type="checkbox"/> Others ( <i>please specify</i> ): _____
<b>When does the initiative take place? (Please only list initiatives since 2005.)</b>	<p>The initiative starts with the Workshop “Scienza della Sostenibilità Italia” (<a href="http://www.ssitalia2011.it">http://www.ssitalia2011.it</a>) aimed to facilitate multi and interdisciplinary debate on Sustainability and ESD in Italy and promote the creation of an Italian Network on Sustainability Science afterwards resulted in the constitution, October 2013, of the Italian Association for Sustainability Science (<a href="http://www.scienzasostenibilita.org">www.scienzasostenibilita.org</a>). IASS works under the umbrella of the International Society for Sustainability Science (ISSS, <a href="http://sussci.org/_pre/wp-content/uploads/2012/10/ISSS-brochure.pdf">http://sussci.org/_pre/wp-content/uploads/2012/10/ISSS-brochure.pdf</a>), a platform for international knowledge-sharing, promotion of integration and cooperation among academic fields and strengthening of academia’s reception of and commitment to education in sustainability science. ISSS has been launched as a follow up of a process started with the first G8 University Summit (Sapporo, Japan, 2008) in which Presidents of 27 Universities recognised “the urgent need for rapid and joint evolution in the generation and application of new knowledge to address the world’s most pressing sustainability problems which lie at the intersection of environmental and economic issues”.</p> <p>The Summit called for promotion of education for sustainable development and the creation of a network of research networks to promote the development of a holistic action-oriented science. IR3S of the University of Tokyo followed the recommendations of the Sapporo Sustainability Declaration and organized the first International Conference on Sustainability Science (ICSS). The conference was held in Tokyo in February 2009 and gathered scholars from international leading universities and research centres whose</p>

*This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.*

	goal was to discuss the different academic approaches and to delineate a framework for integrating and structuring knowledge for sustainability science. It emerged a framework for a meta-network functional to the production of newly generation of knowledge and its translation to appropriate action. Three yearly editions of ICSS followed (one of them organised by CIRPS- Sapienza University of Rome) aimed to advance the field of sustainability science (SS), offering a platform for exchange, transfer, and learning among researchers about the current state and future directions of the field
<b>How long does it take?</b>	It is a continuous effort
<b>What is the purpose and objective?</b>	<p>Main goals of IASS are:</p> <ul style="list-style-type: none"> <li>- Promote interfaculty and interdisciplinary cross fertilization for sustainability;</li> <li>- Foster and institutionalize academia/policy makers/enterprises/civil society dialogue and knowledge co-production process for sustainability;</li> <li>- Promote inter-disciplinary and trans-disciplinary research;</li> <li>- Enhance awareness about the transformative role of ESD</li> </ul>
<b>What is the ambition (idea behind the initiative)?</b>	<p>The desire for sharing perspectives and knowledge amongst researchers involved in sustainability research from different disciplines gave life to the Association.</p> <p>The ambition behind the initiative is to promote a culture of disciplinary collaboration, trans-disciplinary research and educational approaches within the Italian academic landscape. Aware that inflexible academic institutions rooted in traditions and techniques of the past will be underequipped to address the mounting problems of the present and future, researchers and practitioners who joined IASS believe that a change in national University system and culture is needed.</p> <p>Among the changes aspired: educational programs reoriented to incorporate sustainability-related principles, knowledge, skills, perspectives; use of innovative, integrative and more experiential pedagogies; modified review and reward systems that value work that contributes to both general knowledge and societal action, creation of a broad framework for faculty members, students industry and NGO representatives and others to engage in sustainability education and research beyond formal structures; different educational levels linked among them; actual culture of collaboration among disciplines; creation of ESD competences for university educators</p>
<b>What is the professional development initiative about (focus, thematic entry point)?</b>	<p>IASS provides a platform for disciplinary contamination, fostering communication and interdisciplinary collaboration within Academia and with external communities and public policy actors (including the decision-makers, advocates and influencers), for the promotion of a transition towards sustainability. Since the first workshop in 2011, a strong attention was directed to the role of education in the global process toward sustainability and the need of new training paths, structured in a trans-disciplinary perspective, aimed at the creation of a civil society increasingly aware about the sustainability problems and their possible solutions.</p> <p>Values, aims and principles shared and promoted by IASS members</p>

	<p>have been included in “IASS Manifesto”. Aware that problems of unsustainability, deeply rooted in our societal structures and culture can't be addressed through a monodisciplinary approach, through the current institutional structures and behavioural patterns, members of IASS call for new research paradigms, inter and transdisciplinarity approaches in both knowledge production and educational processes (see IASS Manifesto). At the epistemological level, the Manifesto builds on the so-called “post normal” science (Funtowicz and Ravetz 1993), and „Mode 2“ approach (Gibbons 1994), sharing with these approaches features as inseparability between facts and values in science as well as in politics, the need for an extended peer community, a plurality of knowledge and values in decision-making processes, interdisciplinary collaboration and use of participatory process, the need for a systemic integration, epistemic and normative reflection on methods and tools for knowledge production, the emphasis on action and social learning compared to the abstract cognitive theorizing of traditional scientific disciplines</p>
<b>What is the pedagogical approach?</b>	<p>IASS experience is an example of cross fertilisation and multiplier effect produced within the global meta- network on sustainability science.</p> <p>IASS facilitated a reflection and carried out an educational experiment with its members through promotion of discussion on issues as: methodological and epistemological aspects (need for new research paradigms), governance issues, sustainable innovation, the role of education, the importance of evaluation processes that take into consideration values and stakes of different groups and communities, knowledge production process that are participative and include all concerned actors in the definition of research programs.</p> <p>Because of its aim and action to involve researchers from different Universities and disciplines in a deep reflection on science and sustainability, producing contamination and mutual learning, the initiative “Self-training and experience exchange within the Italian Association for Sustainability Science” can be considered an educational and formative one worth to be mentioned</p>
<b>What has attracted the participants to take part in the initiative?</b>	<p>IASS's scientists and researchers from all disciplines struggling and acting in isolation within their own Departments with the aim of promoting inter and transdisciplinary approaches, found in this national platform an important venue for discussion, cross-fertilisation and a means for supporting adoption of interdisciplinary and transdisciplinary research within their own Departments and for fostering incorporation of sustainability visions, concepts, values into University practices and pedagogies</p>
<b>What is valuable and interesting about this initiative? Why is it worth doing it?</b>	<p>Considering the lack of understanding and appreciation for transdisciplinary research and education in current Italian academic landscape, the lack of supportive policies, educational programs, as well as the lack of dedicated funding, the process started by IASS within and outside Universities, although still at an initial stage, promises to put a seed for the needed change</p>
<b>How is the initiative being funded?</b>	<p>The initiative has been set up with funding held by the individual members. IASS plans to apply to private and public bodies for supportive funding</p>
<b>How is the initiative being</b>	IASS has started to operate only recently, therefore there have not

<b>evaluated? If possible, please share some of the results.</b>	been occasions for planning a systematic evaluation, yet. However, an evaluation process has started based on data gathering and a reflection on the experience being accumulated so far. This is, there again, a fundamental aspect of a culture of sustainability
<b>Link to website/ references</b>	<a href="http://www.scienciasostenibilita.org">www.scienciasostenibilita.org</a> , <a href="http://sussci.org/_pre/wp-content/uploads/2012/10/ISSS-brochure.pdf">http://sussci.org/_pre/wp-content/uploads/2012/10/ISSS-brochure.pdf</a> ,

## Competences for educators in education for sustainable development

Please complete this grid for each good practice you describe. Reflecting the good practice, please fill the blank fields by reflecting competences that are being developed through the initiative (and/or by describing concrete activities that promote the development of competences). The grid is based on the UNECE ESD Competences for Educators (2011); the framework can be found in the annex to this document.

Please note that a facilitator or participant of the professional development initiative might need to support the answering of this grid.

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to know</b>  <i>The initiative offers an opportunity for the educator to understand....</i>	<ul style="list-style-type: none"> <li>• the basics of systems thinking</li> <li>• ways in which natural, social and economic systems function and how they may be interrelated</li> <li>• their personal world view and cultural assumptions and seek to understand those of others</li> <li>• the connection between sustainable futures and the way we think, live and work</li> </ul>	<ul style="list-style-type: none"> <li>➤ the root causes of unsustainable development</li> <li>➤ that sustainable development is an evolving concept</li> <li>➤ the urgent need for change from unsustainable practices towards advancing quality of life, equity, solidarity, and environmental sustainability</li> <li>➤ the importance of problem setting, critical reflection, visioning and creative thinking in planning the future and effecting change</li> <li>➤ the importance of scientific evidence in supporting sustainable development</li> </ul>	<ul style="list-style-type: none"> <li>• why there is a need to transform the education systems that support learning</li> <li>• why there is a need to transform the way we educate/learn</li> <li>• how engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice</li> </ul>
<b>Learning to do</b>  <i>The initiative offers an opportunity for the educator to be able to....</i>	<ul style="list-style-type: none"> <li>• create opportunities for sharing ideas and experiences from different disciplines/places/cultures/generations without prejudice and preconceptions</li> <li>• work with different perspectives on dilemmas, issues, tensions and conflicts</li> </ul>	<ul style="list-style-type: none"> <li>• critically assess processes of change in society and envision sustainable futures</li> <li>• facilitate the evaluation of potential consequences of different decisions and actions</li> </ul>	<ul style="list-style-type: none"> <li>• facilitate participatory and learner-centred education that develops critical thinking and active citizenship</li> </ul>
<b>Learning to live together</b>  <i>The initiative offers an opportunity for the educator to work with others in ways that....</i>	<ul style="list-style-type: none"> <li>• actively engage different groups across generations, cultures, places and disciplines</li> </ul>		

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to be</b>  <i>The initiative offers an opportunity for the educator to be someone who....</i>	<ul style="list-style-type: none"> <li>• is inclusive of different disciplines, cultures and perspectives, including indigenous knowledge and worldviews</li> </ul>	<ul style="list-style-type: none"> <li>• is motivated to make a positive contribution to other people and their social and natural environment, locally and globally</li> </ul>	<ul style="list-style-type: none"> <li>• is willing to challenge assumptions underlying unsustainable practice</li> <li>• is a critically reflective practitioner</li> </ul>

## Part C – Data collection and validation

Please briefly provide information about how the data was collected and how you can validate it.

### 1. How did you collect the data? (Please refer to section 4.1 of the guidelines.)

In the South Regional meeting held in Madrid, 3-4 March 2014, all Partner Universities involved in the project (5 Universities/groups: CIRPS/Sapienza University of Rome, Tor Vergata University; University of Bergamo, University of Siena, University of Palermo) decided to compile Part A of the template independently. Other ‘key informants’ belonging to other universities have been asked to fill part A and provided us with relevant information also through e-mail exchange and skype conversation. In total, we have received 8 answers regarding part A of the Template.

Two Skype discussions – with Siena University (key informants, Prof. Simone Bastianoni, [bastianoni@unisi.it](mailto:bastianoni@unisi.it), and Dr. Tiziana Gatti) and with Tor Vergata University (key informant Dr. Caterina Lorenzi, [lorenzi@uniroma2.it](mailto:lorenzi@uniroma2.it)) - allowed us to clarify doubts and to compare different points of view.

University of Palermo has carried out an internet survey of projects funded in the last 5 years by the Ministry of Education and Research and main National Research Institutions, searching for university educators professional development, in general and for ESD. The result of the survey has been completely negative.

Data have been collected also through desk review. In particular national documents listed at point 4 below have been analysed and information needed for compiling the template have been extrapolated .

### 2. How did you validate the data?

The diverging answers provided in the template by university educators have been compared as a form of validation, also through discussion of the points of differences between the partners and key informants, using mails and Skype.

The other validation strategy used has been through sending of the draft of the report to all the respondents – partners and key informants – asking for feedbacks.

### 3. Who was involved in the process and in what ways?

The Universities/groups invited to compile part A of the template, in addition to the Italian partners of the project, have been the following:

1. University of Turin, Gruppo Iris, Anna Perazzone, Laura Colucci-Gray and Elena Camino (IRIS was originally supposed to be partner in EU4SD). They have been invited by us to compile part A and part B, and to describe their experience as one of the leading practices. Anna Perazzone, [anna.perazzone@unito.it](mailto:anna.perazzone@unito.it), Laura Colucci-gray, [l.gray@abdn.ac.uk](mailto:l.gray@abdn.ac.uk), Elena Camino, [elena.camino@unito.it](mailto:elena.camino@unito.it)
2. University of Parma, CIREA - Italian Centre for Environmental Research and Education <http://www2.bioscienze.unipr.it/cirea/>), Antonella Bachiorri, [antonella.bachiorri@unipr.it](mailto:antonella.bachiorri@unipr.it);
3. University of Milano Bicocca, Dipartimento di Scienze Umane per la Formazione, Annastella Gambini, [annastella.gambini@unimib.it](mailto:annastella.gambini@unimib.it)
4. University of Genova, Scuola di Scienze Sociali, Dipartimento di Scienze della Formazione (DISFOR), Giorgio Matricardi, [matric@unige.it](mailto:matric@unige.it)

#### **4. What documents have you consulted to complete this template?**

The following documents have been consulted:

[http://www.minambiente.it/sites/default/files/archivio/notizie/Linee\\_guida\\_ScuolaxAmbiente\\_e\\_Legalitx\\_aggiornato.pdf](http://www.minambiente.it/sites/default/files/archivio/notizie/Linee_guida_ScuolaxAmbiente_e_Legalitx_aggiornato.pdf)

[http://www.minambiente.it/sites/default/files/archivio/allegati/educazione\\_ambientale/documento\\_conclusioni\\_forum\\_educazione.pdf](http://www.minambiente.it/sites/default/files/archivio/allegati/educazione_ambientale/documento_conclusioni_forum_educazione.pdf)

[http://www.minambiente.it/sites/default/files/archivio/allegati/educazione\\_ambientale/accordo\\_gennaio08-gover-prodi.pdf](http://www.minambiente.it/sites/default/files/archivio/allegati/educazione_ambientale/accordo_gennaio08-gover-prodi.pdf)

[http://www.minambiente.it/sites/default/files/archivio/allegati/educazione\\_ambientale/carta\\_fiuggi\\_97.pdf](http://www.minambiente.it/sites/default/files/archivio/allegati/educazione_ambientale/carta_fiuggi_97.pdf)

[www.politichecomunitarie.it/file\\_download/93](http://www.politichecomunitarie.it/file_download/93) (Italian contribution 2007 to the European Strategy)

[http://www.unescodess.it/materiali/impegno\\_comune\\_per\\_il\\_dess](http://www.unescodess.it/materiali/impegno_comune_per_il_dess)

<http://www.minambiente.it/pagina/il-sistema-nazionale-infea>

<http://www.anvur.org/attachments/article/26/Linee%20Guida%20Accr%20%20Periodico.pdf>

#### **5. Why did you choose these initiatives and not others?**

1. The University groups that have been involved in the compilation of part B were indicated from the Italian project partners during the discussion held at the South Regional project meeting in Madrid, and their relevance has been confirmed by the results of the analysis carried out for the compilation of part A of the template: University of Turin was from the beginning a candidate because of IRIS, a well-known group working on ESD; the University of Siena is taking a leading role amongst Italian Universities for its involvement in Sustainability field, the IASS – Italian Association for Sustainability Science - seemed another interesting approach to rise the interest towards Education for Sustainability at the Higher Education level.

## Part D – Reflection

This section is seeking your own thoughts and reflections towards professional development of university educators for ESD in your country.

### **1. In the light of the information provided, what would you consider to be priority needs in professional development of university educators related to ESD in your country?**

University Educators working in SD or in ESD are motivated to join academic working group and share experiences mainly through the awareness of the importance of interdisciplinarity and transdisciplinarity in sustainability issues, and by the need to have a space for dialogue, discussion and deep reflection on SD from many different points of view. This process is not necessarily a consequence of having an interest in Education.

Indeed in Italy relatively few University professionals feel that their profession is not only related to research but also to education. This is true also for many University professionals from Education and training departments: their approaches and methodologies are rarely consistent with what they teach. While the few existing ESD University educators are probably an exception, SD educators are not: in general they are mainly interested to transmit their knowledge about SD problems, and relative technical approaches they think are needed, without accompanying their teaching and working in the SD field with an epistemological and pedagogical reflection.

The recently established Italian Association for Science for Sustainability has within its aims that of involving SD professionals and researchers from University and other institutions, in this kind of reflection.

In light of the information collected and the above considerations, the first priority need in professional development of University Educators related to ESD in Italy is to increase awareness of the importance of Educational Competences and to have University educators trained and empowered with the competences ESD requires. Another priority need is to promote and stimulate discussion and sharing of experiences by leading professional development examples, so that these experiences can be adapted to specific situations in different Italian Universities, be scaled-up and therefore producing a larger impact at national level

### **2. Is there any further information that might be relevant and which you would like to share? Please provide links, references, documents that can already be collected for the collection of resources on the common online portal. (Documents in all languages are welcome).**

[www.iris.unito.it](http://www.iris.unito.it); Gray, D., Colucci-Gray, L. and Camino, E. (2009). Science, Society and Sustainability: Education and Empowerment for an Uncertain world. London: Routledge.

[www.scienzasostenibilita.org](http://www.scienzasostenibilita.org)

[http://sussci.org/\\_pre/wp-content/uploads/2012/10/ISSS-brochure.pdf](http://sussci.org/_pre/wp-content/uploads/2012/10/ISSS-brochure.pdf)

[www.unisi.it/ateneo/nesso](http://www.unisi.it/ateneo/nesso);

<http://www.dsfta.unisi.it/it/didattica/sostenibilita>

***Thank you for your efforts and time to map the status of ESD in Higher Education in your country!***

***The UE4SD Steering Group team***

**ANNEX: Competences for educators in education for sustainable development**

	<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
<b>Learning to know</b>  <i>The educator understands....</i>	<p>1. the basics of systems thinking</p> <p>2. ways in which natural, social and economic systems function and how they may be interrelated</p> <p>3. 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</p> <p>4. their personal world view and cultural assumptions and seek to understand those of others</p> <p>5. the connection between sustainable futures and the way we think, live and work</p> <p>6. their own thinking and action in relation to sustainable development</p>	<p>7. the root causes of unsustainable development</p> <p>8. that sustainable development is an evolving concept</p> <p>9. the urgent need for change from unsustainable practices towards advancing quality of life, equity, solidarity, and environmental sustainability</p> <p>10. the importance of problem setting, critical reflection, visioning and creative thinking in planning the future and effecting change</p> <p>11. the importance of preparedness for the unforeseen and a precautionary approach</p> <p>12. the importance of scientific evidence in supporting sustainable development</p>	<p>1. why there is a need to transform the education systems that support learning</p> <p>2. why there is a need to transform the way we educate/learn</p> <p>3. why it is important to prepare learners to meet new challenges</p> <p>4. the importance of building on the experience of learners as a basis for transformation</p> <p>5. how engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice</p>
<b>Learning to do</b>  <i>The educator is able to....</i>	<p>6. create opportunities for sharing ideas and experiences from different disciplines/places/cultures/generations without prejudice and preconceptions</p> <p>7. work with different perspectives on dilemmas, issues, tensions and conflicts</p> <p>8. connect the learner to their local and global spheres of influence</p>	<p>9. critically assess processes of change in society and envision sustainable futures</p> <p>10. communicate a sense of urgency for change and inspire hope</p> <p>11. facilitate the evaluation of potential consequences of different decisions and actions</p> <p>12. use the natural, social and built environment, including their own institution, as a context and source of learning</p>	<p>13. facilitate participatory and learner-centred education that develops critical thinking and active citizenship</p> <p>14. assess learning outcomes in terms of changes and achievements in relation to sustainable development</p>
<b>Learning to live together</b>  <i>The educator works with others in ways that....</i>	15. actively engage different groups across generations, cultures, places and disciplines	<p>16. facilitate the emergence of new worldviews that address sustainable development</p> <p>17. encourage negotiation of alternative futures</p>	<p>18. challenge unsustainable practices across educational systems, including at the institutional level</p> <p>19. help learners clarify their own and others worldviews through dialogue, and recognize that alternative frameworks exist</p>
<b>Learning to be</b>  <i>The educator is someone who....</i>	20. is inclusive of different disciplines, cultures and perspectives, including indigenous knowledge and worldviews	<p>21. is motivated to make a positive contribution to other people and their social and natural environment, locally and globally</p> <p>22. is willing to take considered action even in situations of uncertainty</p>	<p>23. is willing to challenge assumptions underlying unsustainable practice</p> <p>24. is a facilitator and participant in the learning process</p> <p>25. is a critically reflective practitioner</p>

Source: UNECE (2011) *Learning for the future: Competences in Education for Sustainable Development*, ECE/CEP/AC.13/2011/6

<b>HOLISTIC APPROACH</b> <i>Integrative thinking and practice</i>	<b>ENVISIONING CHANGE</b> <i>Past, present and future</i>	<b>ACHIEVING TRANSFORMATION</b> <i>People, pedagogy and education systems</i>
		<p>26. inspires creativity and innovation</p> <p>27. engages with learners in ways that build positive relationships</p>