

# Changing with climate network

Newsletter | Issue 1 | March 2011



## Lifelong Learning Programme

This newsletter will appear at four-monthly intervals and will highlight the activities of the CwC network which is supported by a grant from the Lifelong Learning Programme of the EU's Directorate General for Education and Culture. The newsletter will not only describe past and present activities, but will also discuss current issues related to changing with the climate.

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### 1. Overview of Network

Schools face the challenge of including within their lesson plans education for sustainable development of which climate change is a priority topic. So there is a need for compiling resources for teaching such a multi-disciplinary topic; developing a teaching and learning process that will make scientific topics more interesting to students and relevant to their lifestyle; and creating an understanding about the ever increasing need to use energy more sustainably.

The role of the CwC network is to explore in schools the likely impacts of climate change and consider individual and collective actions to minimise these impacts.

#### The founding network partners

The founding partners are

- Ecoserveis (Barcelona, Spain) which provides both formal and informal education on energy topics
- ICI (National Institute for Research and Development in Informatics, Bucharest, Romania) an Institute specialising in research and development into Information technology involving environmental protection using web based technology
- Comune di Bologna (Italy) Environmental Department which is involved in environmental education
- Regional Environmental Centre for Central and Eastern Europe (Szentendre, Hungary) whose mission is to assist in solving environmental problems
- Hespul (Villeurbanne, France) which works in the field of renewable energies and rational use of energy, educational material and teacher training
- Institute of Education at University of Reading (England) which is the lead partner in the network and focuses mainly on pre-service teacher training and professional development courses for teachers in schools

#### The network members

The network members are classes in schools willing to

- incorporate up to five hours each school year to bring together individual themes relating to climate change
- encourage students to identify human behaviour that contributes to climate change
- consider actions (individual, class, family) that could limit the effects of climate change
- share these ideas with a partner school in another European country

#### Associate members

Associate members are organisations or individuals that are willing and able to support members in understanding the effects of climate change and actions for minimising these effects. Associate members include local authorities, energy utilities and learned societies.

Contact details for further information or applications to join the network are given at the end of this newsletter.

## 2. News from partners

### UoR

The Institute of Education at the University of Reading has used the occasion of the annual science teachers' conference to make contact with other organizations with similar aims like the Royal Meteorological Society and teachers from UK and abroad.

Our plans until July are to work with up to 10 schools primarily in and around Reading and to identify teachers and classes that are willing to take part in our network events. The proposed activities include uploading the profile of each school/class to the network website, calculating individual students' carbon footprints and working towards participating in a one-day activity challenge to be held in Reading towards the end of June.

### Hespul, France

**HESPUL profite de la première année de ce projet européen pour le faire connaître aux niveaux départemental et régional et ainsi recruter des classes. Nous identifions les canaux de diffusion et les collègues intéressés par la démarche. Plusieurs activités sont envisagées avec les premières classes intéressées, comme la réalisation d'un bilan carbone et une balade dans le quartier de l'école pour que les élèves s'approprient la thématique énergétique dans leur environnement proche.**

**Pour le groupe de partenaires européens, notre travail consistera à rédiger un plan de communication stratégique et une méthode d'évaluation.**

HESPUL will use the first year project to make our Changing with the Climate (CwC) network visible on a local and regional scale, in order to recruit classes to the network. We will identify dissemination channels and schools who might be interested in joining the network, simply by using our own network of schools and partners. We are planning to organise an activity related to a person's carbon footprint with the classes interested and maybe a walk in their neighborhood to see how energy is being used. Thereby the pupils will see their environment from the energy point of view.

On a European scale and for the consortium of partners, HESPUL is in charge of the dissemination and evaluation plans. The production of the first draft is in progress.

### REC, Hungary

The Regional Environmental Centre for Central and Eastern Europe (REC) has country offices in 19 countries not only in Europe but also around the Black and Caspian seas. It was founded through an initiative by George Bush senior in 1992 and now plays a leading role in environmental education across the region. Its most widely used publication has been the Green Pack which was initially financed by the Toyota Foundation which provides a wide variety of multi media resources for teachers and students on all aspects of the environment and education for sustainable development.

### CdB, Italy

The Municipality of Bologna, through the Showroom Energy & Environment, organised a preliminary meeting with teachers on 16th November as an introduction to CwC project. The meeting was followed by the project Workshop on 14th December. 25 teachers joined the meeting and workshop, while 9 schools were represented.



Teacher workshop in Bologna, Italy.

From 16th February specific meetings with teachers will be held in order to prepare lesson plans on Climate Change, integrated as much as possible in the standard curricula. The objective is to involve 20 classes.

The collaboration with the Institute Aldini-Valeriani-Sirani (in Bologna) will provide the opportunity to introduce CwC project to the schools involved in another Comenius project "We are promoting ourselves the region and the country – the European youth create new lifestyle." This involves schools from 8 European Countries.

**Il Comune di Bologna, attraverso la Showroom Energia e Ambiente, ha organizzato il 16 novembre un incontro preliminare con gli insegnanti sul progetto CwC, seguito dal workshop del 14 dicembre 2010. Gli insegnanti partecipanti sono stati complessivamente 25 e le scuole coinvolte 9.**

**A partire dal 16 febbraio partiranno gli incontri con gli insegnanti per preparare insieme percorsi didattici sui Cambiamenti climatici e studiare insieme come integrarli nella normale attività didattica degli insegnanti. L'obiettivo è il coinvolgimento di almeno 20 classi.**

**La collaborazione con l'Istituto Aldini-Valeriani-Sirani consentirà di illustrare il progetto CwC nel corso dell'incontro tra scuole del progetto Comenius "We are promoting ourselves the region and the country – the European youth create new lifestyle" (che coinvolge 8 paesi europei).**

### **ICI, Romania**

The National Institute for Research and Development in Informatics (ICI) has been involved with a number of European projects associated with environmental education and has worked closely with the other partners in these projects together with other Institutes, Organisations and Ministries in Romania. It is the lead partner for informatics and is busy developing the network's website which will be prime communication between all the participants in the network.

Romania is a country short of fossil fuel but has a large renewable potential, which like most other countries has not yet been exploited.

### **Ecoserveis, Spain**

Ecoserveis has already presented the CwC project to local and regional entities (CRBS, Barcelona; Col·legi Oficial Filosofia i Lletres i Ciències de Catalunya). These entities are willing to collaborate and help us to find the most active schools to introduce the CwC project to.

We have planned to work with at least 5 schools in the third period of 2010-2011 school year. This would include determining those teachers and classes willing to participate and to introduce the project website for classes to upload their profile. Also Ecoserveis will introduce teachers to its Climate Change resource, which is adapted to primary and secondary school teaching.

First annual event will be held in Barcelona next Autumn (25th, 26th October 2011). Ecoserveis is hosting this first event and at this first stage programme and logistics are being determined.

## **3. Website and internet resources**

Website: [www.changingwithclimate.info](http://www.changingwithclimate.info)

Our multi lingual website is still being designed and built by our Romanian partners. The first part of the website which will allow schools to upload their profile and choose a partner will be active during April.

Websites that the project partners have developed in previous EU projects that include suitable activities for students, information for teachers, students and their families are -

KITH	<a href="http://www.kyotoinhome.info">www.kyotoinhome.info</a>
TREAM	<a href="http://www.eais.info">www.eais.info</a>
Green Pack	<a href="http://www.rec.org">www.rec.org</a>

Other resources will be assessed and discussed in the next newsletter.

## 4. Recent climate change news

### *"Best evidence yet" of a warming world*

*Global temperatures in the first half of this year (2010) were the hottest since records began more than a century ago, according to two leading climate research centres.*

*Scientists have also released what they described as the "best evidence yet" of rising long-term temperatures. The report is the first to collate 11 different indicators, from air and sea temperatures to melting ice, each based on between three and seven data sets, dating back to between 1850 and 1970s.*

*Publishing the data in London, Peter Stott, the head of climate modelling at the UK Met Office, said despite variations between years, the evidence was unequivocal: "When you follow those decade-to-decade trends then you see clearly and unmistakably signs of a warming world."*

*Seven of the 11 indicators rose over the last few decades of which one was air temperature. The other six rising indicators were sea surface temperatures, ocean heat to 700 metres in depth, air temperatures over oceans, the tropospheric temperature in the atmosphere up to 1 km, humidity caused by warmer air absorbing more moisture, and sea level rise as hotter oceans expand and ice melts.*

*The cause of the warming was "dominated" by greenhouse gases emitted by human activity, said Stott, "It's possible there's some (other) process which can amplify the other effects, such as radiation from the sun, (but) the evidence is so clear the chance there's something we haven't thought of seems to be getting smaller and smaller," he said.*

further reading: Guardian 29/07/2010

### *"World faces 4 C rise in temperature"*

*The world is heading for an average temperature rise of nearly 4C (7F), according to an analysis of national pledges from around the globe. Such a rise would bring a high risk of major extinctions, threats to food supplies and the near-total collapse of the huge Greenland ice sheet.*

*More than 100 heads of state agreed in Copenhagen last December to limit the rise in global temperatures to 1.5C-2C above the long-term average before the industrial revolution, which kickstarted a huge global increase in the greenhouse gases thought to trigger climate change.*

*But six months on, a major international effort to monitor the emission reduction targets of more than 60 countries, including all the major economies, the Climate Interactive Scoreboard, calculate that the world is on course for a rise of nearly double the stated goal by 2100.*

*In its last assessment of the problem, in 2007, the International Panel on Climate Change (IPCC) forecast that a rise of more than 2C would lead to potential increases in food production, but an increasingly high risk of extinction for 20-30% of species, more severe droughts and floods, and an unstoppable "widespread to near total" loss of the Greenland ice sheet over very long time periods. At 4C it predicted global food production was "very likely" to decrease, "major extinctions around the globe", and near total loss of Greenland's ice. The severity of floods, erosion, water pollution, heat-waves, droughts and health problems such as malnutrition and diarrhoeal diseases would also increase.*

further reading: Guardian 06/07/2010

### **Covenant of Mayors**

Energy consumption in Europe is mostly dependent on fossil fuels (oil, carbon and natural gas) thus greatly contributing to Climate Change.

Energy Saving potential in buildings and household appliances is high and many actions have been already implemented at European level since 1990. Energy Saving is presently a priority in EU and local actions are being motivated through the so called "Covenant of Mayors" programme, aiming at reducing CO2 emission by 20% in 2020 in urban areas.

further information:

[http://www.eumayors.eu/home\\_en.htm](http://www.eumayors.eu/home_en.htm)



## Christian Aid News report on climate change

*Around the world, an estimated 1.7 billion poor people are struggling to cope with increasingly unpredictable weather conditions caused by climate change, according to the Organisation for Economic Development. Such climatic instability is hampering their ability to rise out of poverty.*

*Around 80 per cent of Cambodians live in rural areas where communities have traditionally relied upon rice farming to survive. They depend on the rainy season starting in June to water their rice crops. The difference between annual rains coming on time or arriving late can mean being able to feed your family for 10 – 11 months, or only having enough to feed them for three months of the year. For millions already living in poverty, water shortages are catastrophic.*

further reading Christian Aid News Issue 50; Winter 2011

## Lobbyists fail to make Europe withdraw carbon cuts road map

Europe's climate chief has beaten off intense lobbying from businesses to secure a key victory in the battle over greenhouse gas targets.

Connie Hedegaard, the European commissioner for climate action, published her long-awaited report into how the EU could toughen its climate targets in a cost-effective manner, with a proposal that the EU raised its current emissions targets from 20% cuts to 25% cuts by 2020.

Despite pressure from business groups to remove the proposal and retain a clear commitment to adhere to the lower 20% target, the plan remains in the final draft of the Roadmap 2050, seen by the Guardian before publication.

Ruth Davis, chief policy adviser at Greenpeace, said: "Over the last few weeks, lobbyists for Europe's dirtiest corporations have frantically sought to strip the European climate plan of any ambition whatsoever, but they have failed. What this road map shows is that, if Europe does nothing beyond what it is already planning to do, we will not only meet our 2020 carbon target but also exceed it by quite some way."

According to the 2050 plan, Europe will reduce its emissions by about 25% by 2020 if it implements energy-efficient policies member states have already agreed upon. The plan found setting a reductions target of at least 25% by 2020 would also be the most cost-effective way of cutting emissions by 80% by 2050, in line with the EU's international commitments.

However, the 25% target must pass several more obstacles before it can become official policy. It will be the subject of intense negotiations on 14 March, when member states meet to discuss the European response to climate change.

The extent of business lobbying has become clear from the range of companies that have talked to Günther Oettinger, the energy commissioner, in recent weeks. Oettinger opposes raising the 20% figure, saying tougher targets would lead to the "faster de-industrialisation" of Europe.

## 5. Encouraging renewable energy sources

Our use of energy from fossil fuels continues to increase and the most important way to reduce the environmental impact of energy use is to switch to the use of renewable energy sources, most of which can be incorporated into or mounted on the roofs of our homes. Renewable energy sources are abundant, non polluting and inexhaustible as they are derived directly from sunlight. They therefore have the potential to reduce our dependence upon fossil fuels which are resource limited and, in the case of oil, are close to peaking or have already peaked.

Most European governments offer some form of financial incentive for some renewables. Although the UK has not been as active as some countries, the UK is now proposing to introduce a feed-in tariff for renewable heating in June. This will be the first time such a tariff has been introduced in Europe having previously only been available for renewably generated electricity. These tariffs enable the owner to recover their investment in 8 to 10 years and thereafter to receive a payment for every additional unit of energy for a further 10 years.

The incentives in the other partner countries are –

### France

Promoted by HESPUL since 1991 and supported by national authorities since 2000, photovoltaic energy is at a risk in France. The grant for installing photovoltaic systems has been progressively called into question in 2010; and its expansion is on hold since December 2010. A new Government proposal should come out in March 2011, followed by a dialogue process organised by the Ministry. Thereby it will be possible to offer solutions to increase the development of this energetic field.

The photovoltaic power is around 614 MW in France, that is very far from the 5 400 MW goal the authorities set up for 2020. To be continued.



Photovoltaics panels on a roof terrace, Chambéry, France. (HESPUL)

**Promue par HESPUL depuis 1991 et soutenue par les autorités nationales depuis 2000, l'énergie photovoltaïque est aujourd'hui menacée en France. La filière photovoltaïque, progressivement remise en question au cours de l'année 2010, voit son développement gelé depuis le mois de décembre dernier. Dans l'attente d'une nouvelle réglementation prévue en mars 2011, les réunions de concertation, actuellement organisées par le ministère, permettent aux différents acteurs d'être forces de proposition pour un développement pérenne de la filière. Aujourd'hui estimée à 614 kW, la puissance raccordée est pourtant loin de l'objectif de 5 400 MW pour 2020. Affaire à suivre.**

### Italy

In Italy, energy saving has been recently supported by an incentive scheme that allows repayment of up to 55% of the investment for efficient thermal plants (including thermal solar plants) and best insulation of buildings through the reduction of annual taxation of the investor for 3 up to 10 years.

20% discount on A+ energy efficiency Class refrigerators was also available along 2010.

Another tool devoted to Energy Saving is the "White Certificates": energy distributors are obliged to attain specific targets of energy saving each year by adopting energy efficient technologies at end-users.

The photovoltaic sector is the one which is showing the fastest increase of installation in Italy, thanks to the Government's policy of feed-in tariffs. Started in 2007, incentives to PV have been confirmed in 2011 till 2013. Incentives have allowed the creation of a PV market where costs are decreasing, with a pay-back time of 7-10 years (depending on the location) even though the feed-in tariffs have been decreased every year. Administrative simplifications for PV plants have enormously facilitated installations, especially for plants integrated in existing buildings. 2011 incentives encourage innovative solutions exploiting solar energy, like concentrated PV and systems specifically designed for integration with the building.

It should be noted that since 2007 a PV power quota (or any electric power from renewable sources) is compulsory for new buildings in Italy.

**Il fotovoltaico è il settore delle fonti rinnovabili che sta vedendo in questo periodo un forte sviluppo in Italia grazie agli incentivi statali. Introdotti dal 2007 e riconfermati nel 2011 fino al 2013, gli incentivi hanno creato un mercato i cui costi si sono fortemente ridotti nel giro di due-tre anni, consentendo un rientro degli investimenti in 7-10 anni (a seconda della località a Sud o Nord Italia) pur essendosi ridotte le tariffe incentivanti. Le semplificazioni amministrative per l'installazione degli impianti hanno contribuito notevolmente alla loro diffusione, soprattutto per gli impianti sugli edifici esistenti. Le incentivazioni introdotte nel 2011 favoriscono soluzioni innovative di sfruttamento dell'energia solare per la produzione elettrica (solare a concentrazione e sistemi integrati architettonicamente con caratteristiche innovative). Il fotovoltaico (o altra produzione elettrica da fonte rinnovabile) è comunque obbligatorio per i nuovi edifici.**

## Romania

The main political instruments for renewables in Romania are: Strategy for Renewable Energy Sources deployment, Promotion of electricity generation from RES, Promotion of biofuels and other RES in transport, Regulation for guarantee of origin for electricity (Green certificates).

An integrated Energy and Climate Change Strategy has been under discussion in January 2008.

In Romania beside the value of the electricity, green electricity is also assigned a green certificate, which can be traded on the corresponding market. Furthermore energy suppliers are obliged to fulfil a specific quota for green certificates. Non-compliance leads to penalties, which are redistributed amongst energy suppliers in a consecutive step.

**În România, principalele instrumente politice referitoare la energiile regenerabile sunt: Strategia de valorificare a surselor regenerabile de energie, Promovarea producerii energiei electrice din surse regenerabile, Promovarea utilizării biocarburanților și a altor carburanți regenerabili pentru transport, Procedura de supraveghere a emiterii garanțiilor de origine pentru energia electrică produsă din surse regenerabile de energie (CertIFICATELE VERZI).**

**Integrarea Energiei și Strategiei pentru schimbările climatice a fost discutată în ianuarie 2008.**

**În România, pe lângă valoarea energiei electrice, energia electrică ecologică are atribuit, de asemenea, un Certificat Verde, care poate fi tranzacționat pe Piața Certificatelor Verzi. În plus, furnizorii de energie trebuie să dețină un număr de Certificate Verzi egal cu cota de energie electrică din surse regenerabile de energie impusă. Nerespectarea duce la sancțiuni, care sunt redistribuite, într-o etapă următoare, între furnizorii de energie.**

## Spain

The photovoltaic sector had an important increase of installations during 2007 and 2008. This huge development was justified because the government established grants for renewable energy.

In Spain, the government's energy policy was to establish a feed-in tariff for renewable energy in order to promote clean energy generation as part of its energy system and environmental goals. These objectives are also related to the European commitments. Feed-in tariff aim is to harmonize clean technologies with conventional ones, which are cheaper and do not internalise environmental costs.

Once this feed-in tariff is granted, all kind of energies can compete, in equal conditions, on the energy market.

El sector fotovoltaic va registrar un augment important durant els anys 2007 i 2008 pel que a instal·lacions es refereix. Aquest gran desenvolupament va tenir el seu auge perquè el Govern va establir un sistema de primes destinades a les energies renovables.

A Espanya, la política energètica del Govern va ser establir aquest sistema de primes per a les energies renovables amb la finalitat de promoure la generació d'energia neta i aconseguir així els seus objectius energètics i mediambientals. Aquests objectius també estan relacionats amb els compromisos europeus. La finalitat de les primes és aconseguir la paritat a la xarxa entre les tecnologies netes i les convencionals, caracteritzant-se aquestes últimes per ser més barates i no internalitzar els costos ambientals. Amb el sistema de primes tot tipus d'energies pot competir, en igualtat de condicions, al mercat energètic.

El sector fotovoltaico registró un aumento importante durante los años 2007 y 2008, en lo que a instalaciones se refiere. Este gran desarrollo tuvo su auge porque el Gobierno estableció un sistema de primas destinadas a las energías renovables.

En España, la política energética del Gobierno fue establecer este sistema de primas para las energías renovables con el fin de promover la generación de energía limpia y alcanzar así sus objetivos energéticos y medioambientales. Estos objetivos también están relacionados con los compromisos europeos. La finalidad de las primas es conseguir la paridad en la red entre las tecnologías limpias y las convencionales, caracterizándose estas últimas por ser más baratas y no internalizar los costes ambientales. Con el sistema de primas todo tipo de energías puede competir, en igualdad de condiciones, en el mercado energético.

## 6. Forthcoming events

June 17

### Changing with climate activity day for schools

09.30 to 14.30 to be held at University of Reading.

For further information and to enter teams of six students from years 7/8 contact [p.m.e.lewis@reading.ac.uk](mailto:p.m.e.lewis@reading.ac.uk)

25/26 October

### First annual CwC Network conference

Barcelona, Spain hosted by EcoServeis

Next issue: June 2011.

Theme: 'Scientific evidence for global warming'. Short contributions welcome by 15 May to editor.

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*This publication reflects the views of the authors and the European Commission cannot be held responsible for any use which may be made of the information contained therein*

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