



# SPARE Newsletter

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## Dear readers!

Sir Isaac Newton is known to have said once: "I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the sea-shore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me."

It is impossible to change the surrounding world until we alter our perceptions. Today, numerous corporations, carbon industries and officials lobbying their interests are trying to convince us that there is simply no other way, no alternatives to the current modality of development. They argue that destruction of the nature is all a part of the technological and economic progress and there is no getting around it if one would live in comfort...

In this connection, Lester Brown while contemplating environmental problems through the prism of human outlook wrote: "In 1543, Polish astronomer Nicolaus Copernicus published "On the Revolutions of the Celestial Spheres," in which he challenged the view that the sun revolved around the earth, arguing instead that the earth revolved around the sun. With his new model of the solar system, he laid the groundwork for a new worldview. Today, we need a similar shift in our worldview, in how we think about the relationship between the earth and the economy."

A new world where there is a place for wild nature and harmony is quite possible. However it would require changing the key principles and fundamentals of the human civilization. However, understanding and involvement of everyone is essential for this to become a reality.

Dave Allen in his publication on sustainable development observed "If systemic thinking has taught us anything at all it is the understanding that systems are intricately interrelated and each system affects the other systems and is affected by them. An individual wishing to change the world has but little influence on public policy or global ties. But the individual has an influence on his family, the family - on the local community, the community - on the city, the city - on the state and the state influences the entire nation..."



In this manner, faster than one could imagine, the whole world becomes changed thanks to a few people who care".

Every big initiative is known to start from small things. The popular slogan "Think globally, act locally" is ever relevant. Activists involved in the SPARE program are working in schools, families and local communities to make sure that people stop mixing the notions of "price" and "value" and never perceive the notion of "more" as an equivalent to "better".

**Join our program! Get involved into changes and the global movement for protection of the environment.**

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## News from SPARE partners and participants



### Energy saving must become a priority

On 15 April 2009, the President of the Republic of Tajikistan, Emomali Rahmon, delivered his traditional message to the parliamentarians. One of the key subjects that the President dwelled upon was pertaining to energy saving and energy efficient economy.

“The annual electrical power shortage in our country constitutes 4.5 billion kilowatt/hours. One of the ways of alleviating the problem would be country-wide introduction and use of energy saving equipment. ...Just by replacement of the conventional bulbs with energy efficient ones we could save up to 3,120 million kWt/hours in the household sector alone which is equivalent to output of a hydropower station with the capacity of 810 MW.” – indicated the President.

“Many of you can remember the energy crisis of 1970’s that struck the US, Europe, Canada and Japan. Due to efficient public outreach activities those countries managed to bring down their energy consumption by 4-14% within a short period of time” – said the head of the republic.

On 24 April 2009, as a follow-up to the message the president signed a decree where (apart from transition of the republic to the energy efficient bulbs) he specifically instructed respective ministries and agencies to develop and submit to the Government of the Republic of Tajikistan the Energy Saving Program for 2010-2015.

To reduce losses of power, gas and water the Government of the Republic was charged to develop and adopt the Program for Efficient Use of Energy Resources for 2009-2015 and also take the necessary steps for wide application of alternative renewable energy sources.

### Meeting with the deputy minister of Energy of Armenia

On 6 April 2009, a meeting was held between the SPARE coordinator for Armenia and Armenian deputy minister of Energy, Areg Galstyan, to discuss ways of promoting cooperation between SPARE and divisions of the Ministry.

In the course of a constructive discussion, Mr.Galstyan acknowledged importance of the subject and willingness of the Ministry to promote cooperation with non-governmental organizations of the republic in the sphere of energy saving and use of alternative energy sources. During the meeting, to make sure that the issue is not shelved the deputy minister instructed the Head of Foundation for Energy Saving and Alternative Energy to develop and present a plan of possible joint activities with SPARE project to raise public awareness about energy saving and techniques of repairing and winterization of educational institutions.

Having expressed the opinion that Norwegian experience in application of energy saving window panes would be relevant and promising for Armenia Mr.Galstyan instructed his assistants to review the issue together with SPARE representatives and submit appropriate proposals within one week.

At present the small-scale hydropower sector is being intensively developed in Armenia – new mini-HPPs are built one after another. The developed inventory of prevailing wind directions and prospects of wind power generation on the territory of the republic increasingly attracts new investors. The republic is also planning to complete within 2 coming years the project for construction of boiler-rooms and repairing doors and windows in all schools of the country using international financing.



## News from SPARE partners and participants



### Contest results are summed up in the Ukraine

On February 16-17, 2009, the final nation-wide round of the Energy and Environment International Youth Energy Efficiency Projects Contest organized under the slogan "We can reduce greenhouse gas emissions" was held at the National Ecology and Naturalism Student Centre in Kyev.

The contest results were announced on the day of signing of Kyoto Protocol. The contest in the Ukraine was organized by the national SPARE coordinator with support from the Ukrainian Ministry of Education and Science, UN Development Program in the Ukraine, Committee for Fuel and Energy Industry, Nuclear Policy and Nuclear Safety of the Verkhovna Rada of Ukraine, and Ukrainian National Agency for Efficient Use of Energy Resources.

The contest panel selected 44 best projects out of a large number of works received from different parts of the Ukraine to be presented in the finals of the head-to-head round of the International contest. Participants of the head-to-head round presented their projects exhibited on stands demonstrating working models, technical and economic calculations. The prize fund of the contest was again provided by the joint-venture "Danfoss TOB" which established a special nomination for application of new technologies in hot-water supply systems.

The contest panel was composed of representatives of the Ukrainian Technical University, Ukrainian National Agency for Efficient Use of Energy Resources, Energy Saving Institute, Worldwide Fund for Nature and commercial agencies – PHILIPS-Ukraine and DANFOSS TOB. The concerted effort of the contest panel to select the best projects was a vivid example of the fact that the submitted works were profound and reflected the children's desire to improve environmental and economic situation in the country.

For many participants from different regions of the country it was not the first such contest where they could present their improved projects and demonstrate their intellectual growth and a high level of civil consciousness.

### Earth Hour in Moldova

In March 2009, the Republican Child and Youth Center 'GUTTA-CLUB' organized a whole range of activities aimed at attracting public attention to the issue of climate change and energy saving in Moldova within the framework of its global event, Earth Hour.

The campaign started with a flashmob which took place in M.Eminescu central park. Sharp at noon the flashmob participants took electric bulbs out of their pockets and counted to sixty in chorus. On the same day, the event was shown on all Moldova's major TV channels. The next event was the mobile exhibition of posters devoted to the Earth Hour.

The exhibition moved between the country's universities and institutes. At the exhibition, GUTTA-CLUB activists would explain to those interested why participation in the event was so important and distributed leaflets. A couple of days later, representatives of two non-governmental organizations "SalvaEco" and "GUTTA-CLUB" walked through Kishinev's main street with posters and lit up candles encouraging the passers-by to join the action 'Earth Hour'.

Materials and press-releases about the event were circulated beforehand by GUTTA-CLUB to all major newspapers and magazines. Articles about the Earth Hour and the problem of climate change were published in over a dozen nation-wide printed media. On 28 March 2009, supplementary illumination of buildings, lighting in offices and apartments, and advertisement panels were switched off in thousands cities of the world. Millions of people across the globe took part in the action.



## News from SPARE partners and participants

### Lesser hall of the music school has become warmer

In January 2009, under the school project for efficient use of resources and energy, the Little Earth staff implemented an initiative for replacement of incandescent bulbs with energy saving ones (CFB - compact fluorescent bulbs) in the lesser hall of the A.S.Lensky's music school #3 of Dushanbe. Nine incandescent 100-watt bulbs were replaced with energy saving 20-watt ones. This will make it possible to considerably reduce energy consumption for lighting since CFB consume 5 times less power and work up to 10 times longer, thus saving both the power and money.

In late January, the Little Earth also decided to assist the music school in winterizing the lesser hall. All the windows here were double-glazed but many panes either had cracks in them or did not fit the window-frames (had large gaps). With view to the above many cracked and undersized windowpanes were replaced with new appropriate ones. Minor slits between the glazing beads and the glass were filled with liquid sealer. These seemingly insignificant measures help preserve the heat, raise the temperature inside the building and ensure more comfortable conditions for the classes.

Upon completion of the winterization work, a small information stand was put up in the music school explaining the importance of energy and heat saving that will allow all interested guests and school students to get acquainted with the work done under SPARE and learn helpful advice on energy saving.

The winterization of the lesser hall was implemented within the framework of the annual campaign "Warm classroom – warm home" which is aimed at demonstrating importance and advantages of the rational energy use and heat conservation.



### A series of workshops in Irkutsk region – Youth, Climate and Energy Saving

A series of workshops under the above name were held in Irkutsk region in autumn and winter of 2008-2009 school year. The workshops were conducted in Usol'e-Sibirskoye, Ust'-Kut, Tulun, Irkutsk and Ust'-Ilimsk. The events were organized by the non-governmental organization "Baikal environmental wave". The key objective of the workshops was to attract attention of teachers and youth to the issues of climate change and energy saving.

The main focus during the above workshops was placed on the information about the causes and aftermaths of the global climate change, measures to mitigate the climate change and adapt to it, nurturing of "green" habits at the individual, family and community level as well as ways of energy saving at home and in school.

The participants also familiarized themselves with activities of SPARE and the key activities of the project implemented in the region. A number of publications and education materials were disseminated to the participants including the compendium of school projects "Saving energy is cool", booklet "Saving of energy resources: start with yourself", SPARE disk "Energy saving: step-by-step", environmental magazine "Volna", etc.

The mobile exhibition "From Bonfire to LED" was organized at the workshops showing educational information and demonstration energy saving equipment. The workshops themselves aroused genuine interest on the part of teachers and young activists both with regard to SPARE project and the topic of energy saving in general. The workshops were conducted with support and assistance from local partners representing educational institutions that take an active part in SPARE project in Irkutsk region.

## News from SPARE partners and participants

### Round table on improvement of energy efficiency of schools in Kazakhstan

A round table entitled 'Improvement of energy efficiency of Kazakhstan schools: challenges, achievements and prospects' was organized by the non-governmental organization 'EcoObraz' at the Ministry of Environmental Protection in the city of Astana on 14 April.

The round table was attended by representatives of the Ministry of Environmental Protection, Ministry of Education and Science, government agency 'Education authority of Astana', government agency 'Energy authority of Astana', UNDP project expert, school teachers from Karaganda region and staff of the NGO 'EcoObraz'.

During the meeting the participants were shown presentations on energy saving technologies tested in schools of Karaganda city and Karaganda region including introduction of energy saving lamps and installation of heat-reflecting screens behind heating radiators. The teachers also shared their experiences in the use of modern sealing materials for window winterization.

The second part of the event was devoted to discussion of the delivered presentations and ways of improving energy efficiency in schools. The issue of government support of schools in the sphere of energy saving was also touched upon. The goal of the discussion was to develop effective mechanisms for introduction of energy saving technologies in schools of Kazakhstan.

Based on the discussion results the round table adopted the following decisions: develop recommendations of legislative nature encouraging introduction of energy saving measures in schools, identify mechanisms for implementation of energy saving projects (obtaining grants, development of recommendations). It was also decided that nationwide interactive lessons in energy saving should be organized.



### Winterization of the school in Choryakkoron Dara

As soon as spring holidays started in schools of Tajikistan, the Little Earth environmental organization in conjunction with the school administration of Choryakkoron Dara started works for heat-insulation of one of the school's buildings.

The village is located just a few kilometers outside Dushanbe but its residents face great difficulties with power supply in wintertime. In wintertime the school is heated by stoves burning coal and sometimes firewood. The school building lacked thermal insulation. In winter, children would sit in their outdoor clothes even in heated classrooms. Blind and single-glazed windows made airing of the classrooms impossible. Whenever stoves were burning a lot of smoke and carbon oxide would accumulate in classrooms causing various illnesses.

The Little Earth offered the school administration to carry out thermal insulation of three classrooms in one of the school buildings. All single-glazed windows in the selected classrooms were replaced with sealed double-glazed units. The floor and the ceiling were winterized using mineral wool. New doors were also installed to reduce draughts. The school administration and local authorities provided assistance within their powers in winterization of the school.

The Little Earth staff closely monitored the progress of the project. All the main heat-insulation works in the three classrooms were completed by 1 April when the new school term started and the students resumed their classes. The applied measures are expected to make the classrooms significantly warmer. The heat-insulation will help raise the temperature and create more comfortable conditions for education. It is also expected that coal and firewood consumption in winter period will be reduced by at least 25%.



## News from SPARE partners and participants



### 'Green tram' in Yekaterinburg

An ingenious way of environmental education was suggested by environmental activists in Yekaterinburg: "a green tram" makes trips around the city displaying appeals on its sides for the future in harmony with the nature addressed to young city-folk. During their trips on the "Green tram" Yekaterinburg residents can learn the latest news about the city's environmental problems, new projects of young ecologists and other environment protection activities. Moreover, the specialized thematic excursions provide practical advice on energy saving, rational water use, proper ways of waste disposal and also narrate about natural features and landmarks of Yekaterinburg.

The 'Green tram' idea was proposed by young residents of Yekaterinburg a few years ago. It was the young environmentalists' unanimous opinion that the greatest problem of the city rooted in lack of understanding of the basic environmental problems by adult residents of the metropolis. Hence, the environmental outreach facility on wheels (the 'Green tram') was invented. As distinct from traditional resource centers in libraries and institutes one does not have to spend one's spare time and make an extra trip to access the resource. The green tram comes to city residents on its own.

The Committee for environment and wildlife management under Yekaterinburg administration indorsed this initiative and allocated the longest city tram route #13 for the youth project. The children themselves painted the tram in colorful environmental pictures and slogans. The Ural section of the Russian Academy of Education and several schools of the city took the tram under their patronage and regularly update its excursion program, prepare hand-out materials for passengers, leaflets and booklets.

The city residents have noted that passengers of the tram treat one another and their city in a much more benign and thoughtful manner.

Quite recently the 'Green tram' was entered in the Book of Yekaterinburg's landmarks.

The city authorities consider the 'green tram' one of the most effective outreach environmental projects in the city and are planning to invite the city youth in the near future to prepare and submit a proposal regarding establishment of a 'green trolleybus'.

### SPARE on regional TV

A series of video spots about energy saving and renewable energy sources was broadcast on the private city TV-channel SM-1of Khujand (Sughd region, Tajikistan) in January and February 2009. Over 15,000 residents of Khujand and Sughd region watched the environmental video spots, the broadcasting of which was organized under the SPARE project by the Youth Group for Environment Protection.

On 28 February 2009, the fourth issue of the youth environmental TV-quiz "Green five" was shot in the studio of Sughd regional television. The theme of the TV-quiz was "Energy saving as the best environmentally friendly source of energy". The issue was prepared with support and assistance from the environmental organization Little Earth, Norwegian Nature Protection Society and BiLine mobile operator.

Representatives of the youth movement 'Green Patrols' of Khujand, the team 'Green brothers', and 'Tsunami' team from Chkalovsk who had shown the best knowledge of energy saving during the selection round took part in the program. The TV-quiz consisted of five contests including the captains' contest and the contest of questions in which the participants showed their competitive spirit, ingenuity, command of the subject and creative approach. Participants from both the teams received commemorative prizes from the quiz sponsor, Beeline mobile operator. The new issue of the TV quiz was broadcast in early March 2009.



## Energy saving at home: sharing experience

*Olga Senova, SPARE coordinator for Russia and head of the non-governmental organization "Friends of the Baltic" has shared with us her methods and techniques of energy saving at home.*

Our family is extremely environment-friendly. We used to go on walking trips and never littered the nature. Whenever we stay in our summer cottage we always sort out wastes: paper is burnt in the stove, organic matter goes to the compost pit. We try not to buy plastic items and whatever plastic is still bought we use it for storing nails and other household trifles. Some of it is used in our kitchen garden and for pot cultivation. As to our city apartment we started resource saving by installing a massage shower head in the bathroom which saves several times less water than a conventional one. However, back at that time we could not fully appreciate efficiency of that solution for we had no water meters in our apartment then.

A couple of years later, under one of our projects we were working on a tutorial film "Conservation begins with metering" describing the benefits of using hot and cold water meters. The film featured our family's everyday life describing in a staged manner how we discussed the issue and how the meters were selected and installed. In the first month after the installation of the meters we paid twice less for water consumption. We have been using water meters for five years now. We have learnt to turn off water when we brush our teeth, take a shower instead of bath and use water sparingly when washing the dishes. Some time afterwards when energy saving lamps became available in stores of St.Peterburg we started to use them to gradually replace burnt out incandescent lamps. So far we have replaced about 80% of the lamps and our electricity bills have reduced by 20%.



*On the photo: water meter that was installed in Olga Senova's house*



*On the photo: process of solar water heater installation at the country cottage*

In spring and autumn we would often use an electric heater. Our apartment is located in a bearing-wall structure. Moreover it is on the shorter side of the building and two of our rooms have gable-walls. The walls represent mere concrete just 20 centimeters thick and nothing more – it is as cold as it gets inside the apartment. Last year, our family finally ventured upon renovations. Using penoplex and gypsum board liners we winterized the walls on the inside. It became significantly warmer right away. The windows had been winterized earlier still. That done we could almost completely discard the electric heater. The saving of energy and money became considerable.

This summer we installed a solar water heater in our country cottage. The idea was suggested by Dag Arne Hoystad, our colleague from Norwegian Environment Protection Society. A specifically designed 1,000 liter tank was installed next to the bath-house. The full-fledged testing of the equipment is expected next summer. Another of our country cottage projects was a composting toilet with separate collection of fractions. This method allows for subsequent conversion of the fractions into compost and their further use as organic fertilizer. We have just started with the idea and all the experiments and their results still lie ahead of us.

Domestic energy saving solutions produce obvious positive results and more and more people come to recognize their benefits. The energy saving approach to household management has gained the upper hand in our family for good and all. At present, advocating for energy saving under SPARE I can always rely on my own experience and achievements made at home. I wish you all the best of luck!

*Olga Senova, "Friends of the Baltics"  
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Improvement of human living standards in the foreseeable future will obviously be associated with increased amounts of consumed energy whereas the sources of fossil fuel are finite after all. Therefore the humankind cannot do without energy saving and development of new renewable energy sources. And since the energy is essential in the material world with all the rest being but of secondary significance, it is 'energy saving' (and more properly, energy efficiency) that must become "philosophy of the 21<sup>st</sup> century" and we should learn to appreciate it from childhood.

*Victor Yakovlevich Zharkov – associate professor, Automated Electrical Drive Department, Tavrichesky State Agricultural and Technological University, Mityopol, Ukraine*

Energy saving is of utmost importance today so that future generations living on this planet can have not only energy resources per se but also the opportunity to breathe in fresh air, drink clean water, enjoy the beauty of nature and live in the climatic conditions existing today.



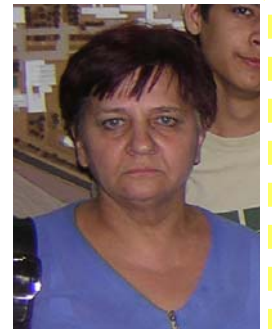
As to energy conservation activities implemented in my family, we have been using energy efficient lamps instead of conventional incandescent ones for about 5-6 years. We turn off almost all our electric appliances for the night. We use a shower cabin in our bathroom instead of a bath. All taps have spray nozzles saving water. We also have meters of gas, hot and cold water consumption.

At my workplace (I have been working as a teacher of ecology in high-school 19 of Minsk for 15 years) I have initiated the following energy saving projects "Energy saving in school and at home", "Let us give wastes a second chance", "Water for life", "Environmental footprint".

Together with our students, their parents and high-school teachers we learn to use water, heat and electricity in a rational manner, acquire skills of separate collection of domestic wastes and try to minimize our environmental footprint (negative impact on environment).

*Valentina Svistunova, teacher, high-school #19, Minsk, Byelorussia.*

Energy saving must become the state-wide priority in Tajikistan since we face a shortage of energy resources whereas in remote mountain districts the scanty forests and shrubs are actively cut down which leads in its turn to new problems such as soil degradation and natural disasters.



Everyone can engage in energy saving activities at the level of one's school and family: this does not require much funds or involvement of experts. School 78 has been an active participant of SPARE for several years now. We conduct lessons on energy saving, organize various events, produce thematic wall-newspapers, and winterize classrooms.

Some of our practical projects include construction of solar kitchens and solar water heaters. Making use of knowledge received in classes our students take practical steps to save energy at home involving parents in the process. We give much attention to outreach activities among residents of the neighborhood where the school is located.

Together with the children we make environmental raids from time to time, disseminate leaflets and discourse with local residents.

*Butakova Nadezhda Fedorovna, teacher, school #78, Dushanbe, Tajikistan.*

## School Project on application of resources and energy (SPARE)

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