

# “Road to Copenhagen: Climate Change and Poverty in Central Asia”

*Outcomes of the regional E-discussion  
October – December 2009*

E-tools of the Aarhus Convention

## Conference in Copenhagen

Governments gather in Denmark in December 2009 for what is perhaps the most important meeting since the end of the second world war. December is the deadline they have set themselves for agreeing on action to tackle climate change, and the COP15 conference in Copenhagen is where hopes are high that a new global deal can be struck.

Out of this complex mix of competing interests, COP15 must answer four key questions. How much will developed countries commit to reducing their emissions? What are major developing countries willing to do to limit theirs? Where will the money and technological support come from to help developing nations reduce emissions and adapt to climate change? And how will that money be managed?

### **Position of Central Asia on long-term cooperation for the post-Kyoto period** (short version)

The countries of Central Asia (CA):

- Support the efforts of the Secretariat of the Convention and Ad-Hoc Working Groups on Long-Term Cooperation and Kyoto Protocol on strengthening global partnership;
- On the whole approve the principles, elements and provisions of the Common Vision (Revised document of 11 November 2009 to the negotiation text FCCC/AWGLCA/2009/INF.2);
- Stress the urgency for earlier measures to be taken by all Parties on mitigation of climate change based on the principles of justice, common but differentiated;
- Support the emission reduction mechanism by developing countries through the Nationally Appropriate Mitigation Actions, including the proposed international standard of monitoring, reporting and verification (MRV) plans and procedures;
- Stress that climate change presents serious challenges for the countries of CA region, which have dry climate, fragile mountain ecosystems suffering from droughts, desertification and shrinkage of glaciers that demand a broad international support;
- Welcome support provided by developed countries to the developing countries in the development and transfer of technologies needed for implementation of adaptation and mitigation measures.

CA ICSD session (Tashkent, November, 2009)

Content:

I. Introduction .....	4
II. Impact of climate change and the Millennium Development Goals .....	6
III. Short summaries and fragments from the discussion:	
Theme 1: How does climate change impact environment, health and quality of people's lives .....	9
Theme 2: What are we doing and needs to be done: adaptation to climate change .....	11
Theme 3: What are we doing and needs to be done: mitigation of climate change .....	12
Theme 4: "Human face" of climate change: vulnerable groups and risk factors .....	15
Theme 5: CA Countries and People on the Way to Copenhagen: Forming Position .....	7
IV. "Literacy campaign": Climate Change Issues .....	8
V. The electronic discussion forum as a public participation tool in addressing climate change and poverty issues in CA countries .....	22



*“ We have read the science. Global warming is real, and we are a prime cause. Unless we act, now, we face serious consequence”.*

**Ban Ki-moon, UN Secretary General**

## **I. Introduction**

Only in recent past climate change has been a theme of scientific discussions and political debates. But today the issue, especially its consequences, is high on the media’s agenda that it is hardly possible to find someone who hasn’t heard about this problem. As it happens in the 21st century the information spreads quickly, therefore such factors as completeness and accuracy of information, its reliability, as well as relevancy and competence of sources come in the foreground.

It is obvious today that climate change will not have the same impact in all parts of the world. According to experts the population of developing countries, especially living in drought-stricken and mountainous areas, densely populated valleys will face the worst effects of a changing climate. This also concerns the ecosystems of mountainous countries in Central Asia, where the global warming will significantly shift the way of people’s lives hugely impacting their livelihoods, incomes and health.

While scientists continue their arguments of the causes of climate change defending different hypotheses, its consequences do not need in special evidences. It has now become clear that such processes as shifts of weather patterns, glacial melting, and more frequent climate-related disasters (floods, landslides, mudflows, etc.) are increasingly affecting the human development and the livelihoods of men and women.

In addition to the ongoing discussion on technical and financial aspects, the climate debate of the future must be further enriched by taking into account the human dimensions. The most effective solutions to climate change, however, will be those that come from the bottom up, that are based on communities’ knowledge of their immediate environment, that empower—not victimize or overburden—those who must adapt to a new world, and that do not create a new dependency relationship between developed and developing countries.

Equally important is how individual behaviour can undermine or contribute to the global effort to address climate change. Here a special attention should be given to raising public awareness—both of the problem itself and of possibilities that the governments and individuals can use to prevent the consequences and reduce the impacts of climate change.

As part of preparation activities to the 15th Conference of Parties to the UN Framework Convention to Combat Climate Change (December 2009, Copenhagen) the CARNet Information Network with support of the UNDP-UNEP Poverty and Environment Initiative and UNDP Country Offices in Central Asia launched a regional electronic discussion “Road to Copenhagen: Climate Change and Poverty in CA countries” at <http://forum.caresd.net>.



## The objectives of the regional E-discussion on climate change and poverty:

- Collect and summarize the expert opinions on climate change and poverty issues in CA countries
- Exchange information about the state policies and strategies, action plans on climate change and poverty, as well as involve CA experts, the public and real sector in the discussion
- Find new approaches to adaptation and prevention, collect best practices and proposals
- Disseminate the information on the upcoming meeting in Copenhagen
- Build capacity for forming a common position of Central Asian countries in the run-up to the meeting in Copenhagen

Experts on climate change, environment, nature protection, health care, representatives of civil society, local communities, journalists and all others who are interested in the topic participated in the discussion.

The E- discussion was organized around 5 thematic areas:

1. How does climate change impact environment, health and quality of people's lives
2. What are we doing and needs to be done: adaptation to climate change
3. What are we doing and needs to be done: mitigation of climate change
4. "Human face" of climate change: vulnerable groups and risk factors
5. CA Countries and People on the Road to Copenhagen: Forming Position

## "Live voices" from the discussion



**Kurbonali Partoev – Director of NGO “Cooperation for Development”, Tajikistan:**

*“I think all people living on our planet should know about the global warming. People in developed countries have better awareness of this problem due to wider access to internet, TV and mass media. But this is not sufficient in my opinion, and UN, donor and sponsor organizations should lend the developing countries both in-kind and financial support to strengthen the outreach and advocacy activities, focusing primarily on local communities, rural areas and cities. It is highly important that poor people and countries knew more about this problem”.*

## Moderators of E-discussion:

Shamil Iliyosov – Associate Professor of the Kyrgyz-Russian Slavic University, Candidate of Technical Sciences, Leader of the Working Groups of the 1st and 2nd National Communications of the Kyrgyz Republic on Climate Change - Regional Moderator

Narynbek Myrsaliev – Assistant of Ozone Center in KR, expert of 2nd National Communication of KR on Climate Change – Country Moderator, Kyrgyzstan

Timur Idrisov – Executive Director of environmental organization “Small Earth” – Country Moderator of the discussion, Tajikistan

Yuriy Mun – Environmental club “Eremurus”, National Coordinator of Youth Environmental Network of Uzbekistan - Country Moderator of the discussion, Uzbekistan



## II. Impact of climate change and the Millennium Development Goals

Today it is clear that climate change will have negative effects on people by making their living conditions more severe and on the natural resources by depleting their amount and quality. While developed countries with higher economic capacity find themselves more prepared and adaptable to these changes, the countries with emerging economies will have to suffer disproportionately from the worsening conditions, reduced resources and will not be able to cope with consequences of climate change and adapt to them alone.

The United Nations and governments are concerned that the impacts of climate change can impede achievement of the Millennium Development Goals by 2015 and sustainable development.



*Apricot gardens are the only source of income for people living in Batken region (Kyrgyzstan). Growing, yielding harvest, drying, storing and selling apricots is a seasonal work, which “feeds” the families the whole year. Mainly older people with their grandchildren are occupied in this work because the working-age population leave their homes to neighboring countries – Kazakhstan, Russia in search of jobs. The recent years the traditional business of this region is giving less income as the increased instability of climatic system first of all affected fruit gardens in south. Households in Batken, for whom apricot gardens are the only source of livelihood, find themselves on the edge of survival today. This is the first but not the last example of negative impacts of climate change on the well-being of CA population.*

In this publication we present to readers attention the results of electronic discussion in relation with the Millennium Development Goals, where the focus

is made on the impacts that are already delaying their achievement by 2015 in Central Asian region. (Table 1).

## The Millennium Development Goals

In September 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at United Nations Headquarters in New York to adopt the United Nations Millennium Declaration, committing their nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets - with a deadline of 2015 - that have become known as the Millennium Development Goals.

Source: A Gateway to the UN System's Work on the MDGs  
<http://www.un.org/millenniumgoals/>

Millennium Development Goals		Potential impacts of climate change
	Goal 1: Eradicate extreme poverty and hunger	<ul style="list-style-type: none"> <li>• Damage to livelihood assets, including homes, water supply, health and infrastructure, can undermine peoples' ability to earn a living;</li> <li>• Reduction of crop yields affects food security;</li> <li>• Changes in natural systems and resources, infrastructure and labor productivity may reduce income opportunities and affect economic growth;</li> <li>• Social tensions over resource use can lead to conflict, destabilizing lives and livelihoods and forcing communities to migrate.</li> </ul>
	Goal 2: Achieve universal primary education	<ul style="list-style-type: none"> <li>• Loss of livelihood assets and natural disasters reduce opportunities for full time education, more children (especially girls) are likely to be taken out of school to help fetch water, earn an income or care for ill family members;</li> <li>• Malnourishment and illness reduces school attendance and the ability of children to learn when they are in class;</li> <li>• Displacement and migration can reduce access to education. classes and their learning abilities will reduce;</li> </ul>
	Goal 3: Promote gender equality and empower women	<ul style="list-style-type: none"> <li>• Exacerbation of gender inequality as women depend more on the natural environment for their livelihoods, including agricultural production. This may lead to increasingly poor health and less time to engage in decision making and earning additional income;</li> <li>• Women and girls are typically the ones to care for the home and fetch water, fodder, firewood, and often food.</li> <li>• During times of climate stress, they must cope with fewer resources and a greater workload;</li> <li>• Female headed households with few assets are particularly affected by climate related disasters.</li> </ul>
	Goal 4: Reduce child mortality	<ul style="list-style-type: none"> <li>• Deaths and illness due to heat waves, floods, droughts and hurricanes;</li> <li>• Children and pregnant women are particularly susceptible to vector-borne diseases (e.g., malaria and dengue fever) and water-borne diseases (e.g., cholera and dysentery) which may increase and/or spread to new areas;</li> <li>• Reduced water and food security negatively affect child health.</li> </ul>
	Goal 5: Improve maternal health	<ul style="list-style-type: none"> <li>• Reduction in the quality and quantity of drinking water has negative effects on maternal health;</li> <li>• Food insecurity leads to increased malnutrition;</li> <li>• Floods and droughts spread water-borne illness, impacting maternal health</li> </ul>
	Goal 6: Combat HIV/AIDS, malaria and other diseases	<ul style="list-style-type: none"> <li>• Water stress and warmer conditions increase vulnerability to disease;</li> <li>• Households affected by AIDS have lower livelihood assets, and malnutrition accelerates the negative effects of the disease.</li> </ul>
	Goal 7: Ensure environmental sustainability	<ul style="list-style-type: none"> <li>• Alterations and possible irreversible damage in the quality and productivity of ecosystems and natural resources;</li> <li>• Decrease in biodiversity and worsening of existing environmental degradation;</li> <li>• Alterations in ecosystem-human interfaces and interactions lead to loss of biodiversity and loss of basic support systems for the livelihood of many people.</li> </ul>
	Goal 8: Develop a global partnership for development	<ul style="list-style-type: none"> <li>• Climate change is a global issue and a global challenge: responses require global cooperation, especially to help developing countries adapt to the adverse effects of climate change;</li> <li>• International relations may be strained by climate impacts.</li> </ul>

### “Live voices” from the discussion

**Narynbek Myrsaliev, Assistant of Ozone Center in KR, expert of 2nd National Communication of the Kyrgyz Republic on Climate Change:**

*“Adaptation at the national level includes development and implementation of effective strategy, what assumes improvement of scientific basis for decision making, development of educational programs, raising public awareness of the problem, mobilization of forces at the individual and institutional levels, technological*

*development, as well as support of local development strategies.*

*Using the problem of climate change as a catalyst of enabling activities would actually speed up the process of achieving sustainable development – the Millennium Development Goals - through fostering achievement of adaptation targets”.*

## Statistics of the electronic discussion: figures and tendencies

During the discussion (15 October- 1 December 2009) a total of 12000 visits have been registered in the forum.

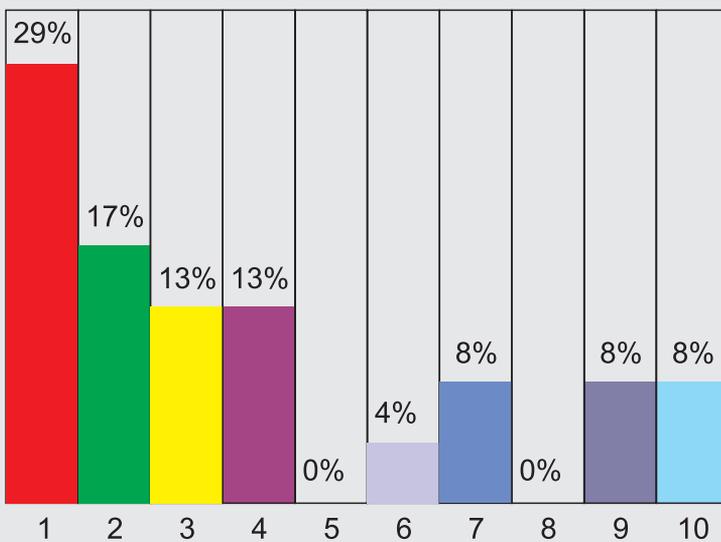
Electronic discussions in figures:

- 74 registered participants,
- 40 themes on the problems of climate change and poverty in CA,
- More than 300 comments in themes,
- More than 20 information and analytical materials on climate change and poverty in CA

The most popular, i.e. most actively discussed (three times more than other themes) thematic areas of electronic discussions were the following:

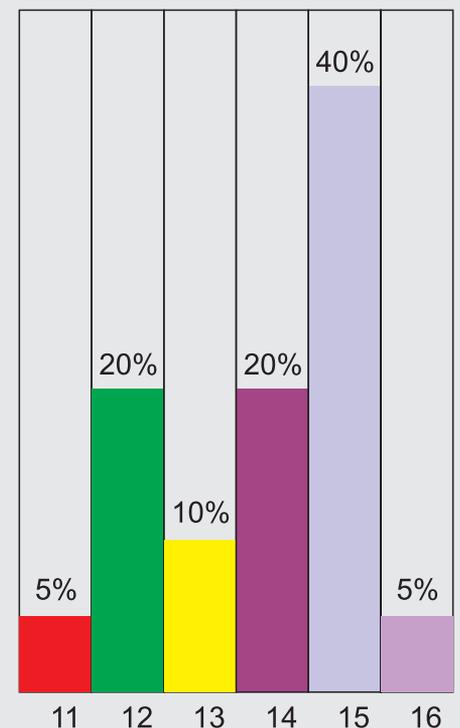
1. How does climate change impact environment, health and quality of people's lives?
2. What are we doing and needs to be done: mitigation of climate change consequences?

## Opinion polls of the forum:



**Can I contribute personally into reducing greenhouse gas emissions on earth?**

1. Yes, I can and try to reduce my daily carbon footprint - 29%
2. Yes, I can and try do it but unfortunately not on a regular basis - 17%
3. I can and know how to do it but yet do not take any measures in this area - 13%
4. I can and would like to reduce my footprint but hardly can imagine how I can do this - 13%
5. I never thought about this problem - 4%
6. I can not, because the main sources of greenhouse gas emissions are - industrial enterprises, transport, etc., and individual contributions can do little - 8%
7. I can not because this problem should be addressed at the government level - 0
8. I can not because this is a global problem and should be addressed at the interstate level - 8%
9. I see no sense in reducing greenhouse gas emissions as I think it is a thought out problem - 8%



**What will have the greatest impact of climate change in CA?**

1. Health of population - 5%
2. Well-being of population - 20%
3. Biodiversity - 10%
4. Water resources - 20%
5. Glaciers - 40%
6. Agriculture - 5%

### III. Short summaries and fragments from the discussion

#### ***Theme 1: How does climate change impact environment, health and quality of peoples' lives***

The highest interest (by the number of visits, exceeding other sub-themes almost 2 times) was focused on the essence of the problem of global warming, and most active participation (by number of comments) was registered in the sub-theme on the links between climate change and health of population.

Climate change hugely impacts life and health of people, especially those groups of population that are most vulnerable to fluctuations of climatic parameters – women, children and older people. It is well-known fact that swings of pressure, temperature, humidity can create uncomfortable conditions for human life, which is proved by the growing number of cases that result in truly tragic ends. Heat waves lead to aggravation of diseases of blood and respiratory system systems and other ailments. The higher average temperatures also lead to the increase in infectious diseases.

Participants of the forum discussed the existing situations in countries, forecasts of incidence rates caused

by climate change for future, as well as actions needed for adaptation of men's and women's health to climate change. Most lively discussed themes by participants were the items on:

- Development of national adaptation strategies in health care area taking into account the gender factors;
- Increasing socio-economic and sanitation and hygiene education level of population;
- Enhancing awareness of population, specialists of ministries, agencies and decision-makers;
- Introduction of effective legislative, administrative and technical measures of control and supervision over implementation of laws on public health protection;
- Development and improvement of individual and population methods of research in terms of adaptation and development of integral indexes characterizing adaptation to the conditions of climate change;
- Encouraging a healthy lifestyle through promotion of physical culture, sports and recreational tourism and through the exchange of best traditional knowledge and experience;

#### ***“Live voices” from the discussion***

**Tuhvatshin Rustam – Head of Department of Pathophysiology of the Kyrgyz State Medical Academy, Doctor of Medicine, Professor:**

*“The last decades Kyrgyzstan, the territory of which is characterized by contrast climatic and meteorological conditions, like the rest of the world has seen general warming of climate. According to the First National Communication on Climate Change (2003), high temperatures during critical periods of pregnancy caused a delay in the development of human embryo, and prenatal mortality achieved its peak both among maturely and prematurely born infants conceived from June to August. The Second National Communication on Climate Change (2009) forecasts the higher incidence rates of diseases (blood system, malignant tumor in women, etc.) related not only to increased average annual temperatures but also to impacts of highly polluted air, water and food products.*

*The task in making forecasts of mortality or incidence rates was to know the burden of disease today and in future as it*

*simplifies making strategic decisions in the public health-care area. Prognosis of potential health impact of climate change requires other methods as the goal here is to assess the effect of other (future) types of climate impacts on other (future) models of diseases in the given period in future”.*

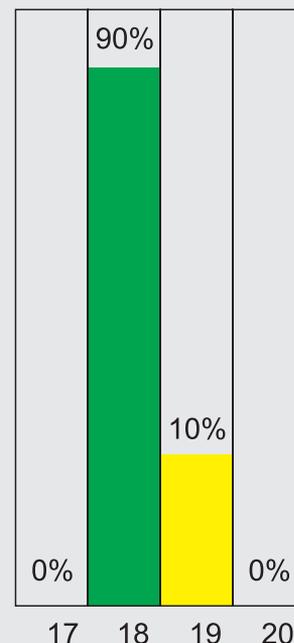
**Nailya, Tajikistan:**

*“The preparation activities within the Second National Communication of RT on Climate Change found that since 1980-ss there has been sharp increase in the incidence rate of malaria due to climate change, which reached its peak in 1990-2000 ss. According to the forecasts the rising annual average temperatures by 2-3C will lead to increase in the number of days favorable for population of malaria mosquitoes that transmit the disease. Consequently, extension of malaria transmission season up to 6-7 months and can lead to 6-7 fold increase in the turnover of infection. In such situation the number of cases can dramatically increase up to more than 100-150 thousand people.*





### Opinion polls of the forum:



**Do you think CA population is sufficiently informed about the problem of climate change?**

1. Sufficiently informed - 0
2. Insufficiently informed - 90%
3. Not informed - 10%
4. I don't know - 0

### “Live voices” from the discussion

Apart from the vector-borne diseases emerging in the result of warming climate and which present the risks for public health there have been observed such diseases as typhoid fever; salmonellosis, dysentery, amebiasis, lamblia, etc. with characteristic spring-summer, summer and summer-autumn seasonal outbreaks. Impact of the so-called heat waves due to climate change can increase the mortality rate of vulnerable groups of population (children and older people). Sharp increase of temperatures and severe drought in 2000-2001 have become one of the key factors for increased mortality rate among population. Findings of our studies along with the results of international studies prove that health effects come later after “pressing”. For example, health impacts of drought in 2000-2001 reached its peak in 2003”.

**Yuri Mun, National Coordinator of Youth Environmental Network of Uzbekistan:**

“Estimates of specialists show that in the coming two or three decades the air temperature can increase by 1,5-2°C, and that warming will negatively affect constituents of our health—food, water and air. There may be not only direct impacts through increased thermal stress and associated diseases (cardio-vascular; respiratory, nervous system diseases, kidney, etc.) but also indirect impacts.



For example, increase of infectious diseases caused by the change of areas of natural – focal infections and due to poor quality of water and its scarcity in environmentally disadvantageous regions. Provision of population with good nourishment will also be problematic in conditions of low agricultural productivity and water scarcity. In the territory of Uzbekistan these changes are more obvious in Aral coast region as drying of Aral Sea provoked aggravation of many diseases among local population”.

**Mira Djangaracheva, Manager of UNDP “Environment Protection for Sustainable Development Programme”:**

“According to our prognoses in Kyrgyzstan during the next hundred years temperature can increase by 4-6 C. Health of people under such conditions, even by preliminary forecasts, remains unprotected. Especially vulnerable group includes older people, women and children. Climate change will definitely aggravate some diseases, which will, first of all affect low income groups of population. This concerns such diseases as diarrhea, malaria, respiratory and cardiovascular diseases conditioned by impacts of climatic factors”.

## ***Theme 2: What are we doing and needs to be done: adaptation to climate change***

The most popular among themes (both by number of visits and left comments) of the discussion was adaptation to climate change. Participants noted that adaptation in different spheres, especially in water management area, is vital for Central Asian region. Addressing of adaptation issues, first of all, should start from the analysis of most vulnerable sectors, as they are almost the same in the countries of the region. These issues are given in great detail in National Communications on Climate Change. Moreover, currently the countries of the region started developing their National Action Plans on Adaptation (NAPA) and it is assumed that a regional strategy on adaptation to climate change will also be developed as our countries share the common problems in the area of water resources, agriculture, climatic emergency situations, public health impacts.

As the participants of discussion stated, in 2003 the Government of Tajikistan approved National Plan for Mitigation of Climate Change Consequences, which included the Strategy for Adaptation to Climate Change. This document, like both the 1st and 2nd National Communications on Climate Change is available on the official web-site of the State Hydrometeorology Institute of Tajikistan at the following link: [www.meteo.tj](http://www.meteo.tj)

Participants of the discussion from Uzbekistan shared the information on adaptation measures in agriculture of their country, which include:

### ***“Live voices” from the discussion***

**Kurbonali Partoev – Director of NGO “Cooperation for Development”, Tajikistan:**

*People in all countries should take measures for rational management of land resources. Adaptation means rational management of existing land resources throughout the life cycle by all generations of people.*

*In the face of climate change we should take measures for introduction of traditional methods of agriculture management and food production. Special focus should be made on introduction of organic land management in all countries of the world. Such a farming method brings harmony into relations between people and nature and helps to conserve soil, water and air on the earth”.*

- improvement of irrigation and drainage system, increasing efficiency of irrigation systems;
- improvement of irrigation methods;
- selection of agricultural crops that consume less water;
- improvement of plant protection measures with chemical and biological methods;
- increasing the area of arable land for crops with short vegetation period, as well as with winter vegetation;
- reducing loss of water through planting forests around the fields;
- rotation of cotton crops with lucerna crops, application of biotechnologies for restoring soil productivity.

Representatives of Kyrgyzstan shared with participants of the discussion the cases on adaptation measures in agriculture, among which were diversification of varieties and species of domestic livestock, changing intensity of production and geographical areas for planting and livestock, use of alternative approaches to land cultivation, change of land topography to solve the problems of water scarcity, introduction of economically and time effective irrigation and agricultural practices as well as instruments of financial regulation such as the harvest insurance, investment into agricultural shares and participation in income stabilization programs to reduce the risks of their loss.



**Chary Muradov, Head of Department , Ecological Information and Database Department, SIC ICSD, Turkmenistan:**

*“Taking into account that all CA countries are located in arid zone, where climate change is felt most sensitively, effective adaptation to the warming climate requires implementation of projects on sustainable development of remote villages. This requires using of modern scientific achievements and traditional knowledge of local population. One of such examples can be implemented in 2007-2009 ss in Karakums (Turkmenistan) projects on sustainable development for the grants provided by APFED. These are such projects as the drop irrigation in school garden of Bokurdok community, alternative heating of premises and helioglassehouse at the secondary school N21, binding drift sands, improvement of the state of desert pastures, using solar energy for water lifting and lighting houses of cattle breeders”.*

### **Theme 3: What are we doing and needs to be done: mitigation of climate change**

Compared to developed countries the Central Asian countries produce less emissions, what is, first of all, explained by the level of their economic development. Low level of emissions are especially characteristic for Kyrgyzstan and Tajikistan, where the power is generated primarily from hydroenergy. Nevertheless, the problems of reducing greenhouse gases are important for these countries too as the greenhouse gases, for the most part, are emitted during burning of fossil fuels, reserves of which are limited and later or sooner will be exhausted. Therefore using alternative renewable energy sources will allow us to ensure energy security in the future perspective and speed up the economic development as the rise of prices for fossil fuels is unavoidable.

#### **“Live voices” from the discussion**

**Timur Idrisov, Executive Director of Environmental organization “Small Earth”, Tajikistan:**

*“The main adaptation strategies proposed in National Communications of Central Asian countries include innovations in water management sector to prevent increased vaporization, reducing rainfalls, and reducing snowmelt runoff; recommendations in agricultural sector include mulching (application of trash) of cover crops, crop rotation and introduction of drought-resistant varieties; recommendations for pasture management include control of pastured livestock population and rotated use of pastures. However, the indicated adaptation strategies do not mention about politically stimulating means such as arable land reform and pasture reform aimed at developing mobility of livestock management or such problem as the growth of rural population”.*

**Alexandra Povarich:**

*“In my opinion, if we want to maintain sustainability of planetary processes, we should rehabilitate the forest ecosystems as sustainability mostly depends on the biological diversity. Therefore we should direct all our efforts on mitigation of consequences to conservation of biodiversity – everyone, even a child can plant a tree. I think half of the world population is now aware of climate change and we should make personal contributions to reducing of greenhouse gas emissions. But a man is such an egoistic creature, who thinks first of all about his own comfort, and only then about other things. Perhaps nature and planet are the last points in the “What to think about list”, and we can not reassure 6,5 bln. people living on earth. Therefore I think there should be some personal benefit, probably environmental problems will be better to link with personal finances to make people to act”.*

In the course of the discussion of this theme there appeared rather interesting new threads of discussion such as :

- Energy conservation and energy efficiency
- Solid domestic wastes – source of CH<sub>4</sub> emission
- Environmental challenges and barriers

Most visited informational sub-theme about the problem of prevention was also actively (by number of contributions) attended, which points to the existing need for information in this area. The theme about wastes ranked second by the number of visits. Apparently, this interest is related with daily obviousness of wastes problem for all countries of the region. At the same time fewer comments were received in such themes as “Decision Making and Implementation” and “Environmental Challenges and Barriers”, which



**Rustam Murzahanov, Environmental Rights Center “Armon”, Tashkent, Uzbekistan:**

*“In Uzbekistan a CDM project on composting of solid domestic waste was under development. It was planned to introduce a mechanism of aerobic composting of solid domestic waste at the most equipped Ahangaran polygon. According to preliminary estimates the project would allow to reduce emissions of methane into air by 590 000 tons during 8 year. But the project has not been implemented. Now negotiations are underway on establishing a system of extracting methane, however in our context it seems to me difficult to realize”.*

**Omurbek, Kyrgyzstan:**

*“Emissions of methane from solid domestic landfills are not registered in Kyrgyzstan, and there is no calculation methodology of methane emissions from SDW dump sites. Due to the wrong dumping technology of solid domestic waste, methane can not be accumulated there in large amounts. However, theoretically, methane can be accumulated and captured in our landfills but this requires appropriate dumping of SDW. Currently Kyrgyzstan lacks construction standards and regulations for dump sites of SDW, i.e. these standards and regulations have been developed but not approved yet. If we build new dump sites according to standards and store SDW layer by layer by isolating each of them, we can generate and capture methane. Further it can be used for burning or other purposes”.*

**Yuri Mun, National Coordinator of Youth Environmental Network in Uzbekistan:**

*“Very often in search of new kinds of energy we overlook or refuse to see what is available for all of us – both adults and children – economical use of energy. This does not*

Continued on p. 14

confirms once more the thesis that the electronic discussion group mainly included public representatives rather than decision-makers and officials of government bodies. Moreover, according to the opinions of participants none of CA countries achieved a real success in implementing these decisions, as well as in removing of existing barriers. Such thematic preferences of participants are quite understandable as what really important for them is something they can use in practice and in their daily lives.

To prevent climate change the discussion participants proposed the following measures:

- Improvement and harmonization of legislative base;
- Increasing efficiency of energy consumption and transition to renewable energy sources;

- Ensuring efficiency of regulatory bodies addressing climate change;
- Stimulation of introduction of “green technologies”;
- Reducing existing market and institutional barriers impeding implementation of economically effective measures to reduce greenhouse gas emissions;
- Coordination of activities in sphere of reducing greenhouse gas emissions including trade in emission quotas;
- Support of regional scientific-research activities;
- Conservation and rehabilitation of ecosystem.

#### **UNDP Supports Climate Change Mitigation in Central Asia**

*In Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan, UNDP is implementing a US\$ 15 mln GEF-funded program on energy efficiency in buildings which helps integrate energy efficiency in on-going and future state-funded construction and renovation programs in public and residential sector by a) developing and strengthening enforcement of building energy performance codes and energy passports; b) building capacity of relevant government authorities, architects, and energy managers; and c) showcasing integrated building design approach through a number of demonstration projects in schools, hospitals and multi-apartment residential buildings across the region.*

#### **UNDP is promoting carbon market development in Central Asia through MDG Carbon Facility and Kyoto Protocol capacity building project:**

- *In Uzbekistan, Kyrgyzstan, Tajikistan and Turkmenistan, UNDP is building institutional capacities of the Designated National Authorities for the Clean Development Mechanism;*
- *In Uzbekistan, MDG Carbon Facility is facilitating development of natural gas leakage reduction project with JSC UzTransGaz which will generate 1.3 mln tons of emission reductions (ERs) through 2012. Emission Purchase Reduction Agreement (ERPA) for this project was signed in June 2008.*
- *In Kyrgyzstan, MDG Carbon Facility is working with the Directorate for Small Hydro Power Development to prepare a carbon finance program for a bundle of 12 small hydro power projects and in Turkmenistan, support is being provided to JSC TurkmenEnergo for the development of carbon finance project on combined cycle power generation in Akchal power plant*

#### **UNDP is supporting renewable power projects in Kazakhstan, Kyrgyzstan and Tajikistan:**

- *In Kazakhstan, under UNDP -GEF \$3 mln Wind Power Market Development Initiative technical assistance has been provided for the development of new Renewable Energy Law, preparation of wind atlas of Kazakhstan, detailed wind resource assessment and pre-feasibility study for 10 sites. MoU between UNDP and National Holding Samruk-Energy has been signed for cooperation on the development of pilot wind power plants*
- *In Tajikistan and Kyrgyzstan, two technical assistance projects are being developed with financing from UNDP core resources, GEF and GTZ to help create favorable regulatory environment and build institutional and administrative capacities for small hydro power by setting attractive business terms and conditions for investors, streamlining and simplifying administrative procedures for project approval, collecting basic hydrological, technical and cost data and preparing feasibility studies for selected five sites (up to 20 MW).*

## “Live voices” from the discussion

require any investment from us, moreover, it positively influences our finances by showing the direct benefits on a personal level. Maybe this can somehow stir up people to treat natural resources with more care, once the attempts to save the planet for ourselves and our children did not work out”.

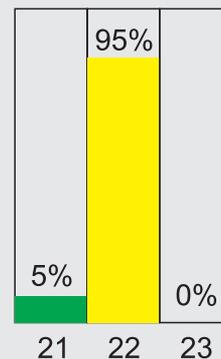
**Elena Rodina, Manager of GEF/UNDP project “Energy Efficiency in Buildings”, Kyrgyzstan:**

“The role of energy efficiency in the general theme of climate change is important as it gives practical mechanisms of reducing greenhouse gas emissions. For example, according to our estimates made in Kyrgyzstan, if we start designing and constructing buildings in line with standards of energy efficiency, the economy of energy by the fourth year of exploitation will reach 200 thousand kWt/hr. In Kyrgyzstan by the order on KR State Architecture of 1.01.2010. new Construction Standards and Regulations is now being introduced for designing of heat insulation of buildings and amendments to law on energy conservation, as well as a big section into Town Planning Code. But I can say that a number of non-governmental organizations are already working in villages to help rural people build energy effective houses”.

**Kurbonali Partoev – Director of NGO “Cooperation for Development”, Tajikistan:**

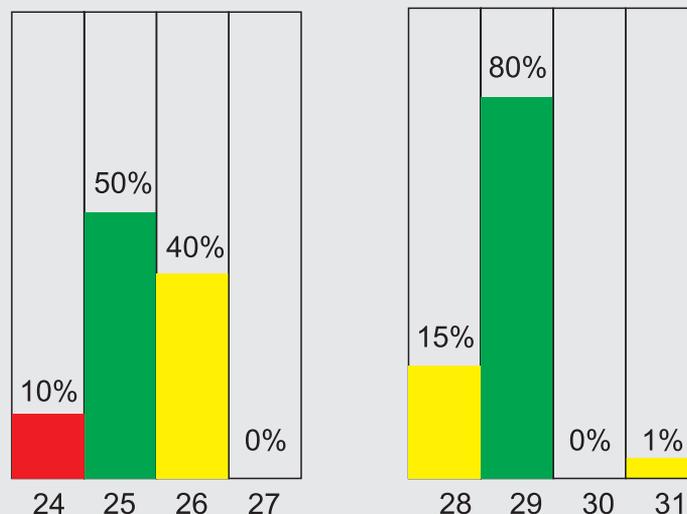
“In Kulyab, Khatlon oblast of Tajikistan the local public organization is carrying out an interesting project on construction of energy efficient dwelling houses with support of OXFAM (Great Britain). The main idea of this construction is based on traditional technologies with partial modification of walls and energy efficient design of windows providing sun exposure during all day. This practice could be replicated in those CA countries, which have more than 300 sunny days per year! Construction of such energy efficient houses opens up new perspectives for rational use of solar energy by local population, which will allow to reduce the use of fossil fuels and greenhouse gases emissions”.

### Opinion polls of the forum:



#### Do the developing countries need external support to address the climate change?

1. No, each country should solve its problems alone - 5%
2. Yes, external support is necessary, developing countries can not do without it - 95%
3. I don't know - 0%



#### Should the commitments to cut greenhouse gas emissions be the same?

1. Yes, the commitments should be the same for all countries - 10%
2. Commitments should depend on the level of the country's economy - 50%
3. Commitments should depend on the amount of greenhouse gas emissions - 40%
4. I do not know - 0%

#### What measures, in your opinion, should be taken in CA countries?

1. Reduce greenhouse gas emissions - 15%
2. Adapt to climate change - 80%
3. Do nothing. It is not up to us - 0%
4. I don't know - 1%

#### ***Theme 4: “Human face” of climate change: vulnerable groups and risk factors***

Unfortunately, the figures and statistics data of this section is rather limited, which is characteristic for other problems under question too. A quantitative analysis of migration in CA countries is done unsatisfactorily, and the problem of environmental migration, as it has been found recently, do not have quantitative analysis at all. Moreover, it is rather difficult to divide the causes for migration of population into economic and environmental ones due to the close connection between them.

However, participants expressed concern that with 74% of population living in rural mountainous areas, in Tajikistan, where the main source of water are the springs that can dry out due to shrinking glaciers, people will be forced to migrate to other places.

It has been reflected in the discussion that according to the international data the number of environmental refugees will increase due to climate change. Their number in the nearest future can reach 150 mln. people. National Communications on Climate Change say that many southern regions of Central Asia will suffer droughts, which will affect their agriculture and access to drinking water in already unfavorable regions. This also can drive people from their homes.

At the same time a sub-theme on vulnerability of population was in the focus of interest of discussants both by the number of visits and contributions. Participants named older people and children as the most vulnerable groups, which once more confirms that population of poor countries will be disproportionately affected by the impact of global climate risks. In regard with this, the countries with developed economies should pay greater attention to developing and poor countries and do their best to reduce greenhouse gas emissions remembering their historical responsibility.

Participants highlighted that the problem is in defining of the needed amount of support and which countries should be referred to poor ones. These are the two questions which are the main topics of discussion in preparation of new international agreements for post-Kyoto period. If they are to be solved to satisfy all parties, then we can expect significant progress in addressing the global problem of climate change. The amount of needed support is huge and as the discussants stressed the compromise in this process has not been yet achieved.

Different categories of population in CA countries were named by participants to be among the vulnerable groups depending on the predicted consequences:

- scarcity of water will affect everybody but the groups of population whose livelihoods and earnings for living directly rely on water, for example, farmers and rural people will suffer more;
- shifts in temperature regime will be reflected in the regime of demand for energy resources in winter period for people depending on constant supply power energy;
- climate change will also have negative effects on biodiversity of countries, putting under stress the people for whom biological resources are vital.

Among all categories of population the most vulnerable will be the poorest people.

#### ***“Live voices” from the discussion***

**Kurbonali Partoev – Director of NGO “Cooperation for Development”, Tajikistan:**

*“It should be noted that adaptation to risks of climate change needs in raising awareness of rural farmers, bearers of traditional knowledge and professionals in agriculture, especially of local agricultural crops, which for many years have acclimatized to agro ecological factors and plant growing conditions. Also rural women’s awareness should be raised, who traditionally, in our countries are engaged in agriculture.”*



**Viktoria, Kyrgyzstan:**

*“Some risk groups have already been identified: older people and small children are more affected by high temperature and pressure swings and more frequently suffer from outbreaks or aggravation of chronic diseases.”*

## “Live voices” from the discussion



**Shamil Iliysov, Associate Professor of KRSU, Candidate of Technical Sciences, expert of the 1st and 2nd National Communication of the KR on Climate Change:**

*“I would like once more stress the importance of the problem of environmental migration. Actually it is already taking place in many countries, including our region. At times we just do not see the real causes taking economic factors for the main reasons. Actually economy and ecology are the two closely related areas. A well-known saying as “climate change disproportionately affects the poor population” is already in place. Therefore actual reasons of migration are often related to poor living conditions caused among other things by already observed climate change”.*

**Timur Idrisov, Executive Director of Environmental organization “Small Earth”, Tajikistan:**

*“Long periods of drought, hunger and aggravating poverty force many people on our planet to leave their places. Today the number of such environmental migrants according to experts is 24 million people. By 2050 their number can increase to 200 million. The reason is climate change, as well as unsustainable farming and water management practices. Almost 70% of drinking water consumed by farming and livestock breeding, which at the same time are responsible for 80% of deforestation”.*

*According to research published by the Organization for Economic Cooperation and Development in 2008, “women are more likely to be “sustainable consumers,” meaning, for example, that they tend to buy ecologically friendly and organic foods, are more likely to recycle and are more interested in efficient energy use. Women and girls are easier to attract to cooperative initiatives, more socially focused, and more concerned about the impacts of climate change. Men and boys were less likely to get involved in sustainability and more drawn to technology, governance issues and business in discussing environmental issues”.*

*Source: UNFPA Report “Facing a Changing World: Women, Population and Climate”, 2009, p. 24*



### ***Theme 5: Countries and People in CA on the Road to Copenhagen: Forming Position***

By the time the E-discussion was launched the common positions not only of the world but also Central Asian countries have not yet been developed. 8-10 October 2009, Ashgabat hosted CA countries meeting aimed at developing of their common position. The final text of a collective message of CA countries has been discussed at the session of the Interstate Committee on Sustainable Development in Tashkent in November this year. It is quite understandable that countries' positions can not be fully concurrent due to different economic and energy situations there, as well as different status of participation in international climate agreements.

Particularly active participation (by the number of visits) was observed in the opinion poll "Can I contribute to reducing emissions", which is accessible and must be of interest to everyone. The highest number of comments were received in sub-theme "Position of CA countries in the run-up to the Copenhagen".

This theme of the discussion featured main recommendations on which environmental organizations in a number of countries insist and which refer to development of national and regional policies in climate change area, in particular:

- Countries of the region should recognize that participation in Kyoto and post-Kyoto agreement means not only benefits but also the readiness to undertake further concrete steps to fight climate change, even on terms of co-financing and technical support from developed countries;

- Governments of Central Asian states should start developing their own National Action Plans on climate change, in which development of environmentally safe alternative energy sources and energy efficiency must be one of the key priorities and undertake commitments to fund implementation of these plans;
- Programs and actions to prevent climate change and adaptation should be integrated into socio-economic development programs and strategies taking into account interregional participation;
- Adaptation policies of governments should be directed not only to strategic objects and sectors, but to local communities also. The common important task is to reduce vulnerability of poor population in the face of climate threats;
- Transfer of new technologies and methodologies aimed at adaptation to climate change and reducing emissions must go hand in hand with transfer of relevant knowledge and skills to local specialists for development of local capacity;
- Development of climate policy and implementation process should be open and transparent: governments should conduct broad public consultations and consider their opinion in making decisions.

### ***"Live voices" from the discussion***

#### **Beginmot:**

*"In any case, whatever decision is made in Copenhagen, regulatory mechanisms will be based on economic, and may be even on political (administrative) measures, what directly or indirectly will influence the well-being of our citizens (increase in tariffs, duties, tax, bans or limits on use, production of certain kinds of goods and services)".*

#### **Timur Idrisov, Executive Director of Environmental organization "Small Earth", Tajikistan:**

*"Signing of post-Kyoto agreement is crucial for all countries of Central Asia as it is in their long-term interest. The governments of countries, which committed themselves to reduce emissions, will have to take actions and even if these efforts require finances the costs of reducing negative impacts of climate change will be way too less that we will have to pay for "business as usual". But for most Central Asian countries the priority will be adaptation to climate change".*

## Literacy campaign on climate change

(Material from the discussion)

**Chinara asks:**

Dear experts,  
Is the global warming the same as the climate change or these are different processes? And can climate change be favorable for some regions? I heard, for example, that for Siberia, Russia climate change will mean longer warm periods that will favor their agricultural sector and overall economy of this region as it is going also to reduce the heating season?

**Yuri Mun, Country Moderator, Uzbekistan answers:**

In fact, climate change does not mean just higher temperatures on our planet. Global climate change is reorganization of all geosystem, where global warming is considered as one of the aspects of climate change. Also global climate change is associated with increased water level of the World Ocean, glacial melting, shifts in river runoff regime, upset of rainfall regime.

**Shamil Iliyosov, Regional Moderator answers:**

Certainly climate change can be advantageous for some regions. For example, in the north the warming will allow to grow agricultural crops that demand warmer climate. But, on the whole, it will largely have negative effects on Earth and Central Asia. Take, for example, the same Siberia, where glacial melting will bring about huge problems that can destroy all existing infrastructure (roads, populated settlements, pipelines). As for the reduced heating season, then it will automatically lead to consuming more energy for cooling in summer period.

### “Live voices” from the discussion

**Zuhra Abaihanova, Climate Change Advisor, UNDP “Environment Protection for Sustainable Development” programme, Kyrgyzstan:**

“Kyrgyzstan as a mountainous country, first of all, needs financial support for development and implementation of adaptation measures for economic sectors and natural resources that are particularly sensitive to climate change. On its part, Kyrgyzstan is ready to start developing Nationally Appropriate Mitigation Actions (NAMA) if developed countries provide support for its implementation. Equally important and necessary is the technical/logistical support for improvement of national capacity (training, travels of national delegations and experts, briefings, round tables and meetings with participation of international experts) for targeted coordination of ministries’ activities, building their capacity on participation in UN FCCC process and adequate representation of national interests”.

**Mavliuda asks:**

Dear experts, why is it becoming colder and colder with the global warming? Winters are longer and colder. Such severe winters according to older people have been observed in 80-ss. Where is the global warming? May be it is only local? Or there is not any...

**Shamil Iliyosov, Regional Moderator answers:**

You are mistaken, it is not becoming colder in the world with the global warming. This only seems to you so. During the last 100 years the average annual temperature has increased by almost 1 C. But the increase in temperature (even the slightest) at the same time upsets all climatic system on earth. What does it mean? It means too hot or too cold years are observed more frequently. The same is with the rainfalls: the last years have seen highly dry years or too much rainfalls. And such anomalies are well remembered against small warming, which is difficult to note due to its slightness.

**Ainura asks:**

I would like to know how global warming can impact the food chain, for example, does it have any effects on agricultural productivity? Second question: whether the global warming is a growing process? Is the regress possible?

**Shamil Iliyosov, Regional Moderator answers:**

That global warming can affect the food chain, namely, agricultural yield is undoubted fact for all Central Asia. However there is no accurate data on how (in figures) it is going to affect. Not because we do not like or try to get the answer. The matter is different. One can know about agricultural productivity in one or



## ***Literacy campaign on climate change***

*(Material from the discussion)*

*other state of climate only based on the experiment. Fortunately, the nature has not made such experiments with us. Therefore we do know for sure. We can only assume with a certain share of mistake based on the earlier accumulated experience. Such estimates have been obtained not only for Kyrgyzstan, but for Kazakhstan also. Different results have been received for different regions of Kyrgyzstan, for example, harvest of melons and gourds are expected to increase while grain crop yields will decrease.*

*To answer your second question: the global warming progress currently depend largely on the activity of international community on its mitigation. Unfortunately, rather unpleasant findings are observed, especially in joint consideration of global warming and ozone layer depletion. What does it mean? It means that human-induced warming in atmosphere cause internal processes (in atmosphere itself), which can speed up the global warming process.*

### **Galina asks:**

*Global warming is discussed all around. How the activities to combat climate change are funded in Kyrgyzstan, which has small budget as it is. In addition, adaptation in forest sector interests me. What is it like?*

### **Shamil Iiyasov, Regional Moderator answers:**

*Unfortunately, the amount of funding for adaptation is chosen individually for each country depending on the level of its economy. For example, in Kyrgyzstan all activities are assumed to be funded from external sources ( it is planned for future, for now none of proposals on adaptation has been funded yet). It also refers to all spheres of activities including the forest sec-*

*tor. Although certain measures are being taken at the national level, they provide only maintenance of forest sector in its present state. We can probably say about low understanding of the climate change problem by decision-makers, however, in many part it is the result of the age-old problem – trade off between economic and environmental problems.*

### **Vitaliy Konovalov asks:**

*Dear experts, is the situation which was shown in film “The Day After Tomorrow” possible to take place in reality, i.e. the world catastrophe changing the world in such a short time?*

### **Timur Idrisov, Country Moderator, Tajikistan answers:**

*Such quick changes as shown in this film are hardly possible because this is a feature film which is partly thought out. However, the raised issues have real grounds, for example, change of ocean flows – a number of scientists assume this to happen in future. It is also important that people in different parts of the world are already suffering the adverse impacts of climate change. According to scientists if we do not stop the warming of temperatures at the level of*

*1,5-2C, we will face disastrous processes that will be irreversible in many regions of the world.*

### **Mavliuda asks:**

*The Kyoto Protocol is about to expire soon. Now the countries should develop a new progressive and very effective document on environment protection through regulating chemical and hazardous emissions into atmosphere. What can Kyrgyzstan offer at the meeting in Copenhagen? Which issues should it raise that concern our environmental sustainability?*



## ***Literacy campaign on climate change***

*(Material from the discussion)*

**Timur Idrisov, Country Moderator, Tajikistan answers:**

*I can not say how it is in Kyrgyzstan but environmental organizations in Tajikistan, where impacts of global climate change such as melting of glaciers, more frequent droughts, disasters and change of ecosystems posing threats to its socio-economic development are already in place, the Government was suggested to include into its position the following point: “support the need for maintaining at the level of 1,5C and cut the global greenhouse gas emissions by 50% by 2050 from 1990 level, as well as recognizing that developed countries actions alone are not sufficient to prevent negative consequences of climate change.”*

*Tajikistan, like Kyrgyzstan, is standing almost last in the list of countries by greenhouse gas emissions per capita, however, we are already experiencing the impacts of climate change. Therefore for our countries adaptation will be the priority in the national climatic policy.*

**Ainura asks:**

*What is adaptation and what measures are being taken for adaptation in CA countries?*

**Narynbek Myrsaliev, Country Moderator, Kyrgyzstan answers:**

*The word adaptation speaks for itself. In the context of climate change it means getting adjusted in natural and human environment to the current or expected climatic impacts and their consequences, thus reducing the damage and developing useful capacities.*

*Although adaptation to climate change is important for all countries, it is especially crucial for the developing countries as their economy largely depend on climate-vulnerable sectors, for example, such as agriculture. These countries are less adaptable compared to industrial countries.*

*Adaptation at the national level includes development of effective implementation of adaptation strategy. This implies improvement of scientific base of decision-making, developing methodologies and tools for estimation of adaptation costs, educational programs, improvement of practical training and raising awareness of this problem, especially among young people, mobilization of forces at the individual and institutional levels, technological development, as well as support of local strategies for overcoming the difficulties. Besides that, potential first actions on adaptation may include development of appropriate legislation and legal and regulatory framework for the support of the adaptation activities. The process of achieving sustainable development could actually be accelerated by using the problem of climate change as a catalyst of favorable activities through achievement of adaptation targets. The countries in our region have almost the same conditions, therefore the adaptation measures are identical.*

**Polina asks:**

*Can you, please say what is more important now – climate change or financial crisis?*

## ***Literacy campaign on climate change***

*(Material from the discussion)*

**Shamil Iliysov, Regional Moderator answers:**

*Your question must be a little humorous but I'll try to give a serious answer. Financial crises occur at different times and then go away. Over the last century there have been many crises differing by their sizes and duration. To a certain extent people got used to them and know (not always for sure) how to overcome them. The climate change is a longer process and in the history of humankind we face it for the first time, therefore we do not have experience in dealing with this problem, everything we do is for the first time. This issue can be considered from the economic perspective. The crisis has resulted in the fall of GDP in different countries from the slightest to significant level for the coming several years. Approximately the same level of decline in GDP can take place if countries start full-fledged funding of the problem. However, unlike the financial crisis this decline will last for longer period. It is quite natural that if we want to address this global problem seriously, we'll have to tighten our belts for longer period.*

**Breguet asks:**

*We do not face any global warming. Any of us can take a magazine "Science and Life" and read out that micro-glacial periods and global warming have always taken place in the history of our planet. What do you think?*

**Yuri Mun, Country Moderator, Uzbekistan answers:**

*Today there are many facts proving the global climate change – rising temperature in atmosphere, melting glaciers, rising level of the world ocean, etc.*

*There are many hypotheses, however no one can state with 100% confidence what causes the global climate change. The same respected magazine "Science and Life" (Issue No7. 2006) says about relation between the Sun and our planet's climate, and the issue No 10. 2007 of this magazine already wrote about the impact of greenhouse gases on the climate. In my opinion, the global climate change depends on many factors. One of which is the greenhouse gases that we can reduce and also reduce our human impact on the nature through more economical use of energy, rational management of nature resources and using RES.*

## **Electronic discussion as a public participation tool in addressing climate change and poverty in Central Asia**

Experts of Central Asia for the first time discussed the common and local problems of global climate change through the electronic media with participation of a wide audience. An effective communication platform for a targeted dialogue was the E-discussion forum organized by CARNet Network.

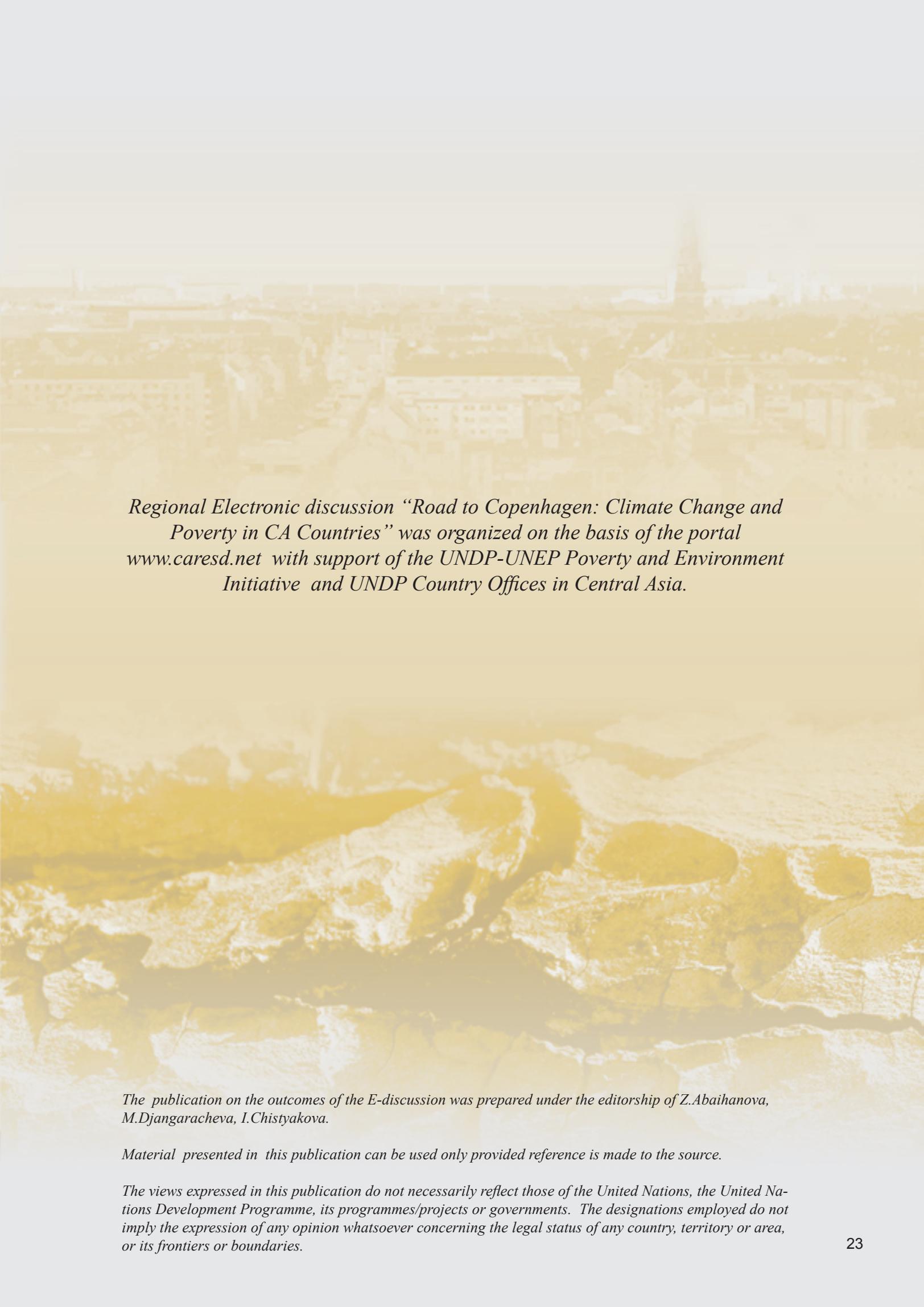
Organized in the run-up to the 15th Conference of Parties to UN Convention to Combat Climate Change the E-discussion on climate change fostered exchange of information and knowledge as a unique effective tool. This as a result allowed to reflect the process of expressing public opinion and influencing efficiency of implementation of adopted measures.

The E-discussion forum on climate change and poverty in CA countries proved itself as a unique and effective tool to conduct online discussions and consultations with all who are interested in obtaining knowledge on environment, climate change and human development issues. Not all participants were able to give qualified assessment or recommendations, but a large number of people demonstrated interests to the discussed issues.

The discussion fostered:

- Enhancing capacities and access to information on climate change, poverty, and gender aspects of this problem;
- Timely exchange of expert opinions and “live voices” reflecting specifics of countries and overall CA region;
- Demonstration of best practices of CA in addressing climate change;
- Involvement of expert communities, scientists, citizens interested in understanding and solution of this problem;
- Better access to information about climate change for unlimited number of consumers;
- Collection, summarizing and storage of large amounts of information on climate change in CA countries.





*Regional Electronic discussion “Road to Copenhagen: Climate Change and Poverty in CA Countries” was organized on the basis of the portal [www.caresd.net](http://www.caresd.net) with support of the UNDP-UNEP Poverty and Environment Initiative and UNDP Country Offices in Central Asia.*

*The publication on the outcomes of the E-discussion was prepared under the editorship of Z.Abaihanova, M.Djangeracheva, I.Chistyakova.*

*Material presented in this publication can be used only provided reference is made to the source.*

*The views expressed in this publication do not necessarily reflect those of the United Nations, the United Nations Development Programme, its programmes/projects or governments. The designations employed do not imply the expression of any opinion whatsoever concerning the legal status of any country, territory or area, or its frontiers or boundaries.*

“Electronic Informational Network on Environment Protection and Sustainable Development in Central Asia and Russia - CARNet” was established in 2004 on the initiative of the UNDP in Kazakhstan with support of the UNDP Regional Center for Europe and CIS in partnership with UNDP Country Offices in Central Asian states. Its main goal is to promote the idea of sustainable development, strengthen public awareness and participation in forming sustainable development policy based on new information and communication technologies and building on the existing experience and best practices.

