

“Capacity Building and Strengthening Institutional Arrangement”

Workshop “Sustainable Development”

**“Environmental education tools for sustainable development”**

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# 1. Environmental Education as a tool for DESD

I. As stated in many International and European Documents and Strategies already mentioned, Environmental Education is recognized as an **essential tool** for achieving sustainability, **together with legislative, economic** and technological instruments.



II. Environmental Education for Sustainable Development is not only addressed to school learners but is a **lifelong process** from childhood to higher and adult education and goes beyond formal education.

III. Environmental Education for Sustainable Development refers not only to the environmental aspects, but **includes the issues** of poverty, health, food safety, democracy, human rights and peace.

# 1.Environmental Education as a tool for DESD

IV. Environmental Education can be seen as education *about* sustainable development and education *for* sustainable development.

The first is an awareness lesson or theoretical discussion.

The second is the use of education as a tool to achieve sustainability.

V. ESD is fundamentally a matter of **values**, to be communicated and shared in a way that should be accessible, namely to new generations: this challenge implies a re-orientation of curricula, methodologies, and tools.

VI. Among the crucial actions suggested by the International Implementation Scheme by UNESCO and by the UNECE Strategy for DESD, there is the develop of adequate educational tools (programmes, projects and materials), in order **to train and to support teachers**, educators and learners (estimated in about 60 millions in the world) and to equip them with specific and transdisciplinary skills.

# 1.Environmental Education as a tool for DESD

From UNECE Strategy:

*“Education for Sustainable Development demands a **reorientation** away from focusing entirely on providing knowledge towards dealing with problems and identifying possible solutions. Therefore, education should retain its traditional focus on individual subjects and at the same time open the door to multi- and inter-disciplinary examination of real-life situations. This could have an impact on the structure of learning programmes and on the teaching methods, demanding that educators change from being solely transmitters and learners change from being solely recipients. Instead both should form a team”.*



# 1.Environmental Education as a tool for DESD

To be effective, ESD should:

- use a wide range of **participatory, process- and solution-oriented educational methods**. Apart from the traditional ones, these should include: discussions, conceptual and perceptual mapping, philosophical inquiry, value clarification, simulations, scenarios, modeling, role playing, games, information and communication technology (ICT), surveys, case studies, excursions and outdoor learning, learner-driven projects, good practice analyses, workplace experience and problem solving;
- be supported by **relevant instruction materials**, such as, methodological, pedagogic and didactic publications, textbooks, visual aids, brochures, cases studies and good practices, electronic, audio and video resources.

# 1.Environmental Education as a tool for DESD

The seven strategies suggested for moving forward (IIS – UNESCO):

- Vision-building and advocacy;
- Consultation and ownership;
- Partnership and networks;
- Capacity-building and training;
- Research and innovation;
- Use of Information and Communication Technologies (ICTs);
- Monitoring and evaluation.

# 1.Environmental Education as a tool for DESD

**Research and innovation** are fundamental in order to:

- identify appropriate ESD pedagogy and possible pedagogical methods (such as those featured in Teaching and Learning for a Sustainable Future);
- update the conceptual and theoretical development of ESD;
- identify linkages between ESD with other aspects of learning (e.g. literacy, numeracy, natural science, social science) and with modes of development intervention (e.g. sectoral projects, community mobilization);
- identify processes to reorient education to address sustainability in locally relevant and culturally appropriate fashion,
- increase research on quality teaching and learning approaches for ESD to help learning become more effective.

# 1.Environmental Education as a tool for DESD

## Use of Information and Communication Technologies (ICTs):

ICTs are particularly recommended to be used as they are means of linking distant partners, storing data, and sharing information rapidly.

ICTs have particular links and implications with ESD because they:

- **offer new learning modes and spaces**, new options and interactivity. This represents an opportunity for the widespread dissemination of ESD;
- can serve to **share experiences**, specially among young people of different countries about their concerns and knowledges on environment, and provide learners with a methodological basis that foster life-long learning skills.

However, local and creative use of information technology systems would be part of a dynamic and active use and sharing of knowledge, rather than a passive acceptance of other people's knowledge found on the Web and other ICTs.

## 2. Quality of Environmental Education

The concept of **QUALITY**, applied to Environmental Education, can be intended:

- as essential aspect, to be taken in account during the **planning** of projects and activities;
- as criteria for the **assessment** of the efficacy of actions.

Quality makes the difference between education as solely school discipline and education as a more wider concept, and is relevant both by a scientific and a cultural point of view.

Quality in environmental education affects:

- contents (*what we teach / learn*);
- processes (*how we teach / learn*).

## 2. Quality of Environmental Education

Italian progress towards Quality of Environmental Education is a process started from some years:

- At national level: a series of activities are carried out since many years, namely through the National Technical Table for Environmental Education and Training, led by the Ministry of Environment, Land and Sea Protection, and by the **C.I.F.E. Working Group** of the Environmental Agencies System, coordinated by APAT.

In this context, the document: “**Guidelines for environmental education in the Agencies System APAT/ARPA/APPA**” and the Laboratory Training Course of Environmental Education, with the training Module on the “**Quality of Environmental Education**”, have been the most important contributions to the process.

- At regional and local level: some experimental models of **indicators systems for the evaluation** of the environmental education activities into the regional networks have been recently performed, with the contribution of the Regional Environmental Agencies (namely, are to be mentioned the experiences of Veneto, Liguria and Tuscany).

## 3. Environmental education tools for sustainable development

Actually, there are many typologies of educational tools (the most provided by internet) that provide good contents for sustainable development issues.

The main categories can be considered:

- I. Manuals, books, cd-rom programmes
- II. Educational packages or toolkit
- III. Websites
- IV. Networks

In the following slides a brief overview on some examples of tools realized / promoted by APAT is provided.

# 3. Environmental education tools for sustainable development

## The European toolkit 'jiffy quiz'



The **European Toolkit Jiffy's Eco Quiz** is one of the activities of European Commission – DG Environment, aimed to the promotion and the diffusion of environmental information and best practices in lifestyle and behaviours by means of interactive tools for citizens.

*" Check your facts - Change your ways"*

Playing Jiffy's Quiz, everyone can test his own knowledge, and get practical advice on how to improve the environmental impact of day-to-day actions. Jiffy Quiz is part of a Toolkit Database, collected by DG Environment, divided for Country and for topics addressed.

## 3. Environmental education tools for sustainable development

### The 'Flepy' Project



“Flepy” is an educational kit, addressed to children between 3 and 7 years old. It was originally created for the Flemish Environment Agency (Belgium).

With the co-operation of the European Commission (DG Environment), the project was translated and adapted to be used in 12 Countries, members of the “Green Spider Network” , among which **APAT** that is the Italian national partner.

### 3. Environmental education tools for sustainable development

Success of Flepy among children is above all due to its sympathy and colourfulness.

He is able to swim and to fly, so that he faces the matters of the pollution of air and water and becomes friend of children to fight for a better, green and healthy world.



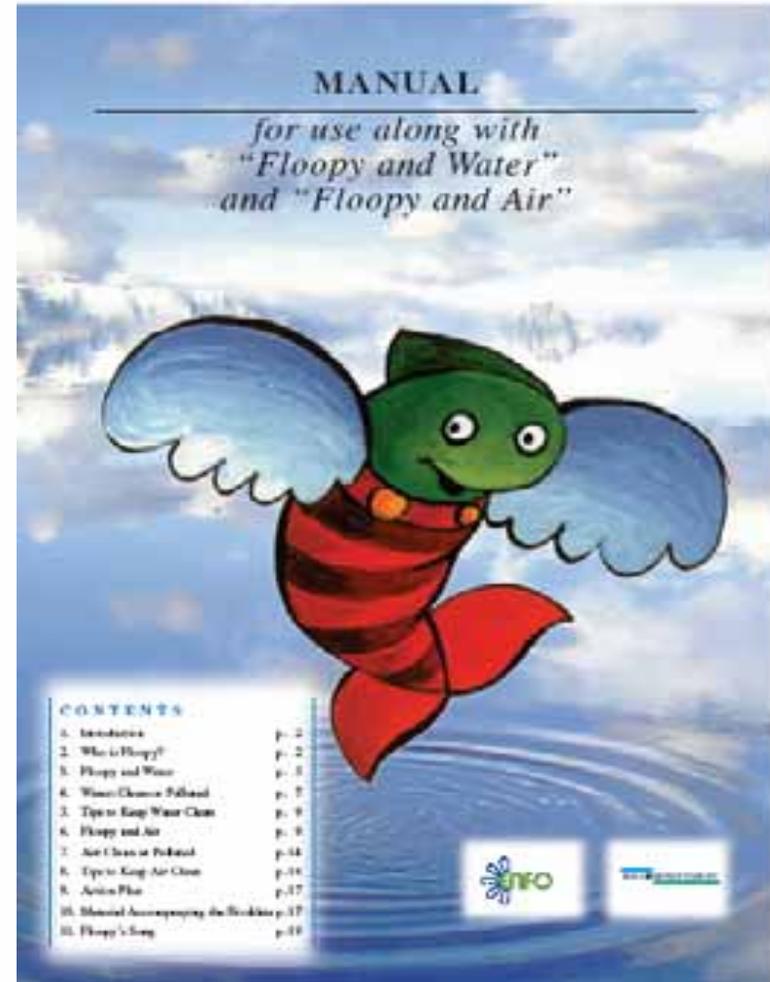
Flepy educational kit is now available on the Apat website on environmental education and training:

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



### 3. Environmental education tools for sustainable development

In the educational kit, there are different tools such as booklets, posters, stickers, video, a card game, a pupil and a Manual for educators which suggests activities and experiences to understand what happens to Flepy and how to “save” environment.

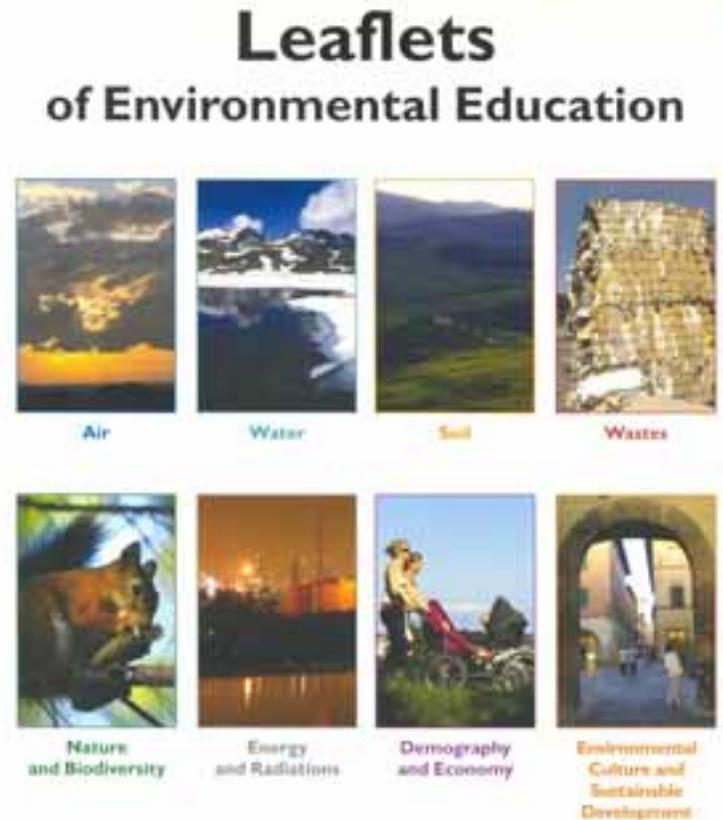


Manual for educators

## 3. Environmental education tools for sustainable development

As a contribution to the need of educational material at the basic level, APAT has realized a series of 8 Thematic Leaflets and Booklets on the following matters:

- ✓ Air
- ✓ Water
- ✓ Soil
- ✓ Waste
- ✓ Nature and Biodiversity
- ✓ Energy and Radiation
- ✓ Demography and Economy
- ✓ Environmental culture and sustainable development



### 3. Environmental education tools for sustainable development

These educational packages, besides of giving general and simple information about the environmental topics identified, also spread the

technical and scientific references from the **APAT Yearbook Indicators**, and provide a questionnaire (only the Booklets), to check individual's knowledge and awareness about the issue addressed.



## 3. Environmental education tools for sustainable development

In order to have a more flexible and immediate instrument to spread activities and tools for Environmental Education and Training, APAT has realized a dedicated website into the domain of the institutional website.

The website, that has been called ***“Formeducambiente”***, namely provides services and information on:

- Stages and internships for graduates
- Training courses and divulgation for operators and experts
- Activities of environmental awareness
- Project ‘Small Municipality Divulgation’
- Environmental E-learning
- Environmental Education



- ▶ Stages and Internships
- ▶ Training Courses and Divulagation
- ▶ Environmental Awareness
- ▶ Small Municipalities Divulagation
- ▶ Environmental e-learning
- ▶ Environmental Education

### Environmental Education and Capacity Building

APAT carries out technical and scientific activities of national interest, linked to the mission of protection of the environment, by means the elaboration, assessment and promotion of programs of divulgation and training on environmental protection. The Agency also provides technical coordination of environmental training activities to the Regional and Provincial Agencies for the protection of the environment, in order to share operational methodologies at national level to carry out institutional tasks, and gives technical and scientific support to the Ministry for Environment, Territory and Sea, and, by means of specific agreements, to other Administrations and Public Bodies.

[\[ Continue \]](#)

#### Highlight



**Workshop: "Environmental training for inspectors concerning the following main sectors: air, water and transport pollution" (II)**

Workshop, at Rabat from 5 to 9 March 2007, in the framework of the "Twinning Project" between the Ministry of Environment of Maroc (MATEE) and APAT, for the project for environmental training of inspectors on these main sectors: air, water and transport pollution. This second workshop focuses on inspectoral technical and on site aspects and public information about air quality.



**Workshop: "Sustainable Development"**

Workshop in Cairo on 17th-22nd February 2007, in the framework of the Italian and Egyptian Bilateral Cooperation Programme, on the Sustainable Development, with particular reference to Environmental Education, Environmental Tools, Manage Systems and Auditing, with specific case studies on sustainable indicator use.

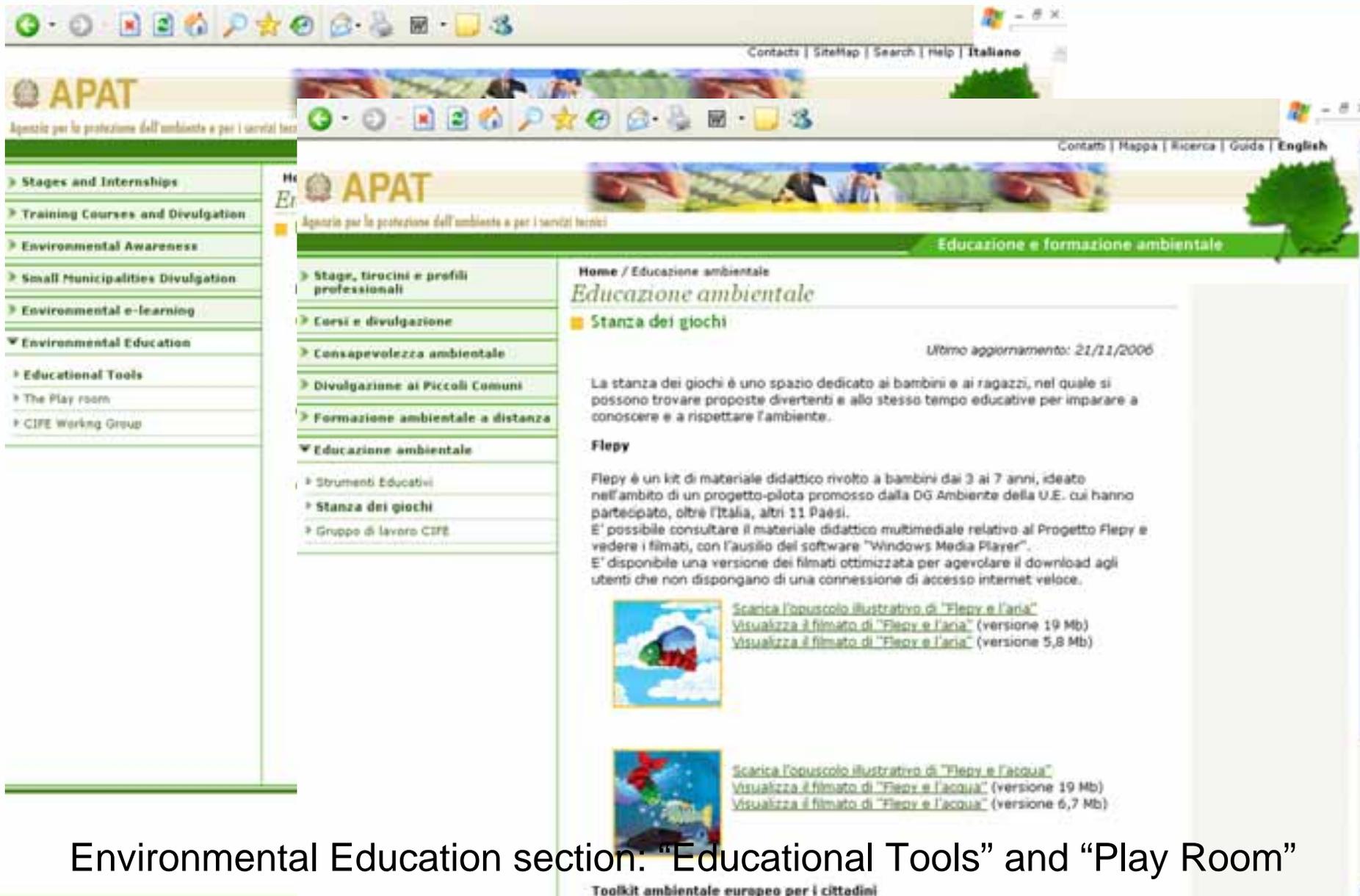


**Workshop: "Integrated law on water resources at local level and participation of local communities and River Basin Agencies" (II)**

#### USEFUL LINKS

- ▶ **UNEP**  
United Nations Environment Programme
- ▶ **OECD**  
Organisation for Economic Co-operation and Development
- ▶ **European Environment Agency**
- ▶ **European Commission - DG Environment**
- ▶ **UNESCO**  
United Nations Educational Scientific Cultural Organization
- ▶ **Italian Ministry for the Environment and Territory**
- ▶ **Arpa Abruzzo**
- ▶ **Arpa Basilicata**
- ▶ **Arpa Campania**
- ▶ **Arpa Emilia-Romagna**
- ▶ **Arpa Friuli-Venezia Giulia**
- ▶ **Arpa Lazio**
- ▶ **Arpa Liguria**
- ▶ **Arpa Lombardia**
- ▶ **Arpa Marche**
- ▶ **Arpa Molise**
- ▶ **Arpa Piemonte**

Homepage of the website: [www.formeducambiente.apat.it](http://www.formeducambiente.apat.it)



The screenshot shows the APAT website interface. At the top, there is a navigation bar with links for 'Contacts', 'Sitemap', 'Search', 'Help', and 'Italiano'. Below this is a banner image showing hands holding a globe. The main content area is titled 'Educazione e formazione ambientale' and features a sidebar on the left with a menu of options: 'Stages and Internships', 'Training Courses and Divulcation', 'Environmental Awareness', 'Small Municipalities Divulcation', 'Environmental e-learning', 'Environmental Education', 'Educational Tools', 'The Play room', and 'CIFE Working Group'. The main content area includes a sub-menu with 'Stage, tirocini e profili professionali', 'Corsi e divulgazione', 'Consapevolezza ambientale', 'Divulgazione ai Piccoli Comuni', and 'Formazione ambientale a distanza'. The 'Stanza dei giochi' (Play Room) section is highlighted, with a last update date of 21/11/2006. The text describes the play room as a space for children and teenagers to find fun and educational activities. It also mentions the 'Flepy' kit, a didactic material for children aged 3 to 7, developed by the DG Ambiente della U.E. The page provides links to download an illustrative booklet and view film versions of 'Flepy e l'aria' (19 Mb and 5.8 Mb) and 'Flepy e l'acqua' (19 Mb and 6.7 Mb).

Environmental Education section: "Educational Tools" and "Play Room"

### 3. Environmental education tools for sustainable development

At last, among the other (many!) educational toolkits that could help teachers and educators to integrate their knowledge and competencies about learning on environment protection and sustainable development issues, it deserves to point out the educational kit for children called **PACHAMAMA** – “*Our Earth, our future*”, performed by UNEP.

“*Pachamama*” (a word meaning “Mother Earth” in the Inca culture) is the youth’ edition of the Global Environment Outlook (GEO), the UNEP most authoritative environmental Report, and has been realized with the contribution of hundred young writers and designers all over the world.

Some of the colourfull pictures showed in this presentation are children’ drawings extracted from “Pachamama” Handbook.

*“ONLY AFTER THE LAST TREE HAS BEEN CUT DOWN,  
 ONLY AFTER THE LAST RIVER HAS BEEN POISONED,  
 ONLY AFTER THE LAST FISH HAS BEEN COUGHT,  
 ONLY THEN WILL YOU REALIZE THAT MONEY  
 CANNOT BE EATEN”.*



*THANK YOU!*

## 4. References

<http://unesco.org/education/desd>

<http://www.grida.no/geo2000/pacha/index.htm>

[http://ec.europa.eu/environment/youth/  
fun\\_and\\_games\\_en.html](http://ec.europa.eu/environment/youth/fun_and_games_en.html)

<http://www.formeducambiente.apat.it>