

CAREC Environmental Education (EE) Programme successfully implemented the next EE and ESD projects in 2003-2005:

The project consists of 3 stages:

- Production of the textbook for secondary schools of Kazakhstan “Environment for Future Generations” as the first stage of the project (*January 2003-March 2004*).
- «Dissemination of the textbook on EE for the secondary schools in Central Asia» as the second stage of the project (*May 2004-May 2005*) – *through posters and video on climate change in Russian for secondary schools of Central Asia*.
- “Adaptation and translation of the *posters and video for Central Asian countries*”(August 2005-July 2006).

The project general goal - enhancement of level of environmental education (EE) and Education for Sustainable Development (ESD) at schools of Kazakhstan and improvement of understanding of importance nature resources rational use by school children and young people.

The first stage of the project was aimed at organization of workshops for the development team and teachers; elaboration and publication of EE textbook, and its approbation in experimental schools of Kazakhstan.

The second stage of the project was aimed at production of posters and video on climate change and organization of trainings for Central Asian teachers on EE.

The third stage of the project was aimed at adaptation of developed materials (posters, video and teachers’ guide) and translation them into national languages of the Central Asia.

The team achieved the goal by the following activities:

- Improving of professional level of teachers, as they are the main source of effective education for environment.
- Development and stimulation of critical mind acquirments of children and orientation them on democratic decision making by means of changing in pedagogical experience development.
- Development of textbook on EE by Kazakh specialists on EE and experimental schools network, where the approbation is held.
- Development of set of five posters on climate change and 23-minutes video
- Development of series of meetings and trainings of the project Working Group and Central Asian Joint Working Group on EE and ESD in May, July and October 2004.
- Development of Guide (Manual) for teachers “How to use posters and video in educational process».
- Conduction Third Sub regional Central Asian Conference on EE and ESD in November 2004, and dissemination all these materials through trainings for teachers, ministries of education and environmental protection, and NGOs.
- Adaptation of developed materials (posters, video and teachers’ guide) to national specifics of the Central Asian countries
- Conduction Firth Sub regional Central Asian Conference on EE and ESD in Almaty in September 2005 and training for the working Group of the project
- Translation posters, video and teachers’ guide into national languages of the Central Asia
- Printing and dissemination all these materials through trainings for teachers, ministries of education and environmental protection, and NGOs.

1). Project “Environment for Future Generations”. The project was implemented in 2002-2004 by under support of *European Commission and British Council, and in cooperation with Field Study Council Environmental Education (FSCEE)*. Ministry of Education and Science of the Republic of Kazakhstan was key partner of the project.

The Project goal - enhancement of the level of environmental education (EE) at schools of Kazakhstan and improvement of understanding of the importance of nature resources rational use by school children and young people.

The project was aimed at:

- organization of workshops for the development team and teachers
- elaboration and publication of environment education textbook
- its approbation in experimental schools of Kazakhstan.

The team achieved the goal by the following activities:

- Improving of professional level of teachers, as they are the main source of effective education for environment.
- Development and stimulation of critical mind acquisitions of children and orientation them on democratic decision making by means of changing in pedagogical experience development.
- Development of textbook on environment education by Kazakh specialists on EE and experimental schools network, where the approbation was held.

The achieved outputs of this first stage of the project are the following:

- ❖ **Ready development team** of the EE textbook, which consist of personnel of eco-NGOs and practical teachers of secondary schools. There were organized and held series of workshops and trainings with participation of expert-trainer from FSCEE. Besides textbook creation, the development team conducted series of workshops and trainings for teachers and directors of those schools, on the base of which there developed experimental course is implemented.
- ❖ **Textbook on EE** essentially, which consists of 7 chapters (including energy and climate change issues), with common content more than 70 pages, provided with map, diagrams, pictures, photos-formed illustrations and data, was prepared and printed for experimental schools of Kazakhstan.
- ❖ **The textbook** was presented to the Ministry of Education and Science of the Republic of Kazakhstan for approval and expertise. In February 2004 we received positive conclusion of expertise of the Ministry of Education and Science of Kazakhstan for its usage in secondary schools of Kazakhstan and recommendation to use the textbook as schoolbook in state secondary education system, in frames of natural sciences.
- ❖ In 2004 we had **the project experimental stage**, during which the textbook was approbating in 30 Almaty and Karaganda-cities schools of Kazakhstan. In 2005 the project executors received **comments and feedbacks** on the textbook through teachers' survey.

Further Project development prospects.

- ❖ At the end of March presentation of the Textbook and training for Kazakhstan teachers was conducted, and Central Asian WG on EE and ESD members took part in the presentation.
- ❖ Member of the development team NGO TAU received additional support from Soros-Kazakhstan for translation of developed textbook into governmental - Kazakh language. The project was finished in May 2004, so native language schools of Kazakhstan were involved into the education for sustainable development proves as well.
- ❖ The textbook was presented by CAREC jointly with the UK Embassy and the British Council at the Ministry of Education and Science of Kazakhstan in Astana on 12 May.
- ❖ The methodical manual (guide) on application of textbook has been prepared and disseminated among experimental schools of Almaty and Karaganda. After the approbation of manual at the secondary schools the teachers' inquiry and collection of comments on manual was carried out.
- ❖ CAREC and the project team offered the experience obtained as a result of implementation the project in Kazakhstan for practical use in other Central Asian region countries, in view of similarity of environmental education problems in CA subregion countries.

2). Project «Dissemination of the textbook on EE for the secondary schools in Central Asia» as the second stage of the project:

- We received *positive response from UK Embassy in Kazakhstan on support of the Project “Climate Change Posters and Video”* - on dissemination of textbook experience on Central Asia - through posters and video on climate change issues, and trainings for Central Asian teachers on EE. The project was a good opportunity for cooperation in Central Asia on EE issues. Central Asian Joint WG on EE and ESD took active part in the project.
- **Printing materials on the project – posters, video and methodical guide.** *The project supports the progress of the EE and ESD and promotes the ideas of the Kyoto Protocol in the CA region.* During the working meetings the project participants – CA partners – attended a number of training seminars supervised by J. Hindson, expert-trainer (FSC, UK), and discussed the conception, form and content of the posters and video film. According to the authors’ ideas, the educational materials shall tell about the reasons of the climate change in the world, global catastrophes occurred in the world and about the consequences that we may face in the future if we do not change our attitude to the nature and take the promptest decisions today.
- **The main idea of the posters and the video is** in the fact that we should not only invent the new ways for the reduction of the influence on the environment but also develop the new human thinking and change the attitude of each person and of the whole mankind to the environment surrounding us. According to the authors’ ideas, the posters and a video film shall be an educational resource supplementing the textbook and must be used in the process of learning the natural subjects – ecology, geography, biology and chemistry. The project proposed the development of the five posters and the creation of the 20- minute video film concerning the climate change to be then distributed between the Kazakhstani and Central Asian countries secondary schools. As a result of the project a **set of five posters on climate change and 23-minutes video** were produced by the project. The posters were produced in November 2004 and disseminated at *the 3-rd Subregional Conference 10-11 November 2004* for CA WG on EE and ESD, teachers and NGOs of CA subregion; and video was produced in April 2005 and disseminated at the last CA WG meeting on EE and ESD in April 2005.

In addition to posters and video the development team prepared a **Guide (Manual) for teachers “How to use posters and video in educational process»** The Guide was published in 600 copies and disseminated for all CA countries (75 copies per each country) – for teachers and NGOs, working on the posters and video.

Educational materials - textbook, posters, video and methodical guide developed in frames of the two stages of the project “Environment for future generations” and “Climate Change Posters and Video” *support development of EE and ESD and promotes the ideas of the Kyoto Protocol in the Central Asian region.*

The main idea of the set of five posters on climate change, video, and guide (manual) for teachers “How to use posters and video in educational process» is the fact that we should not only invent the new ways for the reduction of the influence on the environment but also develop the new human thinking and change the attitude of each person and of the whole mankind to the environment surrounding us. According to the authors’ ideas, the posters and a video shall be an educational resource supplementing the textbook and must be used in the learning process of natural subjects in secondary schools – ecology, geography, biology and chemistry.

In August 2005 continuation of the project “Posters and video on climate change» was started by *CAREC in collaboration with Field Study Council, Climate Care and Norway energy saving project ‘SPARE’, under support of the British Government.* The results of the project will

be adapted and translated into CA languages posters and video on climate change, prepared in 2004-2005.

CAREC and partners from British NGOs have visited several Almaty schools in September 2005, which actively collaborate with the Centre on many topical issues in order to give an opportunity for school children to use energy saving bulbs both in school and home. Results of metering and calculation of energy use participants of the project will be able to see a difference between power consumption of standard and energy saving bulb. In a mean while, in January-February of next year schools will receive energy saving bulbs and there will be a start for practical phase of the project. School principals and school children themselves had a big interest for this experiment.

Climate Care is a company based in the United Kingdom that makes savings in greenhouse gases on behalf of companies and individuals. It does this by funding projects that reduce greenhouse gas emissions, including carbon dioxide. Most of these projects enable energy efficiency or renewable energy, so that fewer carbon dioxide emissions are released to provide power or lighting. The Climate Care is www.climatecare.org.

Climate Care is contributing to the “Education for Sustainability and Climate Change in Central Asia” project by providing about 10 000 compact fluorescent lamps (CFLs) to be distributed to schools in Kazakhstan.

The project is part of Partners for Environmental Cooperation in Europe (PECE) - a UK initiative which brings together Government, business and civil society to help promote sustainable development in Eastern Europe, Caucasus and Central Asia. It is partly funded by the UK Government's Department for Environment, Food and Rural Affairs (DEFRA). More information about PECE is at www.pece.co.uk

The CFLs reduce the amount of electricity that is needed to provide the same amount of lighting. This will have two key benefits:

1. Some money will be saved on electricity use.
2. Using less electricity will reduce the amount of carbon dioxide emitted from power stations. It is estimated that 10,000 lamps could save about 5,000 tonnes of carbon dioxide emissions from burning less coal over a period of seven years.

An important part of this project is to calculate the carbon dioxide that will be reduced by using CFLs in schools. For this reason, the installation and use of the CFLs needs to be monitored. Each school that receives CFLs will be asked to keep records of their use and may be visited by someone monitoring their use.