



# LEARNING FOR THE FUTURE

Competences in  
Education for  
Sustainable Development

United Nations  
Economic Commission for Europe  
Strategy for Education for Sustainable  
Development



UNITED NATIONS



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# Part 1

## Introduction

### Context

There is now widespread concern that the model of development that is evident across the globe is unsustainable. We are faced with the urgent need to recast our ways of living, away from ones that rely on the unsustainable consumption of resources, the degradation of ecosystems and the exploitation of people, towards a model that strives to enhance the well-being of all human beings within the limits of our planet.

Sustainable development is described by the United Nations Economic Commission for Europe (UNECE) Strategy for Education for Sustainable Development as being underpinned by an ethic of solidarity, equality and mutual respect among people, countries, cultures and generations; it is development in harmony with nature, meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.<sup>1</sup>

While the need for sustainable development is clear, the ways to approach it may differ and will evolve. It is widely held that the development of sustainable societies is a continuous learning process and one in which issues and dilemmas are commonplace and appropriate answers and solutions may not be definitive.

Education should play an important role in enabling people to live together in ways that contribute to sustainable development. However, at present, education often contributes to unsustainable living. This can happen through a lack of opportunity for learners to question their own lifestyles and the systems and structures that promote those lifestyles. It also happens through reproducing unsustainable models and practices. The recasting of development, therefore, calls for the reorientation of education towards sustainable development.

Even as education for sustainable development (ESD) raises awareness of the complexity and dynamism of issues, it also plays a key role in making sustainable development understood and that it is applied in a concrete way. ESD helps to develop the capacity for critical reflection and systemic and futures thinking, as well as to motivate actions that promote sustainable development.

The development of a sustainable society should be seen as a continuous process of learning and change, involving a variety of actors providing guidance and leadership in

<sup>1</sup> This definition of sustainable development is consistent with both the United Nations Declaration on the Right to Development, as set out in General Assembly resolution 41/128 of 4 December 1986, and the Rio Declaration on Environment and Development (United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992).

formal, non-formal and informal learning. This requires a corresponding enhancement in the competences of educators, leaders and decision makers at all levels of education.

The competences in ESD described in this document are those of educators and not of learners, although both are intricately related. They go beyond the competences that individual educators would have in order to provide a good quality education in their discipline.

This set of competences is not a "minimum standard" to be met by all educators, but rather a goal to which all educators should aspire. It is not intended to prescribe behavioural outcomes; it provides a framework for the professional development of educators and is of particular importance to individuals, groups and institutions that have a multiplier effect, such as educators of educators.

### The Expert Group and its mandate

The UNECE Strategy for ESD aims to equip people with knowledge, skills, understanding, attitude and values compatible with sustainable development. To this end it calls specifically for the development of educators' competences in order for them to engage in ESD. The Joint Ministerial Session on ESD held at the Belgrade "Environment for Europe" Ministerial Conference in 2007 recognized the competence of educators as a frequent bottleneck in achieving ESD and agreed that one priority for future implementation of the UNECE Strategy should be developing competences in ESD.

In response to this concern, the UNECE Steering Committee on Education for Sustainable Development, at its meeting on 19 and 20 February 2009, established the Expert Group on Competences in Education for Sustainable Development with the mandate to prepare:

- a General recommendations for policymakers, so as to provide them with a tool to integrate ESD into relevant policy documents with a view to creating an enabling environment for the development of competences across all sectors of education, with particular emphasis on formal education;
- b A range of core competences in ESD for educators, including defining these, as feasible, to serve as a tool to facilitate the integration of ESD into all educational programmes at all levels, as well as guidelines for the development of these competences among educators.

The Expert Group comprised representatives appointed by member States and partners from across the UNECE region. They included academics, Government officials and experts from international and non-governmental organizations (see annex I).

The Expert Group took into account diverse local, national and regional circumstances, as well as the global context, and sought to ensure that recommendations were framed in ways that reflected the diversity of the UNECE region.

The UNECE Strategy for ESD makes it clear that ESD takes place in formal, non-formal and informal settings. While the document emphasizes formal education, the competences identify the knowledge and abilities of all educators, including, but not limited to, teachers. Education happens not only through formal learning and teaching, but also through facilitation and support of non-formal educators who operate in informal and social contexts. Many educators do not carry the title of “teacher”.



## The structure of the document

In line with the forgoing mandate this document:

- a Makes recommendations to policymakers with respect to the development of competences across all sectors of education. These refer to professional development in education, governing and managing of institutions, curriculum development and monitoring and assessment;
- b Identifies a framework of core competences in ESD for educators. This is intended as a guide to what educators should know, what they should be able to do, how they should live and work with others, and how they should be if they are to contribute to ESD. The competences are clustered around three essential characteristics of ESD — a holistic approach; envisioning change; and achieving transformation.

# Part 2

## Recommendations for policymakers

### Scope

The policy recommendations are to be addressed at five levels: international, regional, national, subnational and organizational. These recommendations for policymakers highlight the key points for action, namely professional development in education, governing and managing of institutions, curriculum development and monitoring and assessment. They outline the features that will enable the development and practice of the ESD competences described in chapter III (hereafter “the Competences”). The extent of policy change and the specific tools required by these recommendations will depend on existing local conditions and policy frameworks.

Although these recommendations address Competences for educators across formal and non-formal education, as well as informal learning, they pay particular attention to formal education, in line with the mandate. These recommendations address all key aspects of education systems, but only insofar as they may have a direct impact on the Competences.

The development and the practice of educator competences are dependent upon a process of empowering educators. These recommendations are intended to focus attention on how educators can be supported to recognize their full potential and to fulfil that potential through the development and practice of the Competences.

These recommendations address not only Governments and regulators, but all decision makers and leaders who could have a role in providing frameworks, conditions and means for promoting the development of educator competences. These decision makers could, for example, be in the private sector, with responsibility for work-based education and training; in the media, with capacity for promoting informal learning; or be an NGO involved in creating learning experiences.

While not every individual educator needs to have all of the Competences presented in this document, it is important that education is underpinned by the Competences if member States are to contribute effectively to ESD. Within formal education systems these recommendations are addressed to policymakers, but they have implications for actors at all levels, including managers, administrators and educators. All actors within education should take responsibility for the development of the Competences.

There is a need for these actors to take ownership of the Competences. To this end the Expert Group recommends that policymakers adopt policy recommendations to the extent possible in light of national priorities and processes. This should include providing actors

with opportunities to discuss and adapt the Competences to their local contexts. The Expert Group also recommends a wide distribution of this document to all educators and other major stakeholders.

## Recommendations

### 1 – Professional development in education

*Empowering educators must be central to any professional development initiative.* Educators are important agents for change within education systems. Effective educational transformation is dependent upon educators being motivated to bring about change, as well as being capable of and supported in doing so.

*Provide training and education in ESD for those in management and leadership positions in educational institutions.* Leadership and management are key determinants of success in educational transformation at the institutional level.

*Initial teacher education institutions should consider the Competences and identify where they might best be integrated into their programmes.* As many educators form their views about what it means to be an educator during initial teacher education, this is a critical area for action.

*Continuing professional development for educators underpinned by the Competences should be provided.* Practicing educators also need an opportunity to develop the Competences if the system is to be transformed, such as through critically reflective practice.

*Criteria for allocating resources to capacity-building of formal, non-formal and informal education should refer to these Competences.* This is a key mechanism for building ESD into the professional development of educators, including those working in NGOs, the media and broader vocational education.

*Particular attention should be paid to developing the Competences among educators who work in higher education.* Institutions of higher education play a crucial role in preparing future leaders and specialists in a variety of fields, including education. While respecting the contribution of academic freedom to knowledge generation, educators at this level should consider and seek to develop the Competences.

*Where procedures for professional accreditation of teachers and other educators exist, they should be reviewed in light of the Competences.* Many educational systems have procedures for professional accreditation of teachers and other educators. These are often based upon competences that educators are expected to have in order to be accredited. The Competences should be reflected within such requirements.

*Partnerships and networks should be established and supported as an important strategy for developing and practicing the Competences.* These could be at the local, national, regional and international levels. Collaboration among the many actors involved in education will help to ensure that the system embraces ESD.

### 2 – Governing and managing institutions

*Synergies among international, subregional, national and subnational processes should be identified and developed in order to facilitate the implementation of these recommendations.* These will include synergies with existing processes, such as the Bologna process, Education for All and Life-long Learning, among others.

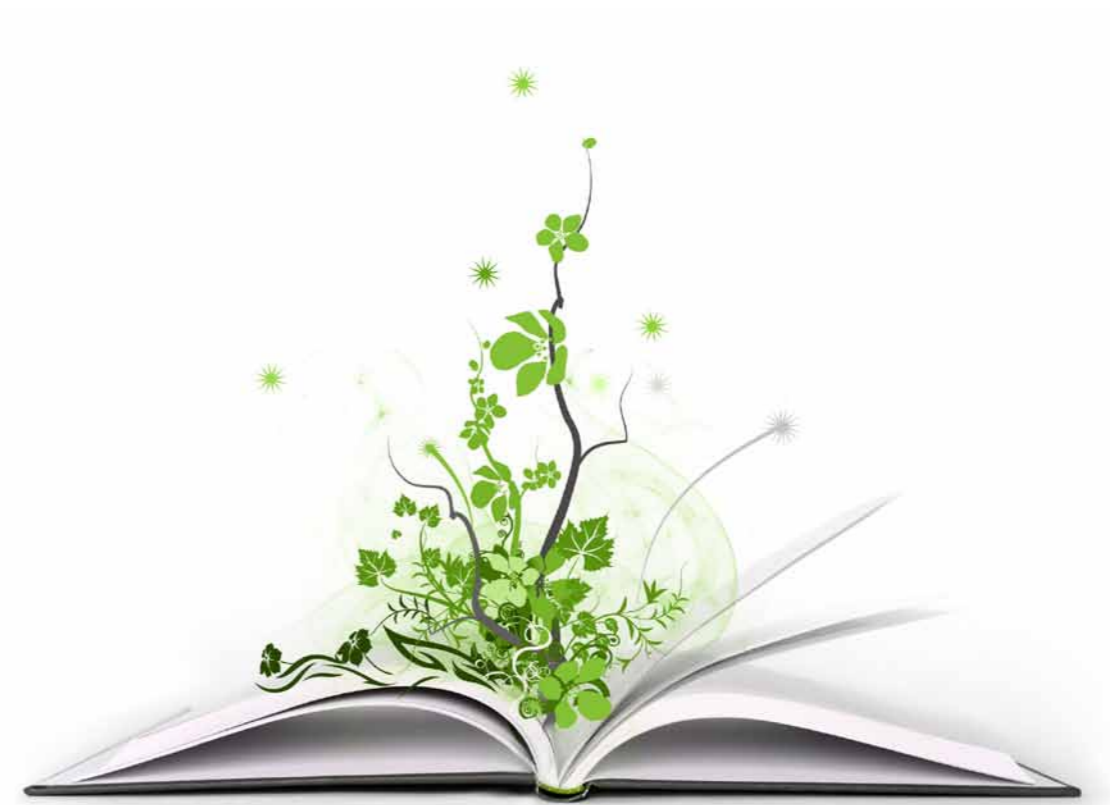
*Models of leadership that promote the enhancement of Competences should be developed and supported.* Leadership is a key determinant of success in educational transformation at the institutional level; ESD requires the distribution of power across institutions in order to facilitate educational change.

*Institutions and organizations that are involved in supporting learning should be encouraged to operate in ways and to maintain a culture that facilitates the development and practice of the Competences.* This will include the way in which the organization distributes its own decision-making, manages its resources and conducts its relationship with the wider community.

*A whole-institution approach should be adopted for the continuing professional development of educators in their workplace.* Educators will best develop the Competences when the culture and management of the entire organization is supportive of sustainable development. This approach also applies to organizations such as businesses and NGOs where learning also takes place.

*Governance should ensure transparency and accountability.* This will ensure legitimacy of ESD practices, as well as improve and further develop the Competences.

*Management should use evaluation as an important learning tool that plays an integral part in strategic planning.* It should be seen as a reflection by all partners on ESD processes and results.



### 3 – Curriculum development

The Competences should be a basis for the review of curriculum documents. While the Competences are those of educators, they also suggest approaches to educational practice. In order for educators to practice the Competences they should be supported by a curriculum which reflects such educational approaches.

*Textbooks and other educational materials should be reviewed to determine whether they reflect educational approaches suggested by the Competences. Materials may need to be developed to further support ESD.*

### 4 – Monitoring and assessment

*Audit and assessment as well as monitoring systems for educational institutions should be adapted or developed in order to assess the institution's contribution to sustainable development. Educational institutions should operate according to sustainable development principles as a contribution to ESD and create an enabling environment for the development and practice of the Competences.*

*Academic quality assurance instruments (e.g., school inspection, institutional and departmental reviews, external evaluations) should be underpinned by the Competences. This will mean that new and existing programmes and educational strategies should be informed by the Competences.*



## Part 3 The Competences

This section describes the core competences in ESD for educators as required by the mandate of the Expert Group. The language of competences is widely used in educational documents, including the report to the United Nations Educational, Scientific and Cultural Organization (UNESCO) of the International Commission on Education for the Twenty-first Century<sup>2</sup> and the European Union recommendation on key competences for lifelong learning. There are different interpretations of the term "competences"; the following paragraphs identify the defining features of the way in which we use the term.

The Competences in this document relate specifically to ESD rather than to education more generally.

The Competences are presented in this document in a table followed by more detailed explanations. The column headings represent essential characteristics of ESD, namely:

- a** 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 in the way people learn and in the systems that support learning.

The clustering of competences in the table rows is inspired by the report of the International Commission on Education to UNESCO. The following framework was chosen as it is comprehensive and presents a meaningful set of categories that reflect a wide range of learning experiences:

- a** Learning to know refers to understanding the challenges facing society both locally and globally and the potential role of educators and learners (The educator understands...);
- b** Learning to do refers to developing practical skills and action competence in relation to education for sustainable development (The educator is able to...);
- c** Learning to live together contributes to the development of partnerships and an appreciation of interdependence, pluralism, mutual understanding and peace (The educator works with others in ways that...);
- d** Learning to be addresses the development of one's personal attributes and ability to act with greater autonomy, judgement and personal responsibility in relation to sustainable development (The educator is someone who...).

<sup>2</sup> UNESCO, Learning: the Treasure Within (Paris, 1996). Available from [http://portal.unesco.org/education/en/ev.php-URL\\_ID=19162&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/education/en/ev.php-URL_ID=19162&URL_DO=DO_TOPIC&URL_SECTION=201.html).

# The Competences for educators in education for sustainable development

## Learning to know

*The educator understands...*

- HOLISTIC APPROACH**  
*Integrative thinking and practice*
- The basics of systems thinking ways in which natural, social and economic systems function and how they may be interrelated
  - 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
  - Their personal world view and cultural assumptions and seek to understand those of others
  - The connection between sustainable futures and the way we think, live and work
  - Their own thinking and action in relation to sustainable development

- ENVISIONING CHANGE**  
*Past, present and future*
- The root causes of unsustainable development
  - That sustainable development is an evolving concept
  - The urgent need for change from unsustainable practices towards advancing quality of life, equity, solidarity, and environmental sustainability
  - The importance of problem setting, critical reflection, visioning and creative thinking in planning the future and effecting change
  - The importance of preparedness for the unforeseen and a precautionary approach
  - The importance of scientific evidence in supporting sustainable development

- ACHIEVE TRANSFORMATION**  
*People, pedagogy and educationssystem*
- Why there is a need to transform the education systems that support learning
  - Why there is a need to transform the way we educate/learn
  - Why it is important to prepare learners to meet new challenges
  - The importance of building on the experience of learners as a basis for transformation
  - How engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice

## Learning to live together

*The educator works with others in ways that...*

- HOLISTIC APPROACH**  
*Integrative thinking and practice*
- Actively engage different groups across generations, cultures, places and disciplines

- ENVISIONING CHANGE**  
*Past, present and future*
- Facilitate the emergence of new worldviews that address sustainable development
  - Encourage negotiation of alternative futures

- ACHIEVE TRANSFORMATION**  
*People, pedagogy and educationssystem*
- Challenge unsustainable practices across educational systems, including at the institutional level
  - Help learners clarify their own and others worldviews through dialogue, and recognize that alternative frameworks exist

## Learning to do

*The educator is able to...*

- HOLISTIC APPROACH**  
*Integrative thinking and practice*
- Create opportunities for sharing ideas and experiences from different disciplines/places/cultures/generations without prejudice and preconceptions
  - Work with different perspectives on dilemmas, issues, tensions and conflicts
  - Connect the learner to their local and global spheres of influence

- ENVISIONING CHANGE**  
*Past, present and future*
- Critically assess processes of change in society and envision sustainable futures
  - Communicate a sense of urgency for change and inspire hope
  - Facilitate the evaluation of potential consequences of different decisions and actions
  - Use the natural, social and built environment, including their own institution, as a context and source of learning

- ACHIEVE TRANSFORMATION**  
*People, pedagogy and educationssystem*
- Why there is a need to transform the education systems that support learning
  - Why there is a need to transform the way we educate/learn
  - Why it is important to prepare learners to meet new challenges
  - The importance of building on the experience of learners as a basis for transformation
  - How engagement in real-world issues enhances learning outcomes and helps learners to make a difference in practice

## Learning to be

*The educator is someone who...*

- HOLISTIC APPROACH**  
*Integrative thinking and practice*
- Is inclusive of different disciplines, cultures and perspectives, including indigenous knowledge and worldviews

- ENVISIONING CHANGE**  
*Past, present and future*
- Is motivated to make a positive contribution to other people and their social and natural environment, locally and globally
  - Is willing to take considered action even in situations of uncertainty

- ACHIEVE TRANSFORMATION**  
*People, pedagogy and educationssystem*
- Is willing to challenge assumptions underlying unsustainable practice
  - Is a facilitator and participant in the learning process
  - Is a critically reflective practitioner
  - Inspires creativity and innovation
  - Engages with learners in ways that build positive relationships



## Holistic approach

The holistic approach includes three interrelated components:

- a Integrative thinking;
- b Inclusivity;
- c Dealing with complexities.

*Integrative thinking* responds to the challenges of sustainable development that are simultaneously global and local and require an awareness of how change in one part of the world can impact upon other parts, as well as an awareness of how choices today can impact tomorrow's world. These challenges are complex and require inputs from a range of disciplines to address them, including perspectives on natural, social and economic systems. Different cultures and world-views can provide valuable insights; at its most fundamental, sustainable development connects individuals and groups to other people, locally and globally, and to their natural environment. Integrative thinking implies ways of thinking and acting that reflect these interrelationships and the creative possibilities that they engender. Systems thinking is a valuable tool in achieving such an integrative approach.

*Inclusivity* refers to a willingness to incorporate a range of perspectives critical to negotiating a sustainable future. Sustainable development issues are often characterized by contradictions and dilemmas; different perspectives can both underpin and provide solutions to these issues. While embracing different perspectives, it is important for educators to be open about their own world-views so that these are not hidden from learners nor imposed upon them.

*Dealing with complexities* enables educators for ESD to provide opportunities to learners for engaging with and creating bridges across a range of concepts and ideas. While it would be impractical to list the entire knowledge base of ESD, the UNECE Strategy for ESD and the UNESCO International Implementation Scheme for the United Nations Decade for Education for Sustainable Development (2005–2014) suggest a broad range of concepts and topics that can serve as entry points, including: peace studies; ethics and philosophy; citizenship, democracy and governance; human rights; poverty alleviation; cultural diversity; biological and landscape diversity; environmental protection; ecological principles and an ecosystem approach; natural resource management; climate change; personal and family health (e.g., HIV/AIDS, drug abuse); environmental health (e.g., food; water quality; pollution); corporate social responsibility; indigenous knowledge; production and/or consumption patterns; economics; rural/urban development, environmental technology; and sustainability assessment. Connections can be supported through engaging learners in active citizenship projects.

## Envisioning change: past, present and future

Envisioning change covers competences relating to three dimensions:

- a Learning from the past;
- b Inspiring engagement in the present;
- c Exploring alternative futures.

*Learning from the past* includes critical analysis and thorough understanding of past developments, including the root causes of those developments. It draws lessons through understanding both successes and failures in cultural, social, economic and environmental spheres.

*Active engagement in the present* is crucial because of the urgency of the contemporary issues that face us. For example, our world is characterized by massive inequality, with millions living in poverty while others engage in unsustainable use of the planet's resources exceeding the carrying capacity of natural systems and hence compromising their regenerative capacities. ESD should address the needs of all people in the present as well as those of future generations.

*Exploring alternative futures* leads to the identification of new pathways as an important step towards sustainable development. This process draws upon scientific evidence, uncovers current beliefs and assumptions that underlie our choices and encourages creative thinking about a wide range of possibilities. Involving learners in creating visions for the future will highlight ways in which actions taken today contribute to or detract from preferred futures. This offers ownership, creativity, direction and energy that can motivate people to make more sustainable choices in the present. ESD should emphasize approaches that are intended to lead to positive futures for people and nature, rather than those that simply do less harm.

## Achieving transformation: people, pedagogy and education systems

Achieving transformation covers competences that operate at three levels:

- a Transformation of what it means to be an educator;
- b Transformation of pedagogy, i.e., transformative approaches to teaching and learning;
- c Transformation of the education system as a whole.

*Transformation of what it means to be an educator* is necessary because education systems are composed of the people who work within them and a key to changing these systems will be educators who are able to change their own practice as critical reflective practitioners. The building of positive relationships between educators and learners is essential. This will require educators to present themselves as fallible human beings rather than people with all the answers. It also requires the ability to empathize with the views and situations of those they educate.

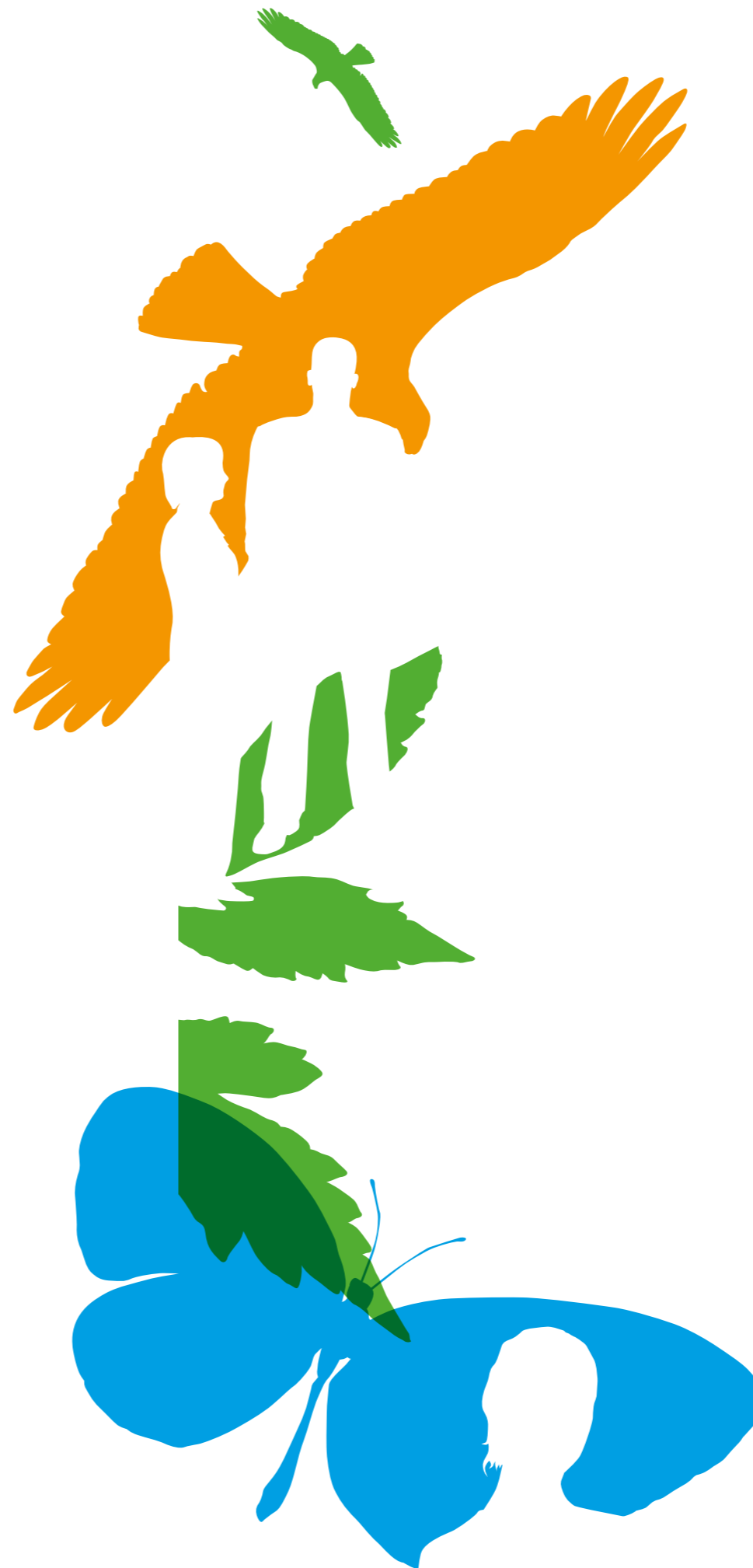
*Transformative pedagogy* draws on the experience of learners and creates opportunities for participation and for the development of creativity, innovation and the capacity to imagine alternative ways of living. It encourages learners to reflect on the impact of their everyday choices in terms of sustainable development.

*Transformation of education systems* is essential because our current systems have not supported sustainable models of development. While the role of formal education is clearly valued by society, change is needed to ensure that the system provides education that predisposes learners to consider sustainability across their life choices. Such change cannot be achieved by educators, schools, Governments or others working alone. Educators are well placed to contribute to transforming the systems within which they work, but they will need critical competences such as understanding the need for transformation, an openness to change and a range of collaborative skills.

# Annex

## Members of the Expert Group on Competences

Name	Institution / Organisation
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Magdalena Svanström	Sweden
Daniella Tilbury	United Kingdom of Great Britain and Northern Ireland
Tatiana Shakirova	Central Asian Working Group on and Education for Sustainable Development
Paul Vare	The Pan-European Coalition of Environmental Citizens Organisations (ECO-Forum)
Aline Bory-Adams	UNESCO
Anna Maria Hoffmann	United Nations Children's Fund (UNICEF)
Zinaida Fadeeva	United Nations University (UNU)



### **Learn more about the UNECE Strategy for Education for Sustainable Development**

In 2005, member States adopted the UNECE Strategy for ESD to promote ESD in the region. The Strategy is a practical instrument to incorporate key themes of sustainable development into the region's education systems.

The Strategy's overall objective is to equip people with knowledge of and skills in sustainable development, making them more competent and confident while at the same time increasing their opportunities for leading healthy and productive lifestyles in harmony with nature and with concern for social values, gender equity and cultural diversity.

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