

“Capacity Building and Strengthening Institutional Arrangement”

Workshop: “Sustainable Development”

**Environmental Education Training Course for  
Sustainable Development**

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APAT

Agency for Environmental Protection and Technical Services



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## 1. Introduction / 1

In the last decades, e.e. has been considered as a tool, aimed to raise awareness on environment seen in its complexity. This means that education must highlight the interrelationships among the envir aspects and the social, economic, political and cultural problems of the human communities.

In this perspective, have been developed studies on sustainability and education, in order to strenghten the reflexive skills of learners, to help them to understand the complexity of reality and to find out possibilities of solving the problems in a creative way.

*TLSF* – UNESCO is one of these new educational programmes, in which the most innovative teaching and learning processes are used, to provide students of school and of other non-formal contexts with a right perception of sustainable development.

## 1. Introduction / 2

In 2002, for the Johannesburg Summit, UNESCO, that was the task manager of the United Nations for the CSD, in cooperation with prof. J. Field of the ..... University, edited the multimedia didactical programme: *“Teaching and Learning for a Sustainable Future” (TLSF), published as a cd-rom and on the Unesco web site.*

The aim of TLSF is the promotion of values, behaviours and lifestyles according with the principles of sustainable development.

Infact, Agenda XXI stated that:

***“Education is fundamental to promote sustainable development and to strenghten the capacity of people to engage themselves in the environmental matters and in sustainable development”.***

## 2. The UNESCO programme 'Teaching and Learning for a Sustainable Future' (TLSF)

TLSF helps young people to better understand the world in which they live, addressing the complexity and the interconnections between problems such as poverty, environmental degradation, urban wastes and decay, human health, and all the matters that threaten the protection of the environment and human being.

The programme contains 100 hours (25 training units) of professional development for use in pre-service teacher courses as well as for the in-service education of teachers, curriculum developers, education policy makers, and authors of educational materials.

## TLSF - Objectives

- Clarify concepts and themes related to sustainable development and how they can be integrated in all subject areas across the school curriculum
- Enhance skills for integrating issues of sustainability into school subjects and topics
- Enhance skills for using interactive and learner-centred teaching and learning strategies that support knowledge, critical thinking, values and citizenship objectives implicit in reorienting education towards sustainable development
- Encourage awareness of available information and communication technologies (ICTs), of the potential of multimedia-based approaches to education and of the internet as source of educational materials
- Enhance skills in computer literacy and multimedia education.

## TLSF - Contents

The programme consists of 4 Thematic Learning Areas:

- I. Curriculum rationale: a general overview of the questions faced, that provides with the definition of some key-issues used in the follow.
- II. Teaching about Sustainability across the Curriculum: how to integrate sustainability in the school curricula.
- III. Interdisciplinary Curriculum Themes: some interdisciplinary issues are proposed, in order to match sustainable future with some challenges of today life.
- IV. Teaching and Learning Strategies: innovative methodologies needed to achieve the objectives of education for sustainability.

## TLSF - Structure

### **Tema A Introduction**

Mod. 1. Exploring global realities

Mod. 2. Understanding sustainable development

Mod. 3. A futures perspective in the curriculum

Mod. 4. Reorienting education for a sustainable future

Mod. 5. Accepting the challenge

### **Tema B Integration of sustainability in the school curricula**

Mod. 6. Sustainable future across the curriculum

Mod. 7. Citizenship education

Mod. 8. Health education

Mod. 9. Consumer education

### **Tema C Interdisciplinary Curriculum Themes**

Mod. 10. Culture and religion for a sustainable future

Mod. 11. Indigenous knowledge and sustainability

Mod. 12. Women and sustainable development

Mod. 13. Population and development

Mod. 14. Understanding world hunger

Mod. 15. Sustainable agriculture

Mod. 16. Sustainable tourism

Mod. 17. Sustainable communities

### **Tema D Teaching and learning strategies**

Mod. 18. Experiential learning

Mod. 19. Storytelling

Mod. 20. Values education

Mod. 21. Enquiry learning

Mod. 22. Appropriate assesment

Mod. 23. Future Problem Solving

Mod. 24. Learning outside the classroom

Mod. 25. Community problem solving



## FIRST THEMATIC LEARNING AREA:

### *'Curriculum Rationale'*

#### Main issues:

- Sustainability = complexity  
Interconnection among social, economic and environmental matters.  
Education as key-strategy towards sustainable development.
- Sustainability = emerging and evolving concept  
Sustainable development must be considered together with the changes in the life of people and in the local reality and territory.
- Sustainability = challenge for the future  
Education for sustainability enables the new generations to build alternative and better futures, looking for solutions to environmental issues.

## SECOND THEMATIC LEARNING AREA:

### *Teaching about Sustainability across the Curriculum'*

#### Main issues / 1:

- A basic premise of education for sustainability is that just as there is a wholeness and interdependence to life in all its forms, so must there be a unity and wholeness to efforts to understand it and ensure its continuation. This calls for both interdisciplinary inquiry and action.
  
- Education for a sustainable future involves a comprehensive approach to educational reform. It extends beyond the boundaries of individual school subjects and requires the attention of teachers, educational administrators, planners and curriculum agencies.

## SECOND THEMATIC LEARNING AREA:

### *Teaching about Sustainability across the Curriculum'*

#### Main issues / 2:

- A disciplinary focus is often helpful, but education for a sustainable future can be integrated into and across different school subjects or areas of the curriculum, and it is relevant to all educational objectives.
  
- In particular, the following themes should be investigated:
  - Citizenship education,
  - Health education,
  - Consumers' education.

## THIRD THEMATIC LEARNING AREA:

### *'Interdisciplinary Curriculum Themes'*

#### Main issues:

Sustainable Development is strictly related to social and cultural matters, such as agriculture or hunger, that deal with diversity between the North and the South of the world.

Namely, are investigated the following issues:

- Culture and religion
- Local knowledge and sustainability
- Women and sustainable development
- Population and development
- Sustainable agriculture and tourism
- Sustainable Communities

## FOURTH THEMATIC LEARNING AREA:

### *‘Teaching and Learning Strategies’*

#### Main issues :

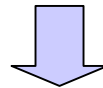
- This Area is namely addressed to teachers, and provides alternative teaching methods and tools, that could enhance the learning of sustainable development.  
With special reference to:
- Learning through Experience: students are encouraged in critical thinking, problem solution and make decision approach;
- Learning through Enquiry: in ESD questions are more important than answers. For this reason students become more active and responsible in their investigation and about their own knowledge;
- Learning for the Community: the aim of the education process is not the classroom but the social context in which students live, and they must learn how to think and to solve the real issues of their local community.

## FOURTH THEMATIC LEARNING AREA:

### *‘Teaching and Learning Strategies’*

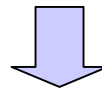
#### Examples of methods for a sustainable teaching:

##### 1. Experience learning



This learning modality forces students to deepen their look into reality, to develop a critical thinking and to act a decision-making process.

##### 2. Story telling



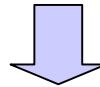
For this method can be used and adapted stories, miths, legends that belong to the traditional and indigenous culture.

## FOURTH THEMATIC LEARNING AREA:

### *‘Teaching and Learning Strategies’*

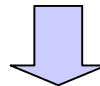
#### Examples of methods of sustainable teaching:

#### 3. Enquiry learning



Students are encouraged to elaborate informations and data acquired, in order to achieve personal results in the investigation.

#### 4. The assessment of the results



The evaluation of students' learning results must also consider the understanding of ethical values.

## TLSF - Characteristics

- *TLSF* must be intended as a ‘best practice’, as an example and a model for other educational tools, because it is accessible to everyone (through internet), flexible, easy language.
- In *TLSF* sustainability is not seen as a theory, but as an issue that affects everyone personally, and that everyone can change with their behaviour.
- *TLSF* was built as an “open structure”, that can be adapted for different users, countries and contexts, in order to join and to integrate the global environmental matters and the specifically local aspects.



## Cd-rom APAT: an example of adaptation of the programme TLSF UNESCO



APAT decided to adopt *TLSF UNESCO* as an educational material for the “*Laboratory Training Course on E.E. oriented to sustainability*”, organised with the C.I.F.E. Working Group of Regional Agencies of Environment (ARPA).

After the translation from english into italian, the two main phases of this experience have been the following:

- I. Adaptation of the texts
- II. Definition of crossing training courses

## I. Adaptation of the texts / 1

The educational material of *TLSF* has been summarised and reorganised, although the original division in 4 Thematic Learning Areas and in 25 Training Units has been maintained, in order to provide an easier approach both for educational operators and teachers, and for non-expert people.

Some changes were needed in order to eliminate some parts that seemed to be too much specific of a cultural context, such as quotations of scientists or writers, local experiences and case-studies of sustainability.

## I. **Adaptation of the texts / 2**

This is the **structure** of each Training Unit:

- an Introduction to the issue, which provides a general overview and the main questions related;
- the Learning Objectives (knowledges / competencies and skills);
- the Contents, subdivided in paragraphs;
- the “Learning Journal”, that contains some practical exercises and questions to deepen the theme.

## II. Definition of crossing training courses

Because of the wideness of contents of TLSF, we thought to select some crossing training courses, in order to allow users to read only some parts of the programme.

These courses were obtained by combining different Units of the four Thematic Areas, linked one to another and pointed out with different colours.

The crossing training courses are the following:

- **Introduction to the concept of sustainable development**
- **Cultural aspects of education for sustainable development**
- **Innovative methods of teaching / learning**

Proposta di lettura del programma di

**'Educazione Ambientale Per lo Sviluppo Sostenibile'  
DELL'UNESCO**

A cura di APAT  
Servizio Educazione e Formazione Ambientale  
Settore Educazione Ambientale

Indice

Introduzione

Tema A Introduzione	Tema B L'integrazione della sostenibilità nei programmi educativi	Tema C Percorsi Interdisciplinari	Tema D Metodologie didattiche
<b>Moduli</b>	<b>Moduli</b>	<b>Moduli</b>	<b>Moduli</b>
<ul style="list-style-type: none"> <li>1 – Esplorare la realtà globale</li> <li>2 – Capire lo sviluppo sostenibile</li> <li>3 – Una prospettiva futura</li> <li>4 – Riorientare l'educazione per uno sviluppo sostenibile</li> <li>5 – Accettare la sfida</li> </ul>	<ul style="list-style-type: none"> <li>6 – Il futuro sostenibile nei programmi scolastici</li> <li>7 – Educazione alla cittadinanza attiva</li> <li>8 – Educazione alla salute</li> <li>9 – Educazione ai consumi</li> </ul>	<ul style="list-style-type: none"> <li>10 – Cultura e religione per un futuro sostenibile</li> <li>11 – Cultura indigena e sostenibilità</li> <li>12 – Donne e sviluppo sostenibile</li> <li>13 – Demografia e sviluppo sostenibile</li> <li>14 – Capire il problema della fame nel mondo</li> <li>15 – Agricoltura sostenibile</li> <li>16 – Turismo sostenibile</li> <li>17 – Comunità locali sostenibili</li> </ul>	<ul style="list-style-type: none"> <li>18 – Apprendere con il metodo sperimentale</li> <li>19 – Il metodo narrativo</li> <li>20 – Educazione ai valori</li> <li>21 – Apprendere con il metodo dell'indagine</li> <li>22 – Accertamento e Valutazione</li> <li>23 – Risolvere i problemi futuri</li> <li>24 – Apprendere fuori dell'aula</li> <li>25 – Risolvere i problemi futuri nella comunità locale</li> </ul>

I contenuti dei temi sopra elencati, nell'ambito dei singoli moduli, sono consultabili anche secondo 3 percorsi specifici:

1. **Introduzione al concetto di sviluppo sostenibile** (Contrassegnato da  e dalle frecce 
2. **Cultura dell'educazione per lo sviluppo sostenibile** (Contrassegnato da  e dalle frecce 
3. **Tecniche innovative di insegnamento / apprendimento** (Contrassegnato da  e dalle frecce 

## Conclusions

- The develop of educational programmes is very usefull for the promotion and diffusion of the values of sustainability, namely if the Information and Communication Technologies are used.
- The education vehiculed by these programmes must be coherent with the qualitative criteria stated also by Unesco's Strategy for the ESD, and must be monitored for an assessment of their results.
- *TLSF UNESCO* could be very usefull in order to join the scientific and methodologic care and the capable to involve students and learners in investigate the issues and in feeling themselves as stakeholders of the process of change of their lifestyles and, on a long-term, of the society.

## References

[www.unesco.org/education/tlsf](http://www.unesco.org/education/tlsf)

[www.formeducambiente.apat.it](http://www.formeducambiente.apat.it)

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