Education for Sustainable Development
Kosovo
Research Report

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1. General Introduction

1.1. Why focus on ESD why ESD is important?

“The world continues to face various critical challenges such as: human-induced climate change, the rapid depletion of natural resources, the frequency of natural disasters, the spread of (old and new) infectious diseases, the loss of biodiversity, the violation of human rights, increased poverty, the dependency of our economic systems on continuous growth in consumerism and so forth. Sustainable development (SD) has become a vehicle around the globe for expressing the need to depart from present dominant models of development which appear unable to balance the needs of people and the planet in the pursuit of peace and prosperity.” (UNESCO, 2009, p. 6.)

Entire generations are at least in part shaped in their attitudes, personal and communal aspirations, in their development goals, by what formal educational systems equipped them with in terms of conceptual toolboxes and mental models. If the current predicament is seen as unbalanced, as not sustainable through the forthcoming generations and thus in need of alteration, it cannot be altered using the existing dominant ways of acting and living (Tillbury, 2007). And those ways of acting and living are, at least partly, a product of the existing formal education. In order to abandon them educational systems have to be reconceptualised to provide current and future generations with new mental models of material, living and social environments and their role in the socio-economic processes.

Among traditional tasks of equipping young people to become successful members of national and global communities, formal education will also have to enable them to live together in way that contributes to sustainable development of their communities. Education for sustainable development (ESD) is a formal education’s response to global challenges in order to help students understand what sustainable development requires globally and locally, help them understand how to use their own capacity for critical reflection and systemic futures-thinking and motivate them to consider individual actions contributing to communal sustainable development.

1.2. Why we were doing this study?

UNESCO’ (2009) reports that the most common global response to the calls for inclusion of ESD into formal education is to make adjustments (either minor or substantial) to the existing educational system, with all its pre-existing strengths and
weaknesses. However, all additions to the national formal education curricula struggle with an already crowded curriculum which has a primary task of teaching the basics of reading, writing and arithmetic. ESD content can be seen as “an integrative, cross-curricular theme that can bring together many of the single issues that schools are already expected to address” (UNESCO, 2009, p. 48.).

The research sets out to map the content that already exists in the national curricula, the content that is either explicitly aligned with the teaching for sustainable development, or is related to it. Based on such mapping it is expected to show how the existing curricular content can be modified (in minor or substantial manner) to contribute to ESD. Besides curricular mapping it is looking into the subject curricula and textbooks concerning the same ESD content. Though not as comprehensive as the curricular mapping, these provide a clearer idea of how important goals expressed in the Framework Curriculum are presented directly to the pupils.

It is expected that this mapping will provide the foundation in each of the participating countries for a public debate on inclusion of ESD learning outcomes in the national curricula (and further educational documents based on them) and their importance for future sustainable development. It is expected that it will point out and stress the important role the formal education has in actively shaping a more secure future for the next generation.

1.3. Sustainable Development and Education for Sustainable Development

1.3.1. The Notion of Sustainable Development

According to the World Commission on Sustainable Development (WCSD) report, also referred as the Brundtland Report “Our Common Future” (1987) (WCED 1987), sustainable development marks the ability of “humanity to /.../ ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.” Thus, the report called for the need to look beyond today’s needs and short-term effects of decisions.

The pursuit for sustainable development repeated at the Rio Summit in 1992 in signing the Agenda 21, the commitment was renewed in the Summit on Sustainable Development in Johannesburg in 2002 (Rio+10). In 2012 the Rio process shall celebrate its 20th anniversary, but the definition of SD evolves further. The evolution of SD has been marked by the attempts to develop a clear notion. However, it has been realised that defining SD is actually implementing the SD. Today, sustainability is firmly embedded in the language of development - locally, globally and at every level between, but according to several authors the popularity of the notion has been
accompanied by more verbal adherence than practical implementation (Gibson et al. 2005). Moreover, the practice at all levels mostly still follows the mainstream economic growth agenda. The difficulties to apply the SD derive from the need for fundamental changes in values and perceptions, but also political and administrative structures.

SD is very much context dependant (social- cultural, political, economic and other) and the interpretation of sustainability changes between contexts and also over time, as new knowledge emerges. Weaver and Rotmans (2006) propose to the use ‘sustainability interpretation’ rather than ‘sustainability definition’. In addition to the societal context, the interpretation of SD may depend on other perspectives, such as on the extent of trade-offs made between values (economic, social and environmental).

In conclusion, the concept of sustainable development has created a great challenge for the socio-economic development. The concept of weak and strong sustainability has questioned the limits of the Planet Earth to cope with the growing demand for resources and the thresholds for harmful impacts. Rockström et al. (2009) have identified the Earth-system processes and associated thresholds which, if crossed, generate unacceptable environmental change. This group of researchers has presented evidence that three boundaries of Earth-system processes (climate change, rate of biodiversity loss, nitrogen cycle) have been overstepped already. The debate over WS and SS is largely about the options for substitutability of natural assets, on one hand, and the acceptability of this by people and communities on the other hand. Understanding of the SD concept assumes to look beyond today’s needs and short-term effects of decisions. Developing this ability has become much in the focus of the education for sustainable development.

### 1.3.2. Education for Sustainable Development

While the roots of education for sustainable development (ESD) could be traced back to the early 1970s ESD was formally tabled at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. UNCED among other landmark publications, it also resulted in „Agenda 21“ which provides a comprehensive plan of action to be taken globally, nationally and locally by UN agencies, governments and major organizations and networks to reduce the human impact on the environment. Agenda 21, the Rio Declaration on Environment and Development and the Statement of Principles for the Sustainable Management of Forests were adopted by 178 Governments. The Commission on Sustainable Development (CSD) was created in December 1992 to ensure effective follow-up of UNCED and to monitor and report on implementation of multilateral environmental agreements.
Chapter 36 of Agenda 21 is addressing the education, training and public awareness. UNESCO has been designated as Task Manager for ESD to address four overarching goals (http://www.un.org/esa/dsd/agenda21/res_agenda21_36.shtml):

- promote and improve the quality of education: the aim is to refocus lifelong education on the acquisition of knowledge, skills and values needed by citizens to improve their quality of life;
- reorient the curricula: from pre-school to university, education must be rethought and reformed to be a vehicle of knowledge, thought patterns and values needed to build a sustainable world;
- raise public awareness of the concept of sustainable development: this will make it possible to develop enlightened, active and responsible citizenship locally, nationally and Internationally; and
- train the workforce: continuing technical and vocational education of directors and workers, particularly those in trade and industry, will be enriched to enable them to adopt sustainable modes of production and consumption.

Although there appears widespread consensus about these goals, there is less agreement about the meaning of ESD. Just as is the case with sustainable development, there is not one single correct interpretation and use of ESD. ESD is argued to be seen as the total sum of diverse ways to arrive at a ‘learning society’ in which people learn from and with one another and collectively become more capable of withstanding setbacks and dealing with sustainability-induced insecurity, complexity and risks. From this point of view, ESD is about - through education and learning - engaging people in SD issues, developing their capacities to give meaning to SD and to contribute to its development and utilizing the diversity represented by all people.

In order to bring the ESD into the attention of governments and the public, the United Nations has declared a Decade of Education for Sustainable Development (DESD). Resolution 57/254 on the DESD (2005–2014) was adopted by the United Nations General Assembly in December 2002, shortly after the World Summit on Sustainable Development (Rio plus 10) which was held in Johannesburg in August/September of the same year. The basic vision of the Decade is of a world in which everyone has the opportunity to benefit from education and learn the values, behaviours and lifestyles required for a sustainable future and for positive societal transformation. DESD seeks to promote the meaningful development and implementation of ESD on all geographical scales (locally, nationally, regionally and internationally) with the involvement of a wide range of stakeholders. At the start of the Decade, this vision was translated into four objectives: 1) facilitate networking, linkages, exchange and interaction among stakeholders in ESD; 2) foster an increased quality of teaching and learning in ESD; 3) help countries progress towards and attain the Millennium
Education for Sustainable Development Research Report

Development Goals; and 4) provide countries with new opportunities to incorporate ESD into education reform efforts.

Current project addresses all the four goals of DESD, but specifically the goal of networking, linkages and learning among education centres in Europe in ESD, fostering the increased quality of teaching and learning in ESD and sharing experiences and knowledge of teaching of ESD.

1.3.3. Sustainable development in national curricula

Daniela Tillbury (2007: 119), Director of International Research Institute in Sustainability (IRIS), suggests that sustainability is about challenging our mental models, policies and practices and not just about accommodating new dimensions into current work or finding common ground between related existing programmes. She holds that learning based change for sustainability challenges educators to think beyond raising awareness and go beyond involving learners merely in one-off activities such as cleaning-up or planting trees. Though these arlop critical and systemic thinking skills, enabling them to get to the core of the issues. This reflects the major shift in thinking from environmental education (EE) to education for sustainability or ESD (Tillbury, 2007: 120).

![Figure 1: Three basic elements of sustainability – environmental, social and economic (Source:)](image)

In terms of curricula content, EE can be whole part of ESD, or have significant overlaps with ESD, but EE is insufficient to replace ESD as it lacks the socio-cultural and economic dimensions (see Methodology, next chapter). Conceptually, ESD also contains important pedagogical elements which are somewhat harder to capture with
our current research, and which includes social learning, participation and capacity-building. On top of these, some countries are moving away from the anthropocentric (or human-centred) perspective towards eco-centric interpretation of sustainable development through references to living in harmony with nature and the rights of other species and the non-human world.

It is clear from the above that ESD is not just a matter of information, but is setting the ground for a gradual change, a learning-based change. This comes from the perspective that dominant current models of development appear unable to balance the needs of the people and the plant in the pursuit of peace and prosperity. SD is mainly portrayed through three dimensions and their interrelation in time (past-present-future) and in space (near-far).

Sustainable social development (people) is aimed at the development of people and their social organization, in which the realization of social cohesion, equity, justice and wellbeing plays an important role.

A sustainable environmental development (planetary boundaries) refers to the development of natural ecosystems in ways that maintain the carrying capacity of the Earth and respect the non-human world.

Figure 2: sustainability representation showing how environment and society limit economics (Source: Wikipedia)

Sustainable socio-economic development (prosperity) focuses on the development of the socio-economic infrastructure, in which the efficient management of natural and human resources is important. It is the finding of balanced ways to integrate these
dimensions in everyday living and working that poses, perhaps, the greatest challenge of our time as this requires alternative ways of thinking, valuing and acting.

In brief, in the SD context it is important to consider the environmental and socio-economic development in cross generational (i.e. intergenerational) perspective.

According to the DESD Monitoring and Evaluation document by UNESCO (2009), ESD would be focused on development of knowledge, capacities, qualities or competences required for active, critical and meaningful contribution to sustainable development, on the transfer of appropriate sets of knowledge, attitudes, values and behaviour. The report states:

“ESD must be seen as a comprehensive package for quality education and learning within which key issues such as poverty reduction, sustainable livelihoods, climate change, gender equality, corporate social responsibility and protection of indigenous cultures, to name a few, are found."

ESD supports five fundamental types of learning to provide quality education and foster sustainable human development – learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society.

ESD is a learning process (or approach to teaching) based on the ideals and principles that underlie sustainability and is concerned with all levels and types of education.

However, ESD still remains debatable around the world. It is now understood that more room will be left for localization and contextualization, and national and regional debates towards the development of the meaning are seen as crucial. Further to that, the current study aims at identifying the cognitive and skills and values elements of sustainable development in the national curricula in 8 countries of Europe.

1.4. ESD in Kosovo

Kosovo is a country in transition which is still looking for a safe way for its development and fulfillment of the needs of its habitants. We are talking here about the basic needs such as ensuring food, safe water supplies, and possibilities for a good health and good education for all. Efforts for development have found Kosovo in a situation of a problematic stability, with a donor’s help which offer a chance to realize the efforts for development. All the efforts made until now did not focus on
the non-economic development being focused only on immediate gains and leaving out the long-term consequences.

Nevertheless, sustainable development has become a part of a number of projects and development programs in the prior fields for development in all levels: local, regional and national. All the actors are now focused in realizing their efforts in implementing the principles for a sustainable development. Kosovo has undertaken responsibilities on the international level to apply such principles in its efforts for development. However, there is still a lot to be done. Including principles for a sustainable development in local and regional development programs is a challenge in front of the civil society and other players who act in these levels. There is a need for the increase of awareness of the different players and the communities, too, in ensuring positive principles and practices for a sustainable development.

More on ESD is presented in conclusions and recommendations.

Besides economic and social problems, environmental protection is one of the biggest problems Kosovo faces. The matter of environmental protection has never been treated before or regulated in a systematic way.

In the circumstances that has characterized social and economical development of Kosovo in the past, the environmental protection was a neglected issue and in most of the cases was subdued to afore daily interests.

Having considering hard period of transition Kosovo is going through, a long institutional vacuum of environmental preserving and lack of credible data on actual state of environment, achievement of a goal for having a preserved environment represents a great challenge for Kosovar society and requires general engagement.

Environment is an issue of our future and it can not be neglected in any case. In current circumstance of political status, Kosovo is not directly signatory of any of the convents, protocols or any International agreement. For the same reason, Kosovo is unable to cooperate as an equal partner in multilateral, regional, under regional and bilateral field. This makes that achievement of resistant development, on the place which coincides with environmental aspect, to be very hard, notably for technical assistance and financial on this issue.

Despite this, Kosovo is trying to incorporate and apply international rule in juridical frame and in implementation field, first in EU including education.

In the Strategy for environment in Kosovo, education for sustainability is considered as an eighth priority from ten priorities of Government Republic of
Kosovo. Eighth priority says: “Development of sustainable education programs, campaigns for awareness and support of science projects focused on environment”. Also, on this Strategy one chapter treats the situation of education linked with education for sustainability.

The situation says that educational plans and programs on different levels of teaching are on the way of compiler, where it is fore seen incorporation of some environment contents and sustainability.

The form of out education, especially of some groups with special interest (such as: farmers, consumers, housekeepers, etc) almost doesn’t exist. Educational programs are not enough adequate for collation of environment problems in required way and critical thinking. Environment NGO-s have small efficiency because the lack of experience and financial aspects. Also, Medias do not cover or conduct environment problems in required level. Often, for environment issues are approached in sensational way meanwhile the education for environment on the radios and public televisions is insufficient.

Strategic orientations which came out from this Strategy for sustainable Education are: a) Integration of environment issues in all levels of education. Selected subject with environment content and b) Institutional and financial support of growing the level of population with information linked with the environment.

Furthermore, defined priorities from this strategic document which are linked with the education are:

1) Inclusion of environment matters and sustainable development of education programs;

2) Growth of inter minister cooperation in collective environment programs;

3) Support of environment NGO-s linked with the education and awareness of population for environment matters and

4) Establishment of circumstances for general and quality medial information of population for environment issues.
Educational System in Kosovo

The present structure of system for primary and secondary education functioning in Kosova contains 9 years of compulsory education (5 years of primary education and 4 years of lower secondary education). The figure shows a comparison between the existing system and the planned primary and secondary education structure.

The higher education in Kosovo has adopted reforms in compatibility with the Bologna Declaration of 1999, which should serve as a long term agenda for structural changes in the higher education systems of European countries, promoting mobility, better chances of employment and attractive programs in higher education institutions.

The Ministry of Education, Science and Technology (MEST) is responsible for all the issues related to education in Kosovo. Although there is a concept of decentralization of government and managing of Kosovo education, a complete division of responsibilities between the MEST and the local education authorities is still being defined.

Within the existing governing structure of the Kosovo education system, some areas are directly managed by MEST: higher education, secondary education, special education, pre-school education, etc. However, the exclusive duty of the Education Administration is the implementation of MEST policies, including issues such as curriculum application, student and school evaluation, teaching methodology, employment and dismissal of the personnel, whereas the Municipal Education Directorate has the primary responsibility of property management, of
support services for schools, care and transportation of students, and similar issues

From the perspective of the organizational structure, the MEST consists of two departments: Education Department and Central Administrative Services Department. Further, the Education Department consists of three divisions for: higher education, general education and vocational education. Pre-Service Teacher Training, In-Service Teacher Training and Curriculum are three out of 13 sections within the General Education Division.

Environment and Kosovo Curriculum Framework (KCF)

Kosovo has a large young population. This gives a good opportunity to initiate and develop environmental education and awareness building among the youth. Education on environment, climate variability and change, and natural resources should be integrated throughout the learning process.

A quality and efficient system of education is an indispensable tool in the overall development of a country. Schools and their staff have a crucial role in terms of schooling, education, training new staff, allowing the country to fulfil standards and join the big European Family.

Kosovo’s curriculum is structured around six learning areas that apply from pre-school up to upper secondary education, including both general and vocational education. The fourth one is Society and Environment.

The KCF specifies that within the Learning Area “Society and environment”, learners will develop an awareness of themselves and the others in the context of their immediate and broader social contexts and environments.

But why is sustainability important? Sustainability is important because all the choices we pursue and all the actions that we make today will affect everything in the future. We need to make sound decisions at present in order to avoid limiting the choices of generations to come. It helps us understand the connection among the humanity, environment, and economy. Its role is too important that without it, we could no longer survive and live.

KCF states that the teaching and learning of sciences is integrated with the teaching and learning of social studies under the heading of “Knowledge and understanding of the world”.

Page 13
Based on such integrated teaching and learning learners will:

- be acquainted with their natural and man-made environment;
- develop a sense of inquiring about social and natural phenomena and processes;
- get familiar with basic concepts, skills and procedures associated with scientific knowledge in natural and social sciences;
- be able to make appropriate connections between different aspects of the environment, life and work;
- be able to understand and assess risks, connect decisions, actions and consequences in an appropriate manner; and
- develop a sense of responsibility for their own well-being.

Time allocation for environment in KCF is:

- 15 % for ISCED 0 (preschool)
- 10 % for ISCED 1 (pre-primary, grades 1-2)
- 10 % for ISCED 1 (grades 3-5)
- 15 % for ISCED 2 (grades 6-9)
- 15 % for ISCED 3 (grades 10-12, Gymnasium)
- 10 % for ISCED 3 (grades 1-12, VET).

The “Key Competencies” envisaged within the KCF define the main learning outcomes that learners will achieve in a progressive and consistent way throughout the education system.

Specific learning areas/subjects may, however, is used as the main ‘carriers’ for the development of particular competencies. In relation to subject areas/subjects, the key competencies are translated into more specific content-and subject-bound competencies and sub-competencies.

In Kosovo curricula, among six key competencies to be mastered by students during compulsory education, the fourth one is related to the environment. This competence foresees that a student should master *Life, work, and environment-related competency;* with a final outcome that student should be *productive contributor.*

Within this competency key issues for students are:

1. team work skills;
2. organizational and leadership skills;
3. entrepreneurial skills:
4. conflict management and risk assessment:
5. independent and responsible actions and
6. active in environment protection and development.

The sixth, Civic competence, with a final outcome for student being Responsible citizen, key issue for student is to undertake initiatives for change in society and environment (in compliance with the Kosovo education vision and policies underpinning the Curriculum Framework, the following is the key competency envisaged for the Kosovo education system: Life-, work-, and environment-related competencies → Productive contributor).

2. Methodology of research

The aim of the research was to collect and analyze the existing content most directly relevant to sustainable development in the national curriculums of the participating countries. The research methodology was designed by the Central Research Team (CRT) of the project to be as straightforward and efficient as possible for the country teams to gather as well as to analyze such complex data, and to aid the CRT in comparative analyses of the findings. The method involved three separate phases (A, B and C) that aimed to restrain and circumscribe the scope of research from the most abstract educational documents (framework curriculum) to the “grass root”, to what exactly is delivered to the children in the classroom (the textbooks).

All three phases used the ESD Content list (Annex 1), categorization as well as specially designed matrixes for each phase.

ESD Content list - there are two major groups of SD content elements that make up the content list: cognitive content and skills and values. The cognitive content was organized on three categories: social cultural elements (human rights, peace and human security, gender equality, etc.), environmental elements (natural resources, water, soil, air, energy, etc.), economic elements (poverty, planetary boundaries, market economy, corporate and social responsibility and accountability, etc.). Skills and values group contains items like: acting with responsibility locally and globally, acting with respect to others, critical reflective thinking, applying learning in a variety of life-wide contents, etc.

All elements of the content lists had codes assigned and descriptions that added coherence and unity for the analysis process in all participating countries, while at the same time permitted a quantitative approach along with the qualitative one.
**Categories** - the research also used for analyses *five categories*: Environment affects Humanity (EH), Humanity affects Environment (HE), Individuals affect Environment (IE), Sustainable Development Values (V), Other (O). The five categories aim to show if the curriculums have an orientation, a vision.

**Phase A** of the research aims to scan the framework curriculum to reveal the SD content and its distribution in six curricular areas, by going through the document(s) and recording in the matrix all occurrences of ESD content according to the Content list as well as categorizing it according to the Categories.

The given **curricular areas** were reorganized (for coherence across countries) as follows:

- Area A – natural sciences, physical environment and technology
- Area B – social sciences, socio-economic development, history and economics
- Area C – values and ethics education, citizenship education, religious education and philosophy
- Area D – arts, humanities and languages (communication)
- Area E – mathematics
- Area F – physical and health education

**Phase B** of the research analyzed the subject curricula. In order to focus the research two most loaded curricular areas based on Phase A were selected: one according to cognitive content and one according to skills and values content. Once the curriculum areas were selected country researchers in consultation with CRT selected subjects again by the criteria of SD loaded at certain grade levels (max 6 subjects) for deeper analyses.

Based on the analysis of FC and findings at phase A, in phase B the following subjects were selected by the country research team:

- Man and the Nature (grade 3,4,5)
- Physics (grade 6,7,8,9)
- Biology (grade 6,7,8,9)
- Geography (grade 6,7,8,9)
- Man and the Nature (grade 3,4,5)

The steps from Phase A were then repeated on the selected subject curricula the SD content from the Content list was recorded into predesigned matrixes and categorized according to categories.
Phase C of the research analyzed textbooks and it was conducted in two steps. Step 1 of these phase aims to select the three textbooks whose content was to be analyzed. This is based on Phase B of the research and includes the following criteria:

1. The most content loaded subject + grade combination. This was based on the highest number of content elements and skills and values elements.

2. The most 'IE only' loaded subject + grade combination. This was based on the highest number of category IE (individuals affects environment).

3. The most 'IE alone or with other categories combination.' loaded subject + grade combination. This was based on the highest number of IE (individuals affects environment) in combination with other category.

The rationale behind this selection procedure was to increase the focus on the framing of the content, as denoted by the Categories. The primary drive behind the selection of textbooks was not to perform an evaluation of such a limited sample, but to provide internationally comparable examples of good practice in interweaving different aspects of education for sustainable development into a coherent narrative delivered to students. Also, relationship between the curricular proscriptions (indicated both in the framework curricula and the specific subject curricula) and the content, tasks and illustrations directly presented to students was to be mapped.

In Phase C, from the list of subjects analyzed in phase B, the country research team selected textbooks for the following subjects:


These textbooks for the subjects selected on content quantity basis, were selected as recent publications and as the most commonly used for these subjects.

The second step of phase C had a matrix which asked the researcher to analyze content, illustrations and tasks from each textbook selected.

Research limitations We must draw attention to some limitations of the present research, which are inherent to social empirical studies. This is an international initiative, deployed in eight countries with different linguistic, cultural, historical and
social context. Each county had a team formed by an educational partner and an environmental partner. A dose of subjectivity in analyzing the curriculum is present, due to so many researchers involved. The central research team anticipated this and it is the reason for introducing codes. However it is not possible to assure that all coding is totally uniform and standardized. The central research team tried to keep subjectivity at a minimum by describing accurately all SD elements and discussing in depth with country teams every aspect of tasks.

The present report is the written analysis of all three phases, as they are in our country.

3. Introduction to analyses

3.1. The path towards ESD as a path towards a durable future

Although the fascination with future and potential developmental paths is well known, at least since it became possible to record fears, wants and states (and thus also to repeatedly transmit them to future generations), contemporary scientific and social global institutions warn that the humanity is collectively facing an unprecedented challenge, at least as important as the coming of the Stone or Agricultural Ages, or the beginning of the Industrial Revolution (Glasser, 2007). The current predicament is at least in part fraught with problems which cannot be resolved using the existing dominant ways of acting and living, but require a step out of the standard conceptualization of our material, living and social environments and their role in the socio-economic processes (Tillbury, 2007).

Though this is a broad socio-cultural task, broader than any formal curriculum can hope to encompass, on the conceptual level it requires an inclusion of questioning of the existing mental models, mostly successfully reproduced through formal education, which have consigned most contemporary societies to the path of unsustainable development. Alongside inquisitive reconsideration of how we act, this also includes a better understanding and questioning of the social expectations and prejudices that influence individual action. The required change is deeper than a curricular intervention, based on educational processes and learning. The perceived threat is big and every community should address it through responses based on planned and all-encompassing learning and understanding. Education needs to be restructured into education for sustainable development, which is more than reducing the lack of knowledge. It is adoption of an attitude and development of motivation to act based on the stimuli from the immediate environment and independent formulation of own interests and attitudes.
One of the current and future tasks of education is to enable people to live together in ways that contribute to sustainable development of their communities and states. However at present education often contributes to unsustainable living because of the lack of opportunity for learners to question their own lifestyles and the systems that promote those lifestyles, because it advocates reproduction of unsustainable models and practices.

A reorientation of formal educational content towards sustainable development is thus recommended. More concretely, that includes helping students understand what sustainable development requires globally and locally and also to help them understand how to use their own capacity for critical reflection and systemic and futures thinking, as well as to motivate them to consider actions towards sustainable development.

3.2. ESD and the national curriculum

The most common global response to the calls for inclusion of ESD into formal education is to make adjustments (minor or substantial) to the existing educational system, with all its imperfections and peculiarities. This is achieved either as an expansion of the existing inclusion of environmental education topics (thus their importance in our methodology and the results; see section 2 and 4) or adoption of altogether new cross-curricular and interdisciplinary teaching and learning. It is especially interesting that at the global level (UNESCO, 2009) few countries report the support of ESD in early childhood education, which is something we have investigated in greater detail from both the side of skills and values development (see section 4.2) and the cognitive content introduction (see section 4.1), through analysis of curricula from the beginning of compulsory schooling. It is often the case that ESD themes are seen as too complex and suitable only for later stages of education, rather than being seen as mostly a matter of presentation of the existing curricular content.

All additions to the national framework curricula, such as sustainable development topics, need to be added to an already fully packed curriculum, which in the formal compulsory education has explicit task of teaching the basics of reading, writing and arithmetic. That was the reason to start the analyses with mapping of the content that already exists in the national curricula (both framework and subject curricula), either explicitly referring or related to sustainable development. In the cases where the contents are related to sustainable development they can be slightly modified to contribute to education for sustainable development (ESD) without introducing additional content to the curriculum. It is therefore of utmost importance that the sustainable development content can be seen as “an integrative, cross-curricular
theme that can bring together many of the single issues that schools are already expected to address” (UNESCO, 2009, p.48).

As is expected from the 2009 Review of Contexts and Structures for ESD (UNESCO, 2009) most of the ESD-content was found in those curricular segments where environmental education content can traditionally be found: in natural sciences. It was in this segment of the national framework curriculum that most content was identified in all of the participating countries. It was especially interesting for us to determine the extent to which the generally-applicable learning goals (part of our Skills and Values Content elements – SV), such as acting with respect for others, acting with responsibility globally and locally, critical thinking, understanding complexity, futures thinking, understanding interdisciplinary relations, ability to identify and clarify values (see section 4.2), are represented across the national framework and selected subject curricula. Some of these learning outcomes can be seen as instrumental (for example, acting with responsibility, futures thinking or understanding interdisciplinary relations), whilst others are more emancipatory (e.g. critical and reflexive thinking, participating in consensus building and democratic decision making, decision-making in uncertain situations). As Review of Contexts and Structures for ESD reports these differences may reflect the historical and political context of individual countries, but through explicitly presenting its role and position in the curriculum we hope to open a public debate about its importance for sustainable development.

3.3. What we teach and how we teach it

In that light, and building on from the methodological and historical foundation of ESD in the curricular environmental education, we also sought to map how curricular content presents the interaction between individuals, humanity and their bio-physical environment (see section 4.1.1.1). We thus report on the overall findings of this type of framing of the curricular content. We have sought to map whether the segments of the curriculum state that some aspect of a natural system affects or impacts people, or that humanity is dependent on some aspect of the Earth or environment; that the actions or decisions of society influence or change the Earth and environment, for better or for worse; or that the actions or decisions of individuals, in their private capacity, influence or change the Earth and environment, for better or for worse (Kastens and Turin, 2006). The latter is especially important for its emancipator aspect in combination with development of certain skills and values. The analysis has sought after mapping and reporting on the content from selected textbooks on how they reflect and represented these curricular recommendations. In regards to overall national and selected subject curricula, it was expected that the analysis will show the
prevalence of different framings of perceived interaction between individuals, communities and the environment.

Following the Review of Contexts and Structures analysis and recommendations it was sought to map both the environmental as well as developmental, disaster prevention and corporate and social responsibility ESD content themes. As is the general global trend it is most often the case that the traditional environmental elements (natural resource management, health, water and importance of biodiversity) are more represented than the social, cultural and economic aspects of development. In the case of Macedonia topics such as peace, citizenship, ethics, equality, and cultural diversity are relatively more emphasized. It is important to note that globally two SD focal areas emerge (a) a focus on understanding the causes and impacts of key issues and their mutual interconnections, and (b) focus on capacity development for addressing the key issues at individual, communal and global level (UNESCO, 2009).

The analysis tries to shed some light on two aspects by looking in greater detail into both the subjects that were expected to contain most cognitive environmental, economic and socio-cultural content (CC) and those subject that were expected to contain most ‘skills and values’ content (SV). Each will be presented in greater detail below. It is important to note that approach focuses on the more conventional presentation of the ESD content, through integration of the ESD and SD issues in the existing school subjects, rather than through innovative methods such as ‘adopting a whole school’ approach to ESD. Though latter is important, it does not have a potential to reach as wide a number of students as the former, and remains an open topic for further analyses and project development. Moreover, interventions in the formal national curriculum lead to more urgent and readily adoptable responses, which is one of the important first steps towards orienting educational practice in the direction of sustainable development.

4. Overview of country findings

| Phase A – observations |

The most represented area in KCF is social sciences, socio-economic development, history and economics. With eleven topics, students are acquainted with the issues of humanity impacting environment, with a variety of skills and values content. Observation tells us that the whole primary, lower and upper secondary levels are covered with social and cultural elements, environmental elements and economic elements.
The area of natural sciences, physical environment and technology is the second most represented in KFC with seven topics. Though this area is not present in grades 10 and 11, students are acquainted with both humanity impacting environment and vice-versa. Social and cultural elements, environmental and economic elements are well presented in this area.

The arts, humanities and languages (communication) area, presented with five curricula topics, are not included in grades 10 and 11. Though presented in remaining grades, it does have the cognitive content for social and cultural elements, environmental and economic elements. It has five skills and value content which are considered insufficient for this area, while students are acquainted with the issues of humanity impacting environment but not with other categories.

The area of physical and health education has three topics throughout the grades (1-12), with a poor skills and value content as well as cognitive content.

The mathematics area again has poor skills and value content. Though is taught throughout the grades, the learners are limited solely to understanding the quantitative aspects of natural and social phenomena and community-oriented problem solving involving mathematic calculations. Cognitive content such as social and cultural elements, and environmental and economic elements, are poorly defined in KFC.

The least representation has the area of values and ethics education, citizenship education, religious education and philosophy. Beside moral dilemmas linked to the advancement of modern science, the KFC does not offer other topics. It is taught solely to grades 10-12, and beside the skill and value content in acting with respect to others, it does not offer to learners gaining of other skills.

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**Phase B – observations**


Man and the Nature – grade 3 has the most content of environmental elements. The reason for this is the age of children where they are acquainted with the nature and its phenomena’s, as well as seeing their role in affecting to nature and the ways nature effects on them. Upon finishing grade 2, children of age 8 and 9 naturally starts noticing that the nature is more than they comprehended. As children at this phase of their life starts becoming more independent, curiosity arises to learn the role of the nature in their lives and how they can fit within. Thus, KFC provides to them more
information related to environmental elements but less social and cultural ones, while skills and value content is not in desirable level, as at this age children should be more practiced to gain relevant skills. The economic content is not present at all, as at this age KFC considers that children should not be burdened with this issue.

Man and the Nature – grade 4 has again the most content of environmental elements, while very little social ones. Beside health issue there are no other social elements in the content. The reason for having most environmental cognitive content is the age of children at grade 4. Becoming 9 or ten years old, children starts interacting more with the nature in various ways, such as walk in the nature, sightseeing, planting etc. Besides health, social cognitive element is not present. Again, the economic content is not present at all, as at this age KFC considers that children should not be burdened with this issue.

The cognitive content for social and cultural elements in Physics – grade 9 is not present at all in this textbook. Though it should not be so, it seems that KFC has foreseen that this textbook too technical to add the social and cultural elements in it. The environmental elements cognitive content is well presented, probably due to the age of the children. At this age (15 and 16), children now as teenagers are more aware of environmental issues as they interact directly with nature through their day-to-day activities. Beside the school, children at this age are getting information from other sources like from newspapers, cable TV and internet. The whole chapter of environmental pollution in this textbook is making them aware of the present situation, how did we end with this pollution and what steps should be taken to prevent further pollution by stakeholders and by them in day-to-day life. Yet, skills gained in this grade are insufficient for them to perform necessary steps when it comes to environment preservation. The cognitive content for economic element is not presented in this textbook, as it seems that KFC considers being irrelevant for this subject.

| Phase C – observations |

The discrepancy noticed tell us that that textbooks are not well balanced and that learners do not fully comprehend described environmental issues. Discrepancies relates to the number of content recordings, numbers of pictures/illustrations and numbers of tasks given to learners. Example: for certain content element, i.e. water, Man and the Nature – grade 3 has one whole lesson in two pages, while it has 20 pictures and 9 tasks.

Textbooks selected for phase C are:

*Man and the Nature – grade 3*
Published initially in 2009, textbook to a certain extent gives relevancy to environmental issues, acquaints the children with the nature and its phenomena’s. Textbook offers 6 whole lessons and one paragraph related to the environment.

The category of human beings (as living organisms) has most pictures (28), while category of water has 20 pictures. Health has 17 pictures, air 14, soil 10, natural resources 9, and surprisingly pollution has 1 picture. This textbook has way more process tasks (28) than route learning ones (4).

*Man and the Nature – grade 4*

Published in 2009, textbook in general gives relevancy to environmental issues, acquaints the children with the nature and its phenomena’s. It is enriched with the content related to environmental issues. The textbook has 11 whole sessions and two paragraphs in other sections, all related to environment.

The category of water has most pictures (15), while category of pollution has 11 pictures. Air has 9 pictures, natural resources 5, soil 3, health 2, and human beings (as living organisms) only 1. Again, textbook has way more process tasks (23) than route learning ones (4).

*Physics – grade 9*

Published in 2006, textbook does not give relevancy to environmental issues. It has one chapter dedicated to pollution and two paragraphs in other sections, but does not offer other any information or cognitive content for other categories of environment. Yet, this textbook offer to learners information on pollution and the steps stakeholders should make for prevention, but does not offer information how learners themselves could be involved in preserving the environment.

The category of pollution has in total 4 pictures, while category of water has only 2 pictures. This textbook is very poor in pictures. This textbook has more process tasks (8) than route learning ones (2).

4.1. The analysis of the SD cognitive content

Findings from this content generally stresses benefits from an education promoting development that is environmentally sound, socially equitable, culturally sensitive and economically just.

Education systems prepares learners to enter the workforce as well as handle a crisis, be resilient, become responsible citizens, adapt to change, recognize and solve local
problems with global roots, meet other cultures with respect, and create a peaceful
and sustainable society. Findings here are more related to the environment, as other
aspects were less or none presented.

During the analysis of the SD cognitive content it was noticed that in overall
predominates cognitive content of environmental contents (B), while cognitive content
of social and cultural elements is less presented. In the analysis it is noticed that
cognitive elements B1-B7 and B12-B13 are presented (Natural resources, Water, Air,
Soil, Energy, Agriculture, Pollution, Human beings as living organisms), most while
other environmental elements are not presented at all (Biodiversity, Climate change,
Rural development, Urbanisation {urban footprint; urban sprawl}, Natural disasters,
and Waste). As a cognitive content of Social and Cultural elements, it was noticed that
solely the Health is presented in Man and the Nature subject for grade 4 (approx age
10). The curricula intent seems to get children of age 10 being acquainted with health
issues. There are no economic elements at all in phase C. It seems that curriculum
considers that in elementary and lower secondary schools (grades 1-9) students
should not be overburdened with economic issues at that age, as there is vocational
education at upper secondary level that considers issues of economics valuable to be
taught.

| 4.1.1. Environmental aspect vs. other aspects of SD representation in the
curriculum |
|-------------------------------------------------|

The environmental aspect is more represented in the curriculum than other textbooks
or other aspects of ESD.

In recent years development of new curricula was drafted in participatory way,
meaning it had an input from teachers of various teaching levels, curricula specialists
from country wide, and sufficient engaged consultancy from curricula specialist from
European countries and from United States. It was the influence of local teachers and
consultancy from abroad who stressed the necessity of having more environmental
aspect in curricula due to global and local concerns in preserving the environment. It
seems that these environmental aspects are more presented in curricula and
textbooks targeting children of age 10 to 12, as it is considered that in respective age
children starts being more acquainted with the nature and with the impact the nature
has in humanity and the impact of humanity in the nature.

The most environmental aspect is presented in the subject of Man and the Nature. As
a subject, it is the only one where environmental aspects could be more stressed and
envisaged.
4.1.1.1. Framing of environmental aspects (IE/EI/HE)

The most environmental aspect found in textbooks is those of Humanity effecting the Environment. These are mainly found in Pollution category, especially visually oriented. As visual presentation is considered as leaving first impression to children, the pictures of power plant smoking, an illustration of a car emitting gas, a picture of a lake polluted by detergents, a picture of a car dump, a picture of a river with steel and solid waste, a picture of a city with smog, and a picture of a dead bird in a shore covered with oil, for example, gives clear message to students how can humanity effect the environment.

4.1.2. Economic aspects representation in curriculum

Economic aspects are poorly presented in curriculum, subjects and in the textbooks. During the Phase A the economic aspect of sustainability (C6) was represented in almost all cognitive elements (20 findings), while Corporate social responsibility and accountability was found twice. Planetary boundaries and Production and/or consumption were found once in textbooks. Mostly they are founded in area B - social sciences, socio-economic development, history and economics. During the phase B this element was less found. For example, Planetary boundaries was found in six being mentioned in textbooks, Corporate social responsibility and accountability was found twice, while Production and/or consumption and Planetary boundaries once. Mostly they are founded in the subject of Biology and Physics.

4.1.3. Socio-cultural aspect representation in curriculum

The socio-cultural aspect, compared to other SD aspects in the curriculum, subjects and textbooks is much less represented. Among sufficient environmental aspects and none of economic aspects, the socio-cultural aspect is found only three times mentioned. Within this aspect, solely the Health content is presented.

4.2 The analysis of skills and values

Findings of skills and values were learning was about knowledge and also about doing, being, interacting with others, whether the formal learning is enjoyable, hands-on and relevant to life outside school.

Among 21 categories of skills and values content, 14 are found among textbooks. Understanding complexity / applying systemic thinking prevails mostly in all subjects,
while Critical reflective thinking and Acting with responsibility locally and globally are the second most presented. Other ones are less presented in few findings.

The most was found in area B - social sciences, socio-economic development, history and economics, while the most presented are in Man and the Nature subject, followed by Biology subject. For example, Understanding complexity / applying systemic thinking skill and value is found in the subject of Man and the Nature, respectively when the matter and energy is described, where to students is described the Earth as a source of mixed substances and is asked from them to analyze why Earth is a source of goods for humans and to reckon and be aware for necessary behaviours, correct and responsible ones to avoid possible risks that may happen by human factor, as well as to reckon that preserving the environment is in benefit of our health and social life.

5. Conclusions and recommendations

Sustainable development means the “development which fulfills the needs of the present without compromising the possibilities of the future generations, by ensuring the fulfillment of their needs and requirements as well. “ (Our Common Future, UN Report 1987).

Kosovo, being a country in transition, needs accomplishing hard work, in order to fulfill the requirements of the present generation, which include food supply, safe water supplies, personal insurance, opportunities for a good education and good health, and provision of sustainable natural resources. Development in the region, supported by a relative stability and donors’ help, offers the possibilities to realize such needs, and such possibilities can take different paths. Conventional development is often focused in the fulfillment of the citizens’ needs without taking into consideration long-term consequences. Sustainable development, on the other hand, tries to fulfill people’s needs by offering solutions which do not cause any pressure for the natural and human environment more than it is allowed and/or approved. The emphasis is put on the improvement of the living conditions for all with a relative social equality. Although Kosovo is rich in its natural resources, and has a high biodiversity, it does not have a desirable level of economic development and economic growth. Incentive forces for a sustainable development can be divided into internal and external forces. Internal incentives include the need for the harmonization of the economic development with the increasing pressures towards the environment; improving the sectors of civil society which deals with sustainable development as one of its key issues; increase of the public pressure, as a result of the increase of public
conscience which is nowadays capable of gaining more information; as a result of public participation and the right to address different issues to the courts. Internal forces include the process of membership in EU and the requirements which should be fulfilled, and which are linked with the compilation and implementation of the policies for sustainable development; industry and tourism and the increased requirements for the protection of nature and clean and healthy environment; and finally, the support of international institutions and donors.

However, these incentives are being realized in a very slow manner. Political and institutional capacities in realizing such incentives lack. Therefore the role of international organizations is essential and critical for capacity building.

Vast majority of people in the world will be living in towns within a short period of time, thus influencing local and global environment, health, economy, culture and technology. Such a tendency for urbanization is also present in the South-East countries, including Kosovo. In order to evaluate sustainable development, a new way of thinking about systems and communities is needed.

Sustainable development in Kosovo requires an approach toward the basic services-including suitable shelter, water, food, health and education. It also requires a mutual gaining relation among environs which are constantly changing and a healthy environment which is capable of ensuring resources and absorb waste and remains, because towns can never stand with internal possibilities only. A healthy relation between the town and its environment is ensured when, for example, farmers and their consumers from towns interact and are conscious for the situation and the needs of each other. It is also needed to lower the usage of resources, such as the use of water, decrease of pollution and the decrease of using private cars. The way towns have been built and continue to be built, products that the citizens use and the way these products are distributed, increase or decrease abilities to use resources and as such produce more waste. With the purpose to efficiently improve urban environment, development should start from its basis. Civil society, including the community and NGOs, play an important role in helping increase the quality of urban environment. Community itself should protect its own environment and should express its opinions to the local authorities regarding each environmental challenge that have an influence on the community itself. Community should be encouraged to express opinions in how to protect and keep the environment clean and healthy. Local organizations which work for the clean and healthy environment should be encouraged and supported. Local governance should support communities with resources and ensure the implementation of laws. For this reason, we shall use the definition given by Hardoy, Mitlin and Satterthwaite (1992): “[sustainability] should be defined as such to include the minimal usage of non-repairable resources, stance within the waste absorption capacities and the fulfillment of the human basic needs.”
Regardless of the approved laws, which are still not very satisfying, especially in the usage of land and territory planning, towns in Kosovo have serious problems with the implementation of laws. This weakness, often allows for different dangerous projects to be realized and which would risk the green areas in towns, destroy cultural heritage and limit citizens’ movement (for example, zebra crossing). Municipalities often lack experienced people who are needed for a good urban planning, lack a general vision for needed for the urban problems and urban development. This includes urban transport where there are no good pedestrian areas, there are no bicycle tracks, while cars remain the most preferred means of transportation. Public transportation is decreasing because of the lack of resources and partly because municipalities and public opinion are not capable of gaining benefits from this way of transportation while preferring their private cars without taking into consideration the higher costs. We are facing an incredible increase of car usage (per habitant) together with consequences of pollution. Air quality, especially in urban areas, traffic jams and movement problems are an increasing problem in towns. Apart from urban planning, collapse of urban transportation, very low quality of fuels contributes in the air pollution, too. A strict law which controls imported cars as well as blocking of fuels containing lead would be a step forward improvement. Promotion of public transportation is also a key issue (but it should be treated along with urban traffic planning. On the other hand, energy production is another hidden problem. Buildings are not well isolated, heating losses increase up to 30% during winter. Increase of energy price makes people with lower income to find alternative means of heating. Coal and wood are the most used means for heating especially in poor urban areas. Managing waste is another problem as a result of new ways of production and consumption together with the lack of law and programs on recycling waste products and which is anew reality in the countries of South East Europe. Municipalities lack sufficient experience in compiling plans for waste managing, which should be based on alternative problem treatment/solution and not just in waste collection and depositing.

Kosovo is undergoing a very difficult transitional period, during which towns and urban areas have faced sharp and new social, economic, and environmental problems. Development of towns within this period of time has been and continues to be uncontrolled, without any organization or planning. As a result, citizens in towns are seeking for optimal conditions for a healthy and comfortable way of living thus leaving out administrative and technical authorities.
Developing and enhancing knowledge and awareness of youngsters on environmental and energy issues is crucial to sustainable socio-economic development. Therefore, a mid-term priority for Kosovo should be to further develop its educational system, in order to make this system capable of raising knowledge and awareness of youngsters on various issues related to environment. This is necessary to benefit our society as a whole, enable young generations to better understand and protect the environment, and most importantly, by supporting the process of reforming the curricula of mandatory education. The goal should be to have an educational system that is in conformity with international and European environmental standards.

Having Environmental issues being taught within schools, the latter will be given the opportunity to engage in interactive and practical learning about specific, interrelated issues of environment. These issues include various types of energy resources and their use in daily life, protection of environment by preventing and decreasing pollution, and issues related to climate change. This will be done through both theoretical presentations and practical exercises. Such exercises will include the use of innovative tools, such as games, presentations, real case studies and exhibitions.

On one hand, environmental problems in Kosovo have accumulated over a long period of time and grown bigger rapidly. On the other hand, interrelated issues of environment have so far neither been thought of comprehensively as part of the problem and solution nor addressed as such by respective institutions at all levels that are responsible for solving such problems in systematic and organized ways. In this situation, citizens, through their daily human activities within their communities, are ultimately the main polluters of their living environment, but also responsible to increase their current level of awareness on how to protect the environment.

The first and most important step to achieve this is by increasing their knowledge on environmental issues. If we want to have such knowledge to be as transformative as possible for the whole society over the long run, we should start developing this knowledge and environment-friendly awareness with young generations.

In other words, in order to be successful in meeting requirements for protecting the environment and developing environment-friendly behavior, the wide public opinion (all people) should first of all have clear and specific knowledge on the importance of protecting the environment. That is why providing education within schools on how to protect the environment is one of crucial instruments to make the wide public opinion aware on these issues.
International experience has proven that in order for this process of education and awareness of the wide public to be sustainable over the long run, it should start at the primary level of education. Successful education for environmental protection means open, pupil-oriented forms and methods of learning. Such learning should be interactive, and combine theory and practice, in order to make sure that knowledge is widely spread and multiplied among pupils. As such, it also motivates pupils to be active in environmental protection, but also develops their community feeling through strengthening skills and the spirit of teamwork and of commitment to the society as a whole.

Schools should undertake activities and small scale projects that tackles issues related to the living natural environment, which embraces a wide range of specific issues, such as environmental protection, climate change, energy saving, efficient use of energy and of renewable energy resources.

In order to make sure all these undertakings are successfully implemented, and the knowledge and experience acquired are sustainable and functional for environmental protection, schools should aim to build on and multiply this knowledge and experience widely – across the community and over the years beyond the current environmental activities duration.
References

www.enjoyed.net/research


Dr. Pupovci, Dukagjin, Teacher education system in Kosovo, Prishtina, 2002

## Annex 1 - ESD Content List

Below is a list of content elements that will help you map and extract curricular content related to ESD. For ease of use the list is divided into several sections, primarily into **Cognitive content** *(knowledge, facts, learning)* and **Skills and Values** *(skill development, competences; understanding, acquiring and sharing values)*.

<table>
<thead>
<tr>
<th>I</th>
<th>COGNITIVE CONTENT</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>A</strong></td>
<td><strong>Social Cultural elements</strong></td>
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</tr>
<tr>
<td>1</td>
<td>Human rights</td>
<td>Civil and political rights, economic; social and cultural rights; environmental rights (right for clean environment) is currently debated</td>
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<tr>
<td>2</td>
<td>Peace and human security</td>
<td>References to benefits and mechanisms of global peace, and securing “freedom from want” and “freedom from fear” for all persons.</td>
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<td>3</td>
<td>Gender equality</td>
<td>In employment, career and salary; in political and social rights</td>
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<tr>
<td>4</td>
<td>Cultural diversity and intercultural understanding</td>
<td>Tolerance to other values and perceptions</td>
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<tr>
<td>5</td>
<td>Health</td>
<td>Human health, health problems, environmental health, ageing</td>
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<tr>
<td>6</td>
<td>New forms of governance</td>
<td>New ways to manage governing of goods and communities, e.g. environmental governance (environmental aspects considered in decision making); democratic decision making (transparent, involving stakeholders).</td>
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<th>I</th>
<th>COGNITIVE CONTENT</th>
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<tr>
<td><strong>B</strong></td>
<td><strong>Environmental elements</strong></td>
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<tr>
<td>1</td>
<td>Natural resources</td>
<td>Minerals, forest, land, soil etc (amount, location, quality)</td>
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<td>2</td>
<td>Water</td>
<td>Fresh water, marine water, drinking water (location, quality)</td>
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<td>3</td>
<td>Air</td>
<td>Ambient air (quality)</td>
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<tr>
<td>4</td>
<td>Soil</td>
<td>Agricultural soil, forest soil (quality); soil erosion processes</td>
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<tr>
<td>5</td>
<td>Energy</td>
<td>Fossil fuel-based energy, renewable energy (resources, dependence on these sources)</td>
</tr>
<tr>
<td>6</td>
<td>Agriculture</td>
<td>Role of agriculture (food, employment); position of agriculture within a wider economics system; forms of agriculture (industrial, small scale, organic, sustainable etc.)</td>
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## I  COGNITIVE CONTENT

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<tbody>
<tr>
<td>7</td>
<td>Biodiversity</td>
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<td>8</td>
<td>Climate change</td>
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<td>9</td>
<td>Rural development</td>
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<td>10</td>
<td>Urbanization (urban footprint; urban sprawl)</td>
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<td>11</td>
<td>Natural disasters</td>
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<td>12</td>
<td>Pollution</td>
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<td>13</td>
<td>Human beings (as living organisms)</td>
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<td>14</td>
<td>Waste</td>
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## II  SKILLS AND VALUES CONTENT

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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Acting with responsibility locally and globally</td>
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<td>Acting with respect to others</td>
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<td>3</td>
<td>Critical reflective thinking</td>
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<td>4</td>
<td>Understanding complexity / applying systemic thinking</td>
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<td>5</td>
<td>Futures thinking</td>
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<td>6</td>
<td>Planning and managing change</td>
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<td>7</td>
<td>Understanding interrelationships across disciplines</td>
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<td>8</td>
<td>Applying learning in a variety of life-wide contents</td>
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<tr>
<td>9</td>
<td>Decision-making, including in uncertain situations</td>
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<td>10</td>
<td>Dealing with crisis and risks</td>
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<td>11</td>
<td>Ability to identify and clarify values</td>
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<td>12</td>
<td>Identifying stakeholders and their interests</td>
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<td>13</td>
<td>Participation in democratic decision-making</td>
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<td>14</td>
<td>Negotiating and consensus building</td>
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<td>II</td>
<td>SKILLS AND VALUES CONTENT</td>
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<td>-----------------------------------------------------------------</td>
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<tr>
<td>15</td>
<td>Observing - qualitative</td>
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<td>16</td>
<td>Measuring - quantitative</td>
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<td>17</td>
<td>Inferring - based on observation</td>
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<tr>
<td>18</td>
<td>Classifying</td>
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<td>19</td>
<td>Predicting</td>
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<td>20</td>
<td>Communication and understanding graphs and symbols</td>
</tr>
<tr>
<td>21</td>
<td>Manipulating mathematical ratios</td>
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For NEPC:
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Design of the cover:
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This report is a part of a wider ENjoinED initiative \url{http://www.enjoined.edupolicy.net} that is active in 8 countries. The aims of the initiative are to uncover the content of the national curricula of the participating countries related to education for sustainable development (ESD), to develop and deliver training activities to those that can and must promote sustainable development, and knit a network of civil society organizations with different backgrounds and competences through a joint mission to exchange know-how for shifting social consciousness towards sustainable development. ENjoinED initiative is born out of Education for Sustainable Development Partnership Initiative (ESdPI) project.

**Coordinator of the Initiative:**
Network of Education Policy Centers (NEPC)

**Location:**
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