Education & Sustainability
Targeted at teachers

....in informal and formal education

- Subscriptions
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- Environmental education
- Department of environment
- Eco-schools network
- Municipalities
- Primary schools
- Secondary schools
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...selected sustainability issues?

Case studies and interviews

Think pieces by leading authors

Teaching resources for different levels

Practical case studies from the region

Practical case studies from the region

Practical case studies from the region

Practical case studies from other regions

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Decade of ESD

RCE Barcelona · Montreal May 2009
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Back to the woods?

September 23rd was the day we used up all the resources that nature will generate for this year. Around the same time, the media proclaimed a crisis in the global economy. Are the two headlines connected? There are many complex parallels but what is certain is that with 50% of the world’s population living in cities, we could say that the future is urban.

On the one hand, our cities have the highest concentration of consumption, buildings, traffic, crime, pollution and waste production per square metre. But on the other hand, they are characterised by a level of density and intensity that engenders shared knowledge, culture and creativity.

"I imagine my city with flying vehicles, portable parks, and water will be supplied by robots. I will be an astronaut and I'll fly to the moon and work in tourism in outer space", Juan Manuel, 8 years old, BogOTá.

Firstly, who better than children to design the drastic changes that have to be made in the city? If the city is a good place to be through the eyes of a child (they can play in the streets, meet friends, move around freely, climb trees and, why not, dream and see dragons in the streets...), it will be a good place for us all. Who wouldn’t want safe streets, efficient and accessible public transport, green areas and open spaces? Giving children a voice and a vote in city planning is a good step forward. In this issue of the magazine we focus on other ways that young people can transform their cities, take eco-safaris, green guerrilla teams and urban biodiversity mappers, as just some examples.

If we also look at the poorest cities in the world, where the urbanization process is happening at a faster pace and in many cases is out of control, can we sit back and relax, believing that we have the educational resources needed to deal with these urban realities? Do we know enough about sustainable urban development, the right to housing, risk management, community self-sufficiency, urban governance and connections between the rural economy and the city? Why not prioritise these matters in the education of the entrepreneurs, engineers and politicians of the future?

Looking to the future, and on a more positive note, what do Freiberg (Germany), Dongtan (China) and Portland (Oregon, USA) have in common? They all appear in different lists of the world’s ‘top eco-cities’, but there are so many ways of measuring sustainability and so much “talk”, that we now need to be a little more wary of the claims to be the most sustainable city, and know how to weigh out the genuine “eco” from the future “city”.

At the time of publishing this issue, over 12,800 world leaders and experts are meeting in China at the fourth session of the World Urban Forum to discuss urbanization and its impact. Will they talk about the role of education? Let’s hope so! Meanwhile, we present an array of ideas and resources for teachers and educators in the frontline of our urban future.

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Printing: El Tinter (ISO certification 9001, 14001 and EMAS)

Printed on recycled paper. October 2008

Legal deposit B-23656-07 ISSN 1887-7220
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The Editorial Committee does not assume responsibility for the opinions expressed by the authors in this magazine.
The city of children is a sustainable city

“It’s all the grownups’ fault”

In the light of the serious problems of environmental sustainability and social degradation, ecologists, sociologists, psychologists and doctors are calling for urgent changes to make our cities habitable again. When working with children, it is surprising to discover that the city that they ask for and need is very similar to the city that experts on the subject describe.

Furthermore, the city that they propose strongly resembles ancient cities. When asked how he imagined the city of the future, the acclaimed Italian architect Renzo Piano replied: “As similar as possible to that of the past”. It isn’t about being romantic or nostalgic, but rather it’s about reclaiming the role of public places in the city, their function as a place for meeting and exchange, a place to express diversity that has gradually been lost up to the present day. The Renaissance city was dreamt up as an alternative to the medieval model of the castle, based on the principle of separation: the powerful and wealthy feudal lords lived within the castle walls, and outside the walls was the village of the serfs and the peasants at the service of the powerful. The city broke with this way of thinking and was built around a main square, a symbol of public space. The governmental palace and cathedral were in this square, and the market was also brought to life here, a symbol of exchange and interaction. The historical city did not have areas separated by different social classes. Its streets were attractive as they were made up of the fine mansions of the nobles, built by great architects, and the humble houses of the artisans. Diversity enriched the city and made it pleasing to the eye. This is the same as ecosystem: an ecosystem will be healthy and full of life if it is complex and joined-up, if each of its parts interacts with others.

For some decades since the Second World War, cities have managed to sell their own character down the river by adopting a model of separation and specialisation. The historical city centres have become depopulated, suburbs have emerged, neighbourhoods have been created for rich and poor, dormitory towns, cultural areas, working areas... In this modern city, thought out for adult male workers, the car has become king. Cars have caused the city to lose its public spaces, clean air, silence, beauty...

Most citizens feel left out in this city adapted to suit working adult citizens. In fact, take a look at the streets of a city, whether large or small, and you will be hard pushed to see elderly people, children roaming freely or disabled people getting about in wheelchairs. These groups of people have been excluded from the city, they have been ignored, and we talk of sustainability, beauty and life... The city is suffering from its own urban sealed body. It has lost its face, its marquis who gave it life.

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The right to play

Children are the first to lose out in this city as they cannot exercise their most important right, recognised in article 31 of the 1989
The National Programme of Community Environment Promotion devised by Colombia’s Ministry of the Environment, Housing and Territorial Development has trained around 6,000 community leaders since 2003. These individuals are seen as generators and promoters of processes that promote citizen participation through the “Young Environmentalists” project in the city of Bogotá. The aim of the proposal is to train 1,000 young leaders distributed throughout the different areas of the capital. The project is run based on the activities of three ministries: Interior and Justice, Social Protection through the National Learning Service and the Environment offering operational support to enable people to attend the training course.

The project has two facets. Firstly, it creates a tool that trains leaders who promote citizen participation, social control and school and citizens’ environmental projects. Secondly, young people are given the opportunity to attend free quality training that will turn them into community leaders with specific skills such as the ability to assess the environment, design proposals and run projects. “Young environmentalists” is aimed at teenagers and young people from 15 and 26 years old, with a planned total duration of 240 hours (120 for study in the classroom and 120 for fieldwork) to be carried out over 20 weekly meetings. At the end of the Bogotá experiment the results generated will be systematized and evaluated with the intention of repeating the project in other cities.

Mediterranean cities cluster together

Mediterranean cities is a network of Mediterranean coastal cities created in Barcelona in 1991 at the initiative of the Mediterranean Technical Assistance Programme (METAP), which in turn was established by the World Bank, the European Investment Bank, the European Commission and the United Nations Development Programme. Mediterranean cities provides technical advice and strengthens decentralised activities, raising awareness of urban environmental problems, especially in southern countries. Mediterranean cities’ networking is a tool used to strengthen management capacity in relation to sustainable development in local administrations, identifying in which areas it is most appropriate to improve regional environmental conditions.

The main aims of this city network are to build awareness of interdependence and shared responsibility on urban environmental policies in the Mediterranean, reinforce the technical, financial and institutional role and training of councils in the implementation of local sustainable development policies, develop the awareness and participation of citizens and consumers, and establish direct cooperation policies for the twinning of coastal Mediterranean cities.

Branding vs sustainable cities

Competing for number 1 eco-city?

The most sustainable city, the most economical car, the most efficient fridge... Excellence in the field of sustainability is a prized marketing value. What’s the point for teachers?

The press agencies serve up this type of news with a somewhat mundane frequency. I have just read, for example, a recent news item from China. Today, a day like any other, they are studying turning a rural area near Beijing into the first eco-city in this vast, dynamic country. The article explains the innovations and improvements that are to be introduced and which will transform the place into a paradigm of doing things well... Quite a symbol of sustainability. A tram system will be used to reduce people’s dependence on private vehicles, and all this so soon after the typical private vehicle in China moved on two wheels, thanks to human traction! China, then, will have the most sustainable city. This would be a sufficiently interesting title in itself if it were not because over recent months the media have also hyped up other examples in the same way that they talk about the case of this Chinese city. Masdar, in Abu Dhabi, is a particularly eccentric case as it is in the middle of the desert and is being promoted by one of the main oil producers. There is also the credible case of Freiburg in Germany, or Portland in the USA, which has been chosen as the most sustainable city in the country that has the well-deserved title of “the world’s most wasteful country”.

The phenomenon of lists is not just found in the case of cities. Let’s have a look at advertising. The car with lowest emissions, we read in the advert on page 7, and on page 19 we find another vehicle that claims its slice of environmental commitment. Efficiency is now stressed as a selling point in some white goods shops. Our trusted salesman can look us in the eye, without blinking, presenting...
**Teaching Resources**

Here we offer a selection of teaching resources related to cities, urban ecology and citizen participation which are available at different educational levels. We have prioritised original and new resources that are available in several languages and are easy to find on the Internet. Please bear in mind that some resources are suitable for several levels. The language of the resource is indicated as follows: Spa: Spanish; Cat: Catalan; Eng: English; It: Italian; Fr: French; Gal: Galician; Bas: Basque.

**INFANT AND PRIMARY EDUCATION**

**La ciudad**

An interactive book that helps identify the different aspects of the city: physical (a square, the underground), social (ways of living and working), historical and functional (mobility, water pipes, etc.). From the age of 5.

Anne Royster. Editorial Cruilla, 2007

[www.cruilla.cat](http://www.cruilla.cat) (Spa, Cat, Fre)

**Cuando los niños dicen ¡Basta!**

The author gives children the right to speak, and through the use of 26 phrases brings together their protests and proposals. The book sets out the importance of listening to children and of being prepared to defend their positions and needs.

Francisco Trunicco. Germán Sánchez Ruipérez Foundation, 2003

[www.fundacionsr.org](http://www.fundacionsr.org) (Spa, Cat, Eng, It)

**Big City Pack**

This pack (a book and poster) focuses on four cities: Glasgow, Phnom Penh, Santiago and Dakar. The activities invite pupils to relate their knowledge of their city with the rest of the world. It explores topics such as markets and shopping centres, transport and leisure.

Oxfam, 1994

[publications.oxfam.org.uk](http://publications.oxfam.org.uk) (Eng)

**Children’s participation in sustainable development**

A manual which contains participative principles and methods to get children involved in environmental and community development projects. Some of the experiences presented refer to planning, design and the construction of spaces and facilities.


[www.paeucad.org](http://www.paeucad.org) (Spa, Eng)

**MULTIMEDIA AND WEBSITES**

**Electricity**

A simulation game similar to SimCity where children can test out their skills in running a town. They have to get energy, water and other resources for the citizens, as well as planting and cutting down trees, and need to adapt to climatic variations. Includes a teachers’ guide.

[http://electricity.co.nz](http://electricity.co.nz) (Eng)

**Child Friendly Cities – UNICEF**

The UNICEF Child Friendly Cities programme aims to promote and foster the application of the Convention on the Rights of the Child within local organisations. It includes an Expert Forum, as well as a library specialising in childhood and local government.

[www.childfriendlycities.org](http://www.childfriendlycities.org) (Spa, Eng)

**Greener Futures**

An interactive website that covers different areas such as waste, water, energy, nutrition, transport and biodiversity in the urban environment, and offers surveys, data-analysis tools, games and puzzles that help build these topics into classic school subjects like science, geography and citizenship.

[www.greenerfutures.com](http://www.greenerfutures.com) (Eng)

**Create your future**

A website for children, designed to make them think about and plan a sustainable future. It offers news, stories and other educational resources.

Published by the NGO Japan for Sustainability.

[www.kidstofuture.net](http://www.kidstofuture.net) (Eng)

**Teach Sustainability**

This website is a resource sharing database to support teachers exploring sustainability issues in their classrooms. This database allows open and free sharing of resources that have been developed or sourced by school teachers and educators.


**Adventures with Bobbie Bigfoot**

This website provides an interactive quiz to help kids understand how food choices, transportation choices and more affect a person’s ecological footprint.

[www.kidsupport.net](http://www.kidsupport.net) (Eng)

**EcoKids**

EcoKids is Earth Day Canada’s environmental website for kids. It features online games, links for homework help and contests, as well as printable resources for parents and teachers.

[www.ecokids.ca](http://www.ecokids.ca) (Eng)

**Oxfam Resources**

The website of the Oxfam organization provides various resources for teachers, journalists, researchers and policy-makers among others that are useful for classes. Citizenship, commerce and social aspects are worked on using their publications and resources in general.

[www.oxfam.org](http://www.oxfam.org) (Eng)

**SECONdARY EDUCATION**

**PUBLICATIONS**

**Saving Energy**

The Alliance to Save Energy offers educators a wide range of tools and resources to bring energy efficiency into the classroom to save energy while helping students build vital real-world skills.

[www.asa.org](http://www.asa.org) (Eng)

**Radio for change**

This CD-Rom contains ready to use classroom activities on the 8 key concepts of the global dimension - human rights, sustainability, conflict resolution, values and perceptions, social justice, interdependence, diversity and global citizenship. Includes worksheets, role plays, songs, quizzes and links to websites for further work.

Global Link:

[www.globallink.org.uk](http://www.globallink.org.uk) (Eng)

**Wall to wall design**

This pack examines the design and construction of sustainable homes. It is intended to help students to consider sustainable issues as part of Design and Technology. There are two detailed case studies: one of Masai homes in Kenya and one of a housing scheme in the UK.

Practical Action Publishing.

[www.developmentbookshop.com](http://www.developmentbookshop.com) (Eng)

**Imaginative Leaps: Creative arts and sustainable development**

This booklet, published by the Development Education Centre South Yorkshire (UK), is aimed at school, youth and community arts groups, and outlines ways in which issues of sustainable development can be used as stimuli for creative work in art, drama, dance, music or design.

DEC(SY), 1995

[www.dnev.org.uk](http://www.dnev.org.uk) (Eng)

**This city life: Street Children Around the World**

This pack, with a video and activity books, was developed to promote understanding and discussion of why young people in three different cities have chosen to live on the streets.

Leeds Development Education Centre, 1999

[www.valid.org.uk](http://www.valid.org.uk) (Eng)

**MULTIMEDIA**

**SimCity**

Electronic simulation game on the creation and running of a city. From the age of 14.

[www.simcity.co.com](http://www.simcity.co.com) (Spa, Fre, It, Eng)
The Art of City Making
Cho, Hyun
City-making is an art, not a formula. The skills required to re-shape the city are far richer than the conventional ones like architecture, engineering and land-use planning. Following the widespread success of The creative city, this new book, aided by international case studies, explains how to re-shape urban potential to adapt to the changing global terms of trade and mass migration.

Ecología urbana
Jaume Terradas
Urban ecology considers that the city is a living environment and is such an ecosystem in itself. The book therefore looks at the urban phenomenon from a scientific perspective, focusing on the study of the processes and flows that hold together the city’s metabolism. Lastly, the author explains the foundations that the city of the future will be built upon and formulates the ecological criteria for the management of major cities.

Cities
Jeremy Seabrook
Jeremy Seabrook opens our eyes to reality, to the time bomb that is ticking in the major cities of poor countries: Karachi, Cairo, Nairobi, Jakarta, São Paulo, Caracas, Lagos and Lima. The author combines portraits of urban life with a wider analysis of contemporary global capitalism.

La ciudad conquistada
Jordi Borja
Jordi Borja suggests different forms, strategies and critical debates for urban intervention and innovation within a global dimension and not as a mosaic of dissociated spaces. He tackles the most profound sociological and political aspects: the city with its forms and fractures, but also with its challenges and the responses made to them. Likewise he sets out present and future options for citizenship within a globalized world, the needs of political innovation and the responses made to them. The author distinguishes between city and urban aspects, with “urban” being understood as everything that cannot be brought to a halt in the city, that which is viscous; the urban way of life is marked by the proliferation of precarious, unstable, lax and unstructured relationships.

Sociedades movidas
José Luis Guerin
Continuing with the deep immersion into the study of public spaces started by El Animal Político y Sociedades Movidas, Manuel Delgado re-enters his research into the urban landscape. The author distinguishes between city and urban aspects, with “urban” being understood as everything that cannot be brought to a halt in the city, that which is viscous; the urban way of life is marked by the proliferation of precarious, unstable, lax and unstructured relationships.

En construcción
José Luis Guerin
125 minutes (2001). Spanish.
The story of the transformation of the red light district of Barcelona, threatened by a refurbishment plan; an apartment building that has to be built. After three years of filming and the construction of the building, José Luis Guerin shows us how the mutation of the urban landscape also involves the mutation of the human landscape.

Ecological footprint
The ecological footprint is an environmental indicator that is defined as the area of ecologically productive land (fields, meadows, forests or aquatic ecosystems) needed to generate the resources used and to assimilate the waste and emissions produced by a certain product, service and/or population. The ecological footprint is expressed in hectares or any other indicator of surface.

Distribution of the ecological footprint
The following diagram shows the distribution of this magazine’s ecological footprint with geographical references, from the processing of recycled fibres to obtain the paper to the magazine’s distribution and waste management on a national scale. It should be pointed out that the printing process only takes up 2.8% of the associated footprint (this is done in Barcelona). We can therefore see that the main proportion of the impact generated by the magazine corresponds to the place of origin and processing of the recycled paper.

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