

Climate Action Today Determines Our Future

Public View of Climate Policy
in the Countries of Eastern Europe,
the Caucasus and Central Asia

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Collection of information and preparation of the report:

Iryna Stavchuk, National Ecological Center of Ukraine, CAN EECCA Network co-coordinator.

Editor: Yuliya Ogarenko.

Design: Ludmila Kharchenko, Nadezhda Antonova and Ekaterina Roma.

If you find any inaccuracies or incomplete information, please do not hesitate to contact us at is@necu.org.ua.



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List of abbreviations

EECCA	– Eastern Europe, Caucasus and Central Asia
FSC	– Forest Stewardship Council
GFW	– Global Forest Watch
GHG	– greenhouse gases
IEA	– International Energy Agency
IMF	– International Monetary Fund
INDC	– Intended Nationally Determined Contributions
IPCC	– Intergovernmental Panel on Climate Change
NAMA	– National Appropriate Mitigation Actions
NRES	– non-traditional and renewable energy sources
RES	– renewable energy sources
TNA	– Technology Needs Assessment
UNFCCC	– United Nations Framework Convention on Climate Change

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Introduction

In November 2015, signatories to the UN Framework Convention on Climate Change will convene in Paris at the 21st Conference of the Parties, where they plan to develop and sign a new global agreement on climate change. The new agreement will feature climate change mitigation actions both developed and developing nations alike – a fundamental difference from its predecessor, the Kyoto Protocol. Each country, in view of its financial capabilities and national circumstances, should prepare and submit its Intended Nationally Determined Contributions (INDC) before October 1, 2015.

INDCs for the reduction of GHG emissions are mandatory and may include different measures and objectives; e.g. overall emission reduction target in relation to the base year, emission reduction target compared to the 'business-as-usual' scenario, targets for increasing the role of RES in the total energy balance, targets for reducing the energy intensity of the economy, gradual phase out of fossil fuel subsidies, etc.

INDC contributions for adaptation are not mandatory. However, for developing countries, the INDC is a powerful tool to declare their adaptation needs and actions, and request international support.

Ideally, a country's INDC should be based on its own national climate policy. However, even more

than 20 years after the UN Framework Convention on Climate Change was signed, climate policy in many countries of the world is still in its early stages, and is often of indefinite nature, weakly integrated into other sectors of economy and not supported by a strong institutional base.

The presented report consists of the following two parts: (1) Scientific basis for climate change actions, and (2) Climate policy review for EECCA countries. The first part presents scientific background information of the urgency to reduce emissions, risks associated with the global temperature increase above 2 °C, as well as global budget allocation options for emissions between developed and developing countries to reach a long-term objective. The second part provides information on the trends in greenhouse gas emissions, development of renewable energy sources and incentive legislation, fossil fuel subsidies, trends in the forestry sector, institutional organization of work on the topic of climate change, examples of negative solutions in climate policies, and an overview of positive regional initiatives.

We believe that this report can become the basis for the preparation of an INDC or long-term climate policy.

Part 1: Scientific basis for climate change actions

The question: «Is our climate changing?» is no longer discussed in scientific circles. According to the 5th assessment report of the Intergovernmental Panel on Climate Change, scientific evidence of rapid climate change as a result of man-made causes from the late 19th century is readily apparent [15]. The burning of coal, oil and gas, as well as deforestation, and industrial and agricultural processes are the main causes of increased greenhouse gas (GHG) emissions in the air and contribute to the changes we already observe.

The key questions scientists are currently trying to answer, include:

1. What is the maximum threshold for global warming, before which it would be possible to avoid the most serious consequences to nature and human beings? What consequences can we expect under different global warming scenarios?
2. What global emission reductions are necessary and how should they be allocated between countries?
3. How is it technically and economically feasible to achieve the necessary emission reductions and what measures will be required to be undertaken for this purpose at the local, national and international levels?

1.1

Is there any difference between warming by 2 °C and by 4 °C?

Greenhouse gas emission reduction commitments already proposed by the countries within the negotiation process of the UN Framework Convention on Climate Change (UNFCCC) will lead the world to warming by 4 °C. Scientists warn that the limit for relatively safe warming is 2 °C, and for many regions and ecosystems, no more than 1.5 °C. What is the scope of change if the temperature on the planet rises 2 °C, or 4 °C?

Figure 1. Scenarios and targets of limiting global temperature growth by 2100

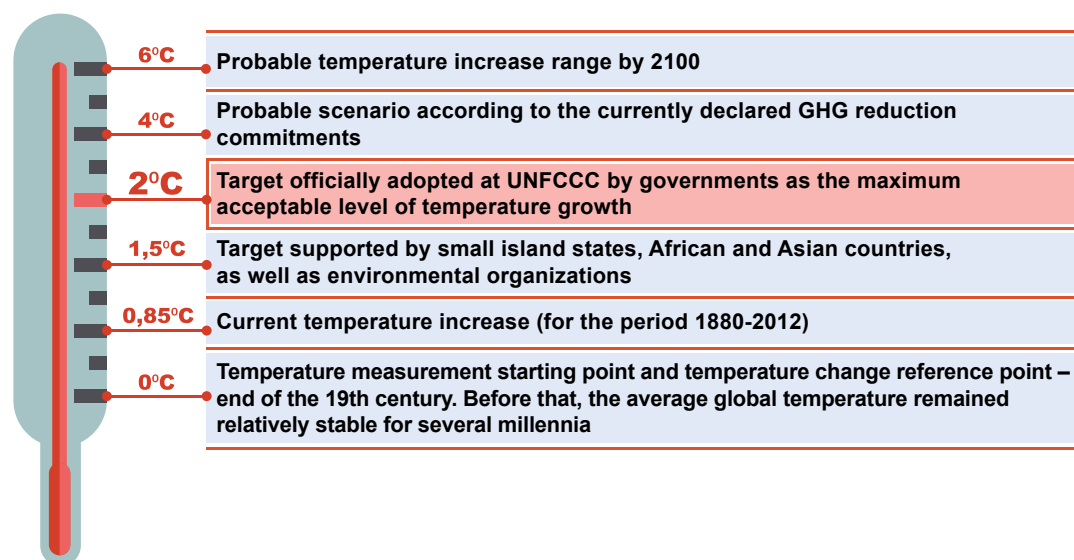


Table 1. Comparison of climate change impacts under 2 °C and 4 °C global temperature change scenarios

Factor and region	Impacts for 2 °C	Impacts for 4 °C
General assessments	Temperature increase by no more than 2 °C by 2100 poses a serious problem globally, especially for least developed countries. Under this scenario however, some of the most negative impacts of climate change will be prevented.	The impacts will be extremely serious, most of which may exceed the capabilities of adaptation to the new climate realities. Warming by 4 °C by 2100 would likely lead to temperature stabilization 6 °C above the pre-industrial level during the following several centuries. There is no historical geological analogy to such vigorous warming. If mankind does not reduce emissions, warming of greater than 4 °C is likely to lead to the large-scale extinction of the species, which occurred 55 million years ago in the course of the Paleocene-Eocene temperature maximum.
Floods and precipitation, Russia, Far East	Intensity and frequency of floods and monsoon rains will increase.	Catastrophic floods and precipitation will force the phase out of business activities across a wide range of territories, or, at the very least, bring about a more rotational method (without permanent residence).
Droughts and agriculture, EECCA countries	Shortage of water and thermal load will adversely affect the yield capacity in drought-prone regions, threatening food security. As expected, the frequency of catastrophic droughts will redouble in large agricultural regions. Nevertheless, it is possible to adapt, to a certain extent, to these consequences through the use of new plant varieties and better irrigation.	It is globally forecasted that wide areas will become so arid that cultivation of certain crops would be unprofitable or even impossible. In case of 4 °C warming, dewatering of arid regions will be almost twice as high as compared to the 2 °C scenario.
Arctic coast of Russia	Extreme weather events, melting of permafrost and soil erosion will be rather intense, though the indigenous population should persevere. Business activities will become more costly.	Extreme weather events, melting of permafrost and soil erosion will be so heavy that business activities may require a rotational team method (without permanent residence). The indigenous population will face major problems.
"Heat" waves, all EECCA countries	"Heat" waves will be at least 2 times more frequent than now, and more severe; infectious diseases more easily spread; however, the healthcare system should be able to cope with it.	Intense thermal waves will become a normal occurrence, and a radically new class of thermal waves with magnitudes never before observed will take place. This will have a serious, but not yet quantified impact on agricultural production and the state of public health. Such heat waves will cause considerable growth to the premature mortality of persons with cardiovascular and other diseases.
Biodiversity	Wide geographic scale of destruction of coral reefs and the ecosystems dependent on them. High risk of loss of biodiversity in vulnerable ecosystems.	In the world with warming of 4 °C, climate change may become a dominant instrument in ecosystem shifts, leading to the destruction of the habitat and posing a greatest threat to biodiversity. Many species and ecosystems could be lost forever.
Coastal areas	In case of warming by 2 °C by 2100, sea levels will rise by 80 cm compared to the year 2000. However, a long-term stabilization of warming by 2 °C involves the continuous rise of sea levels for ages, which may reach 3 m by 2300. At the moment, the irreversible ice cover melting threshold in Greenland is estimated as 1.6 °C warming above the pre-industrial level (assessment of the 4th expert report of the IPCC was 3.1 °C).	Sea level rise will be more than 1 m by 2100, and it is very difficult to predict sea level rise after 2100 due to large gaps in the understanding of ice cover responses to such high warming. Potential impacts will be serious and sea levels could rise by 1 m or more. Almost 187 million people will face a real risk of involuntary re-settlement within a century (up to 2.4% of the world's population). According to forecasts, the frequency of the most destructive (4th and 5th categories) Atlantic tropical cyclones and hurricanes will almost double by the end of the 21st century.

Sources: Aleksey Kokorin (WWF Russia); [10].

The negative consequences of 2 °C and 4 °C warming are vastly different. While 2 °C warming still allows for a degree of adaptation, 4 °C warming may bring about irreversible changes and negative effects for the lives of hundreds of millions of people across the planet, due to the shortage of drinking water, flooding of territories, inability to conduct agricultural business, and the destruction of ecosystems.

1.2

Global carbon budget

The adoption of a global goal to reduce annual greenhouse gas emissions to a certain level by 2050 is not enough to guarantee temperature rise is limited to 1.5 °C or 2 °C. Instead it is important to also ensure the total emission volume will not exceed the allowable level, the so-called “carbon budget,” by 2050.

The IPCC’s fifth assessment report includes calculations for the total global carbon budget for warming levels of 1.5 °C and 2 °C, depending on the probability of achieving these targets (from 10% up to 90%) [15]. The higher the degree of probability is for achieving the stated objective, the lower the carbon budget will be.

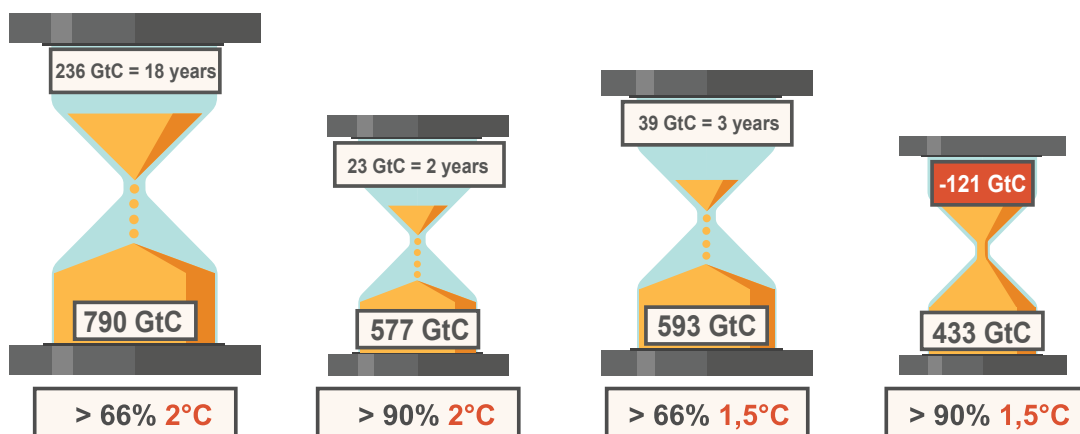
We should do our best to hold global warming to below 2 °C. There is a good chance this objective will succeed by 2050.

According to the IPCC estimates, mankind has used almost the entirety of the carbon budget to achieve the target of 1.5 °C, and, further, to restrain warming up to 2 °C with the maximum probability [15].

If we choose the target of 2 °C with a probability of 66%, then the remaining carbon budget is equal to only 860 gigatons of carbon (GtC). Assuming the current level of annual emissions, this budget will be exhausted in less than 20 years. Moreover, in this scenario, a third of this budget will be expended in the coming 5-6 years.

It is crucial to reduce emissions today, and to make the relevant adjustments in the power, transport, industry, and buildings sectors and in urban planning

Figure 2. Carbon Budget for Limiting Global Warming to 1.5 °C and 2 °C



According to the Fifth Assessment Report of the IPCC, to keep global warming to the level of 2 °C with a probability of 66%, the total carbon budget should not exceed 2,900 GtCO₂-eqv., or 790 GtC. Before 2011, mankind used up 1,890 GtCO₂-eqv., or 515 GtC, with annual emissions of approximately 50 GtCO₂-eqv., or 13 GtC. Therefore, there are only 860 GtCO₂-eqv. (236 GtC) remaining in the carbon budget for the period 2015 to 2050 [15].

1.3

Role of developed and developing countries in global emissions reduction

The role of both developed and developing countries regarding emissions reductions is high on the agenda for the upcoming international negotiations. While in the Kyoto Protocol emissions reduction commitments were limited to the group of developed countries (Annex I), the more recent adoption of the Bali Action Plan has brought developing countries' obligations to the forefront of the debate.

If emissions are calculated based on domestic production (rather than consumption), then, according to statistics from the International Energy Agency (IEA), Annex I countries reduced their CO₂ emissions 3.9% for the period 1990-2011. Conversely, non-Annex I countries increased their emissions 160.8%. Put simply, the past two decades demonstrate a trend of considerable emissions growth in developing countries and stabilization/reduction in developed countries. Further, the share of developed countries' emissions in the global scheme is decreasing.

At the same time, if we recalculate the emissions with an adjustment for exports/imports (taking into account the actual carbon footprint from consumed products), we see that emissions are significantly growing, even in those countries, which have formally fulfilled their commitments under the Kyoto Protocol [26].

The tables below display the carbon budget allocations for developed and developing countries for the following two scenarios: (1) - high probability of limiting warming to the level of 2 °C, which requires global emissions reductions of 80% from 1990 levels by 2050, and (2) - medium probability of limiting warming to the level of 2 °C, which requires global emissions reductions of 50% from 1990 levels by 2050 [10]. The approach to fair allocation is based on equal emissions per capita for developed and developing countries.

In the considered scenarios, commitments for the group of developed countries should not be lower than 85-90% from 1990 to 2050. In this case, commitments for developing countries will be within the range of +7% of growth to -56% of reduction from the level of 1990, depending on the reductions achieved by developed countries. It is evident that the problem of climate change cannot be solved without assistance from developing countries.

Table 2. Allocation of the carbon budget between developed and developing countries with high probability of limiting global warming to the level of 2 °C (Scenario - 1)

	2050	2050	2050	2050	2050
Change of emissions of Annex I countries from 1990	-60%	-80%	-85%	-95%	-100%
Global change of emissions from 1990	-50%	-50%	-50%	-50%	-50%
Change of emissions of non-Annex I countries from 1990	-30%	0%	+7%	+22%	+29%
Emissions of Annex I per capita, tons CO ₂ eqv./person	5,5	2,8	2,1	0,7	0,0
Emissions of non-Annex I per capita, tons CO ₂ eqv./person	1,4	2,0	2,1	2,4	2,5

Per capita emissions figures for the two groups will become equal by 2050 only if Annex I countries reduce their emissions 85% below 1990 levels. Note that under this scenario emissions from non-Annex I countries can actually increase. If contributions from Annex I countries are reduced to 60% however, significant reductions will be required from non-Annex I countries in order to meet the overall target of 50%.

Table 3. Allocation of the carbon budget between developed and developing countries with medium probability of limiting warming to the level of 2 °C (Scenario - 2)

	2050	2050	2050	2050	2050
Change of emissions of the Annex I countries from 1990	-60%	-80%	-85%	-95%	-100%
Global change of emissions from 1990	-80%	-80%	-80%	-80%	-80%
Change of emissions of non-Annex I countries from 1990	-107%	-78%	-70%	-56%	-48%
Emissions of Annex I per capita, tons CO ₂ eqv./person	5,5	2,8	2,1	0,7	0,0
Emissions of non-Annex I per capita, tons CO ₂ eqv./person	(0,1)	0,4	0,6	0,9	1,0

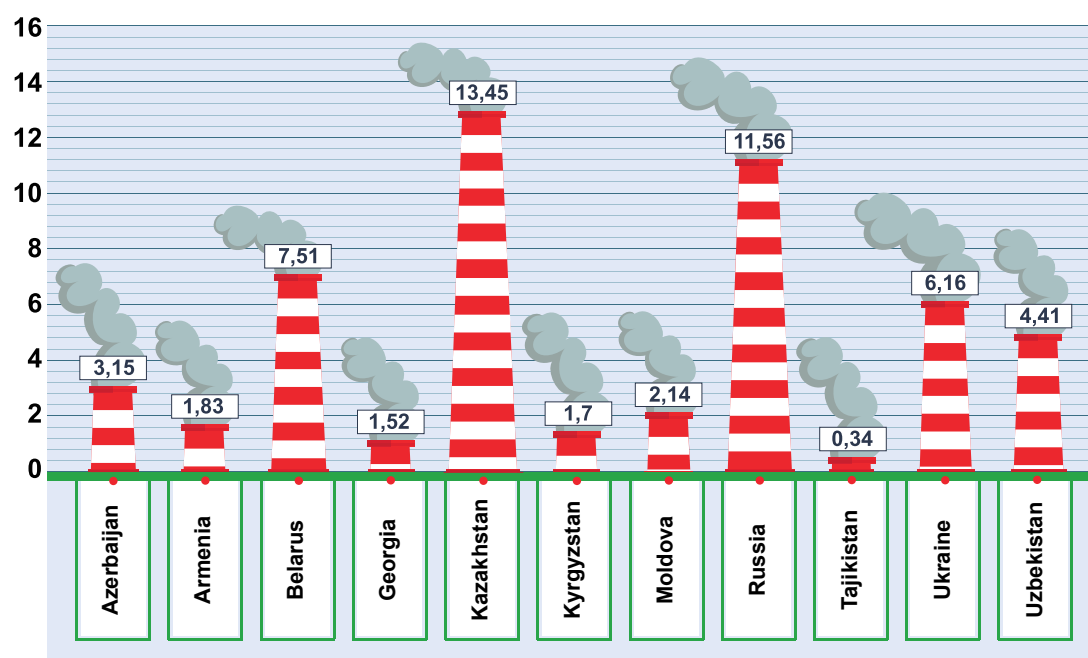
Unlike Table 2, emissions reductions from non-Annex I countries will be necessary regardless of what Annex I countries achieve if the global target of 80% below 1990 levels is to be met by 2050. Per capita emission figures for developed and developing countries will only become equal by 2050 if emissions from Annex I and non-Annex I countries are reduced by 95% and 56% below 1990 levels respectively.

If we use greenhouse gas emissions per capita (specifically a target level of 2 tons CO₂ per capita in 2050) as a barometer for the long-term objectives of EECCA countries, then coun-

tries such as Russia, Kazakhstan, Belarus and Ukraine will need to undertake much greater efforts to reduce emissions compared to other EECCA countries.¹

¹ This approach does not take into account other factors – GDP level, energy intensity of the economy, historical responsibility – discussed at the UNFCCC negotiations and is only presented in the report as a surface-level comparison. Also, as we do not have data for total GHG emissions for all EECCA countries; data concerns only CO₂ emissions.

Figure 3. CO₂ emissions per capita (tons) in EECCA countries in 2012



Source: [13]

Part 2: Climate policy overview for the EECCA region

2.1

Greenhouse gas emission trends and declared objectives for reduction

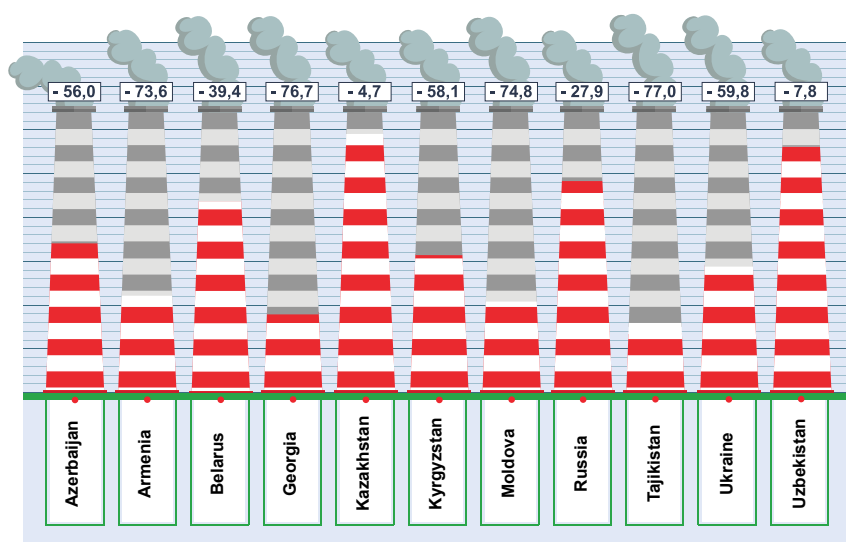
In almost every country in the EECCA region, greenhouse gas emissions have decreased compared to 1990 levels (except for Turkmen-

istan, which is not considered in this report). The reductions vary from -4.7% in Kazakhstan to -77% in Tajikistan.

Below are charts with CO₂ and greenhouse gas emission trends in each of the EECCA countries for the period 1990-2012. The graphs also show announced targets for 2020 and 2050, if such targets are approved at the national level. Russia has the most ambitious emission reduction objectives for 2050, corresponding to the IPCC recommendations - minus 80% from 1990 levels. However, only Kazakhstan's objectives for 2020 provide for any real emissions reduction, taking into account the volume and dynamics of greenhouse gas emissions over the last decade. 2020 Objectives for the remaining EECCA countries do not encourage emissions reduction; without taking any measures, the countries will achieve these objectives.

It is important to note that INDCs are assessed by a number of independent scientific initiatives and widely discussed in mass media. Therefore, the quality of the INDC affects to a great extent the country's image and future opportunities for cooperation under programs for greenhouse gas emission reduction and adaptation to climate change.

Figure 4. Reduction of CO₂ emissions (%) in EECCA countries during 1990-2012



Source: [13]

March 31, 2015 was the deadline for submitting an INDC (Intended Nationally Determined Contributions) for the period of 2020-2030. As of April 15, only Russia submitted its INDC from the EECCA region. It is expected that the other countries will submit their contributions before October 1, 2015. The format of the INDC objectives may include targets for general emissions, renewable energy sources, energy efficiency improvement, preservation/restoration of forests and adaptation to climate change.

Figure 5. CO₂ emissions (MMt) in Azerbaijan

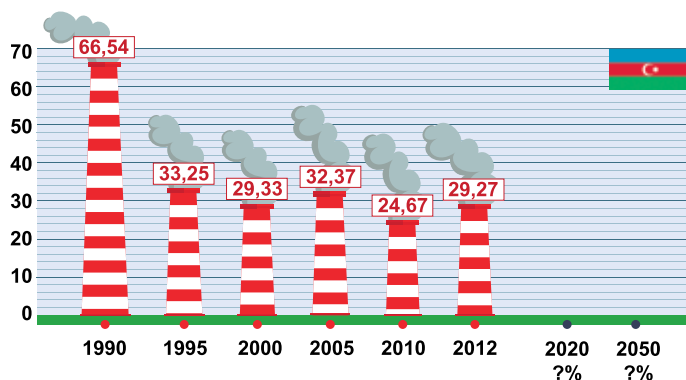


Figure 8. CO₂ emissions (MMt) in Georgia

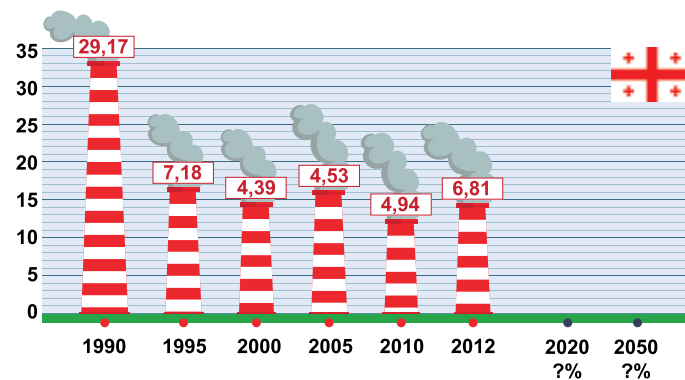


Figure 6. CO₂ emissions (MMt) in Armenia

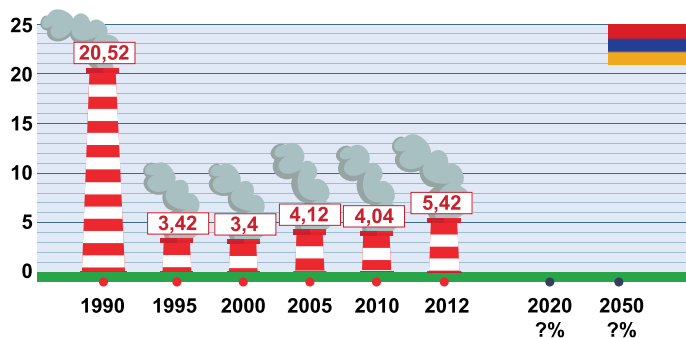


Figure 9. CO₂ emissions (MMt) in Kazakhstan and reduction objectives for 2020 and 2050

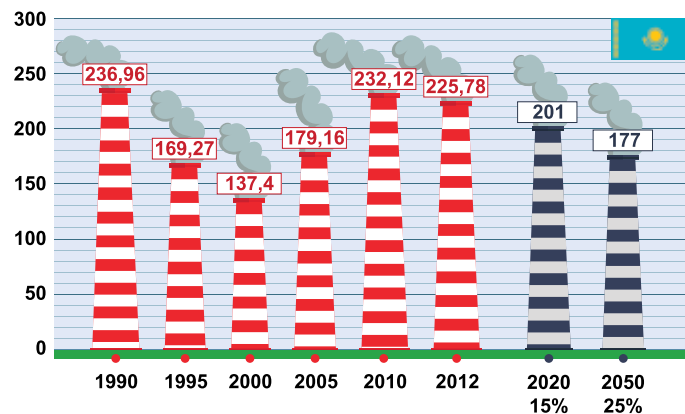


Figure 7. CO₂ emissions and greenhouse gas emissions (MMt CO₂-eqv.) in the Belarus and reduction objectives for 2020 and 2050

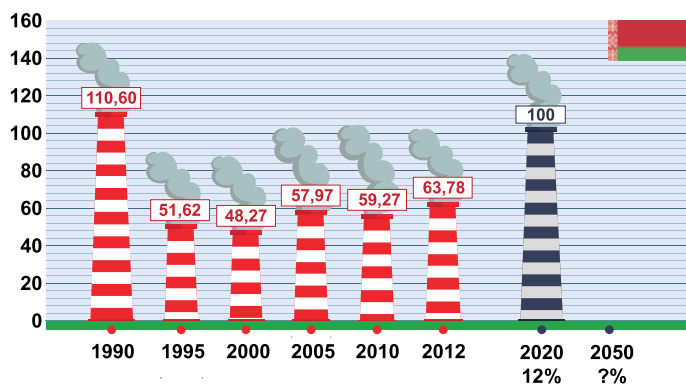


Figure 10. CO₂ emissions (MMt) in Kyrgyzstan and reduction objectives for 2020 and 2050

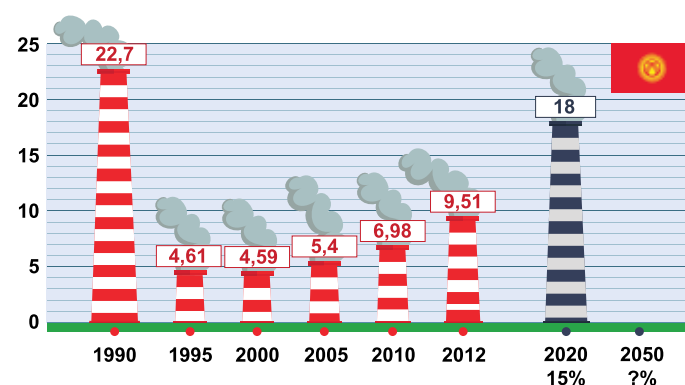


Figure 11. CO₂ emissions (MMt) in Moldova and reduction objectives for 2020 and 2050

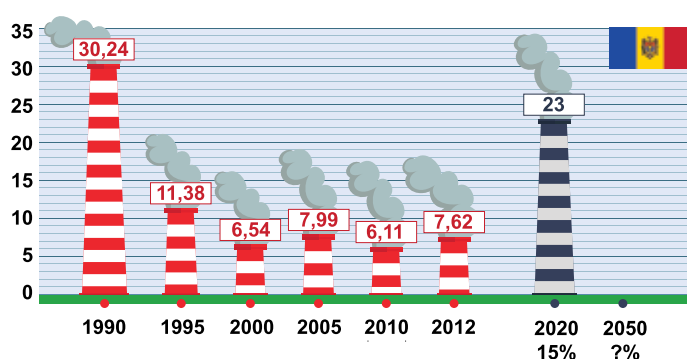


Figure 14. CO₂ emissions (MMt) in Uzbekistan

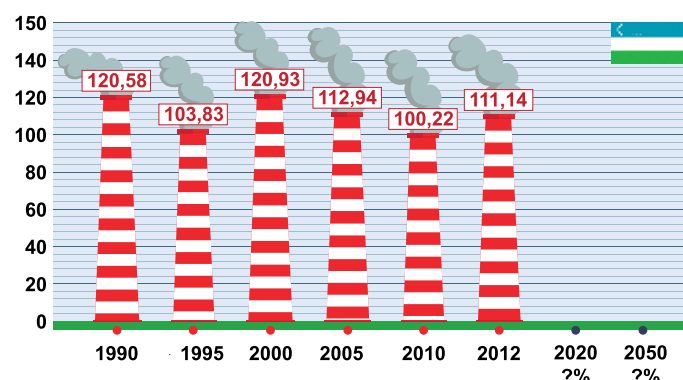


Figure 12. CO₂ emissions and greenhouse gas emissions (MMt CO₂-eqv.) in the Russian Federation and reduction objectives for 2020 and 2050

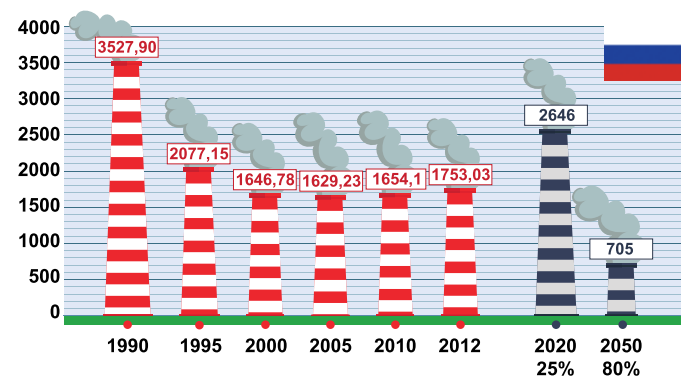


Figure 15. CO₂ emissions and greenhouse gas emissions (MMt CO₂-eqv.) in the Ukraine and reduction objectives for 2020 and 2050

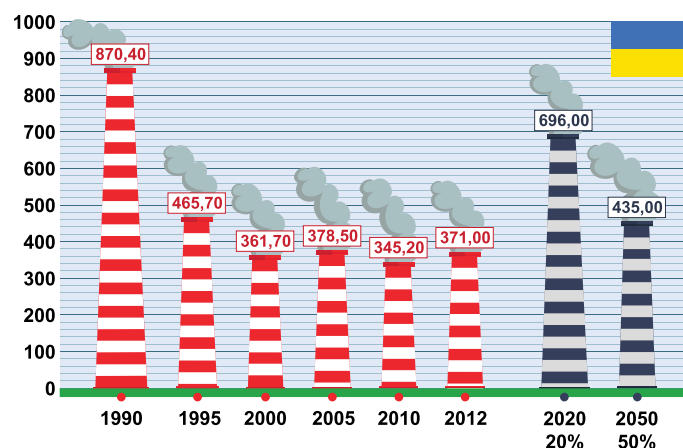
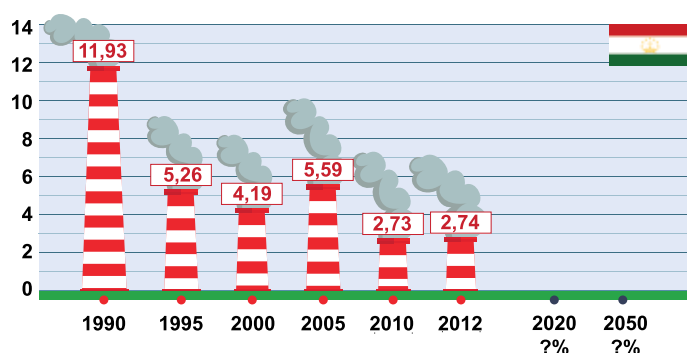


Figure 13. CO₂ emissions (MMt) in Tajikistan



Note:

The above charts represent the breakdown of greenhouse gas emissions trends in EECCA countries. Since data on general greenhouse gas emissions for 2012 are not available for all countries, data was taken from national GHG emission inventories for annex-1 countries ([2], [5]), and CO₂ emissions data was taken from the report by the International Energy Agency [13] for non-Annex1 EECCA countries. The declared emissions reduction objectives for 2020 and 2050 refer to the cumulative greenhouse gas emissions specified in relation to CO₂ emissions.

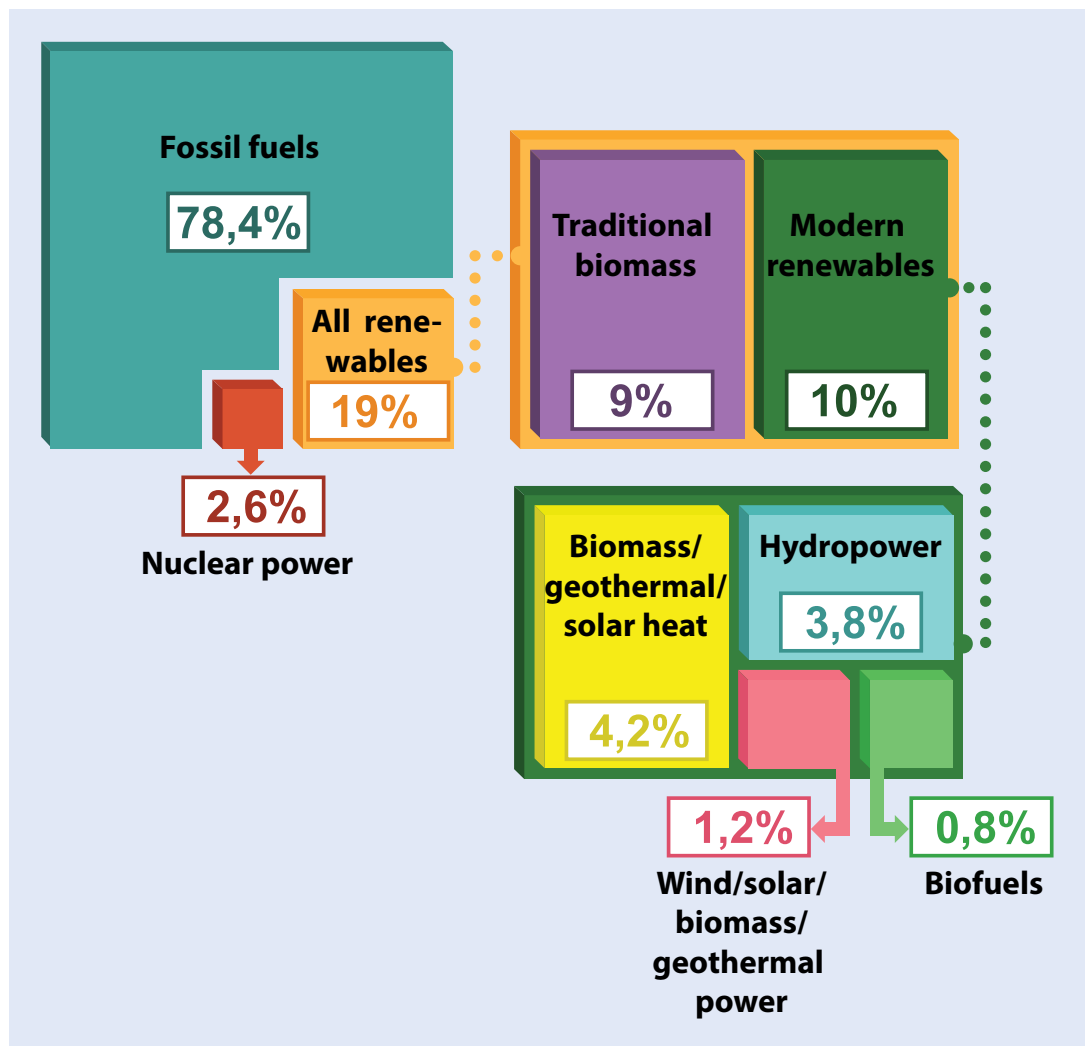
2.2

Role of renewable energy sources: statistics and legislation

IPCC: Phasing out fossil fuels by 2050 will ensure global warming is limited to 2 °C with a probability of more than 90%.

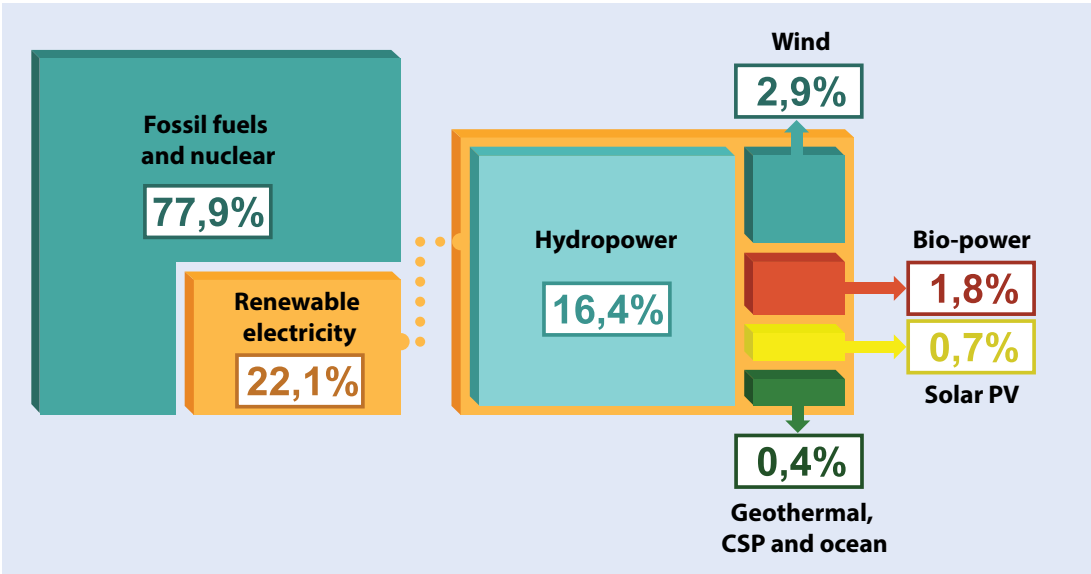
The role of RES in the global energy balance should reach 25% by 2020 and 100% by 2050.

Figure 16. Estimated renewable energy share of global final energy consumption, 2013



Source: [21]

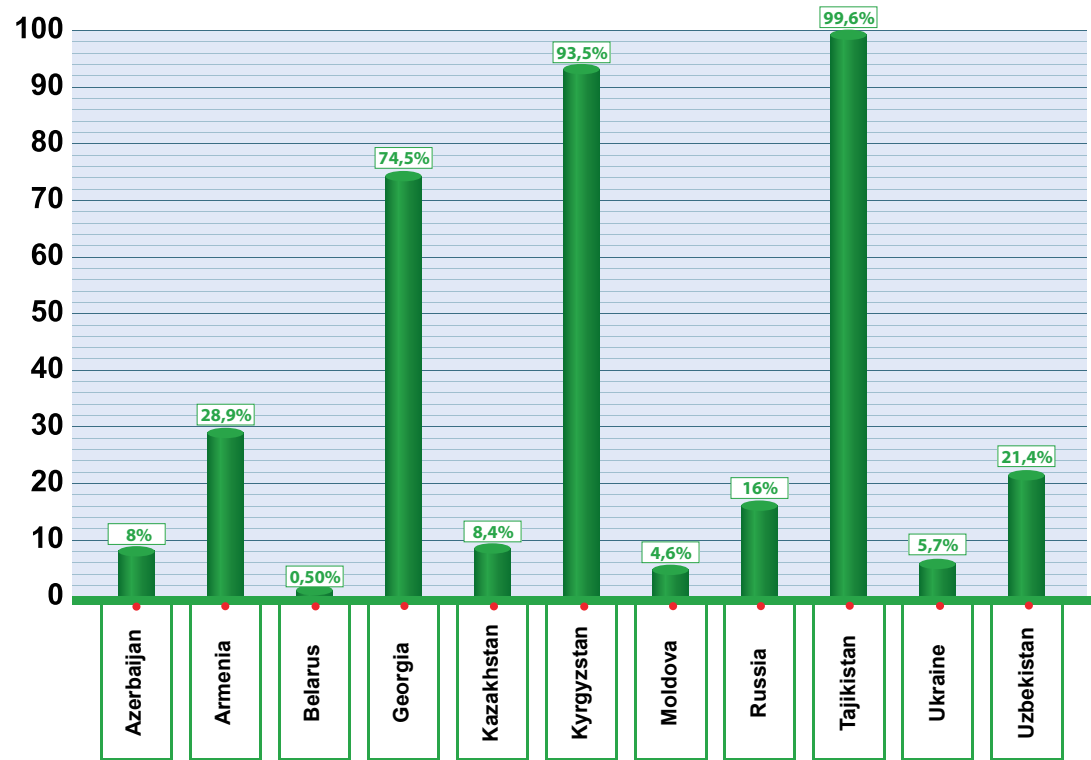
Figure 17. Role of renewable energy sources in global electricity production, end of 2013



Source: [21]

There are several EECCA countries with a very high RES share in electricity production: Georgia, Kyrgyzstan and Tajikistan. These countries have greater still potential, especially for the hydropower sector.

Figure 18. Share of renewable energy in electricity production in EECCA countries in 2012



Source: IEA (2014), Energy Balances of Non-OECD Countries, OECD/IEA, Paris [30]

Table 4. Role of RES and national targets for RES development in EECCA countries

	Country	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Ukraine	Uzbekistan
Role of RES in energy sector	% of RES in TPES in 2012	1.8%	7%	5.3%	25.4%	1%	30%	3.3%		64%	3.1%	2%
	RES target in TPES	9.7% by 2020	21% by 2020, 26% by 2025					20% by 2020			18% by 2030	
	% of RES in final energy consumption in 2012	2.6%	3.9%									
	RES objective in final energy consumption	30% by 2030 without large HPP		28% by 2015, 32% by 2020*				17% by 2020			11% by 2020	
Role of RES in the electric power industry	% of RES in electricity production in 2011/2012	8%	28.9%	0.50%	74.5%	8.4%	93.5%	4.6%	16%	99.6%	5.7%	21.4%
	Objective for % of RES in electric energy	20% by 2020				3% by 2020		10% by 2020	4.5% by 2020		20% by 2030	

Source: REN21 and OECD/IEA, 2015.

* - target for Belarus includes not only RES, but also other local energy sources, like peat and residues from oil refineries.

Only half of EECCA countries have clear national targets for RES development. Among the EECCA countries, Armenia, Azerbaijan, Belarus, Moldova and Ukraine have the most ambitious objectives for RES development. However, Belarus' target includes other local sources of energy, like peat and residues from oil refineries.

Policy support for renewable energy sources is rather weak in the EECCA region. Many countries do not have state policies for RES encouragement to ensure the necessary conditions for their development. Several countries adopted legislation on feed-in-tariffs, but according to the Ukrainian Wind Association this mechanism only realistically works in Ukraine and Kazakhstan.

Table 5. State of the national RES support policy in EECCA countries

	Country	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Ukraine	Uzbekistan
Regulatory and fiscal instruments	Renewable energy targets	0	0	0		0		0	0	0	0	
	Feed-in-tariff/premium payment		0**	0		0**		0	R	0	0	
	Electric utility quota obligation/RPS			0			0					
	Net metering										0	
	Tradable REC					0						
	Tendering								□			0
	Heat obligation/mandate											
	Biofuel obligation/mandate										0	
State financing	Capital subsidy, grant or rebate					0	0		0		0	
	Investment or production tax credits											
	Reductions in sales, energy, CO ₂ , VAT or other taxes			0			0			0	X	
	Energy production payment mechanism											
	Public investment, loans or grants	0		0				0		0	0	

□ – new legislation; 0 – existing legislation; R – revised existing legislation; X – cancelled legislation.

Source: [21].

** Although REN21 lists many countries with feed-in-tariff systems, the legislation for all RES only legitimately functions in Ukraine and Kazakhstan, according to the Ukrainian Wind Association.

Table 6. Definitions of Specific State Policy Instruments for RES Encouragement

Regulatory and fiscal instruments	Renewable energy targets	Adoption of RES development targets at the national level
	Feed-in-tariffs	A policy that typically guarantees renewable generators specified payments per unit (e.g., USD/kWh) over a fixed period. Feed-in-tariff policies may also establish regulations by which generators can interconnect and sell power to the grid. Numerous options exist for defining the level of incentive, such as whether the payment is structured as a guaranteed minimum price (e.g., a feed-in tariff), or whether the payment floats on top of the wholesale electricity price (e.g., a feed-in premium)
	Electric utility quota obligation/RPS	Instrument obliging energy producing companies to produce certain amount of energy from renewable sources.
	Net metering	Service provided to energy consumers. Electric energy produced by the consumer at an authorized facility and supplied to the common network may be accounted in the general electricity bill.
	Tradable REC	Any company producing electric energy from RES receives certificates for each unit of energy produced; these certificates may be traded. There are two types of certificate markets: mandatory (if there is a commitment for companies in the country or at the local level to produce % of energy from RES) or voluntary (purchaser itself chooses energy from what sources to purchase)
	Tendering	A procurement mechanism by which renewable energy supply or capacity is competitively solicited from sellers, who offer bids at the lowest price that they would be willing to accept. Bids may be evaluated on both price and non-price factors
	Heat obligation/mandate	Similar instrument to the commitment for % of electricity from RES.
	Biofuel obligation/mandate	Similar instrument to the commitment for % of electricity from RES.
State funds	Capital subsidy or rebate	A subsidy that covers a share of the upfront capital cost of an asset (such as a solar water heater). These include, for example, consumer grants, rebates, or one-time payments by a utility, government agency, or government owned bank
	Investment and production tax credits	Investment tax credit is a fiscal incentive that allows investments in renewable energy to be fully or partially credited against the tax obligations of a project developer, industry, building owner, etc. Production tax credit is a tax incentive that provides the investor or owner of a qualifying property or facility with a tax credit based on the amount of renewable energy (electricity, heat, or biofuel) generated by that facility.
	Energy Production Payment mechanism	Commitment for energy companies to purchase energy from small producers (farmers, households) during a certain period. Works similarly to green tariffs.

2.3

Energy saving and energy efficiency: statistics and legislation

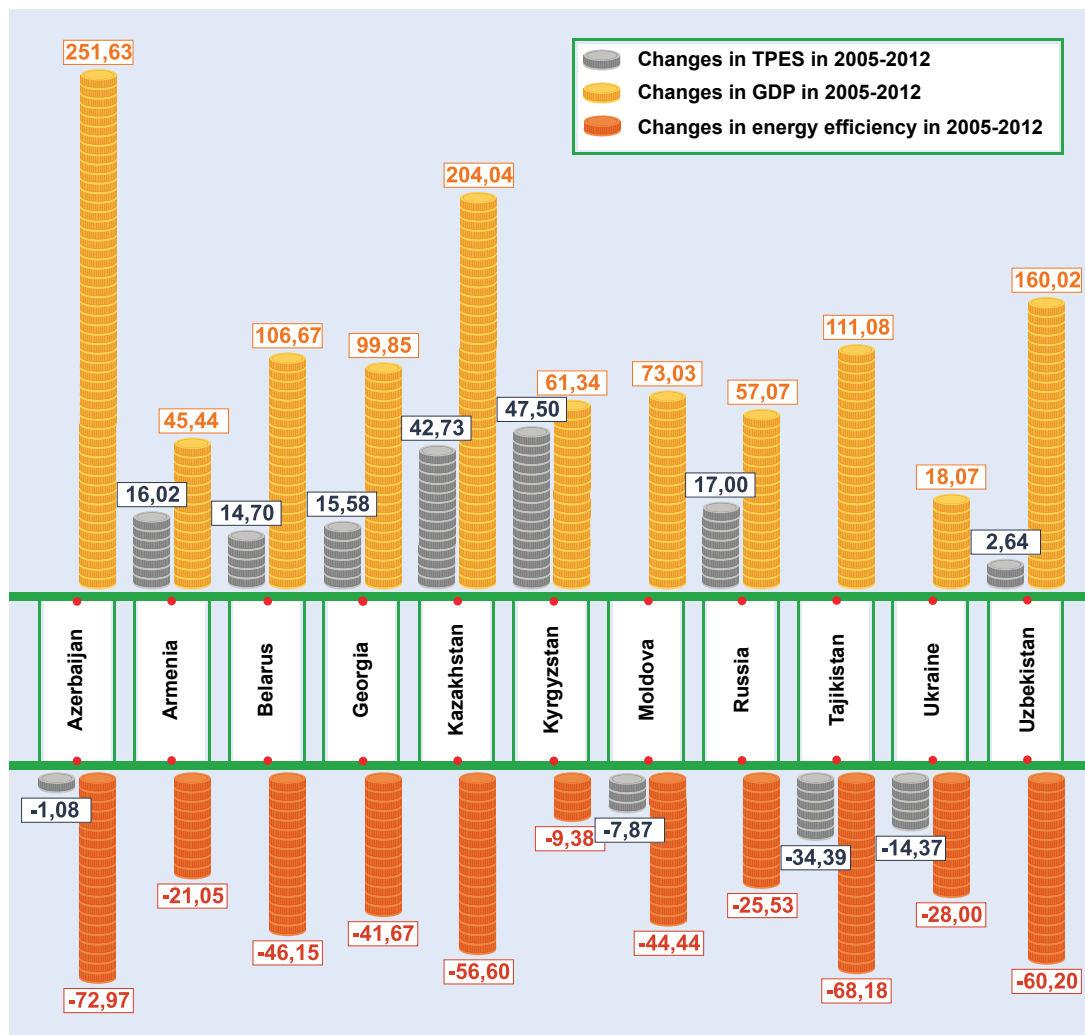
Improvement of energy efficiency is one of the key solutions to the climate change problem. Due to their Soviet past, when energy was cheap, the energy intensity of economies in EECCA countries is still several times higher

than the average values in Europe and the world.

High energy intensity leads to a vulnerable and less competitive industry in world markets, energy dependence (imports), and air pollution.

To encourage energy efficiency, the world practice employs a set of economic, regulatory and other instruments of state policy, which are insufficiently implemented in EECCA countries. Below is an overview of the basic measures employed in EECCA countries..

Figure 19. Primary energy consumption, energy intensity and GDP dynamics in % for period 2005-2012



Source: [13]

Table 7. Legislation encouraging energy efficiency and energy savings in EECCA countries

	Country	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Ukraine	Uzbekistan
Objectives and institutions	National energy efficiency action plan (NEEAP)			0		0		0	0		□	
	NEEAP period			2010-2015 (2016-2020)		2005-2015		2011-2020	By 2020		2010-2018	
	Overall energy efficiency / energy saving target	Increase energy efficiency by 20% by 2020		50% (2005-2015), 60% (2005-2020)		Reduce energy intensity by 10% by 2015 and by 25% by 2020		10% by 2020	40% from the level of 2007 by 2020		Reduction of energy consumption by 9% from 2009 by 2020	
Political and financial energy efficiency improvement instruments	Energy efficiency subsidies in buildings			0					0			
	Concessional loans for industry			0				0			0	
	Reduction of taxes for energy saving equipment or investment			0				0	0 (specific types)		0 (specific types)	
	Accelerated depreciation (allows receiving a high profit from energy efficient equipment)			0							0 (industry)	
	Labeling of household electrical appliances			0				0	0		□	
	Labeling of buildings						0	0	□		□	
	Minimal energy efficiency standards for existing buildings			0 (D for mandatory implementation)			0	10% of repaired buildings by 2020	0, D		D	
	Minimal energy efficiency standards for new buildings			0 (D for mandatory implementation)			0	Passive standard after 2021	0, D		0, D	
	Mandatory energy audit			0 (industry)		0 (industry)		0	0 (industry), D			
	Mandatory energy management system							0	D			
	Mandatory energy consumption reporting			0		0 (industry)	0	0	D			
	Mandatory energy saving plans in industry			0		0 (industry)	0		D			
	Mandatory energy metering by consumers			0			0	0				
	Phasing out of incandescent light bulbs			0					0			
	Mandatory training for professionals			0				0			0	

Source: <http://www.enerdata.net>, <http://www.energy-community.org>, data of national communications on climate change and other national documents, information provided by CAN EECCA network members, as well as information from speeches of officials at the Conference of the Parties to the UN FCCC. Data for Belarus is provided by Alexander Grebenkov. Data may be outdated and may not reflect the latest changes in the legislation. Additionally, considering the data was collected from different sources, it is not unified or mutually comparable.

D - development of legislation; □ - new legislation; 0 - existing legislation; R - revised existing legislation.

Table 8. Definitions of specific state instruments to encourage energy efficiency and energy saving

Energy efficiency subsidies in buildings	Non-repayable financial grant for carrying out measures for energy efficiency improvement or to purchase necessary equipment.
Labeling of household electrical appliances	Specifying energy efficiency classes for appliances to stimulate the demand for the most cost-efficient ones.
Labeling of buildings	Specifying energy efficiency classes for buildings to stimulate the demand for the most energy-efficient ones.
Minimal energy efficiency standards for existing buildings	Legislative requirements for energy characteristics of existing buildings.
Minimal energy efficiency standards for new buildings	Legislative requirements for energy characteristics for newly built buildings.
Mandatory energy audit	Requirement for conducting mandatory energy audits of buildings and/or production sites.
Mandatory energy management system	Requirement for implementation of an energy management system and employment of respective specialists.
Phasing out of incandescent light bulbs	Various forms of abandonment of inefficient incandescent bulbs.
Development of policies for operation of ESCO companies	ESCO companies provide services in the energy efficiency area, including modernization, energy saving, outsourcing of the energy infrastructure, risk management, etc. ESCO companies invest their funds in the implementation of energy-efficient projects and earn from the reduction of energy consumption. The owner continues to pay for energy during a certain time period of time based on the same energy consumption level as before the project implementation.

Example of Kazakhstan.

Among EECCA countries, only Kazakhstan has launched a National greenhouse gas emission trading system. However, implementation of this mechanism in Kazakhstan faces certain difficulties: enterprises can easily obtain additional quotas, there is no common emission volume “cap”, and there is a reserve of emission allowances to comply with the commitments. All of the above mentioned factors lead to a situation in which the mechanism is not efficient enough to stimulate GHG emissions reductions.

2.4

State fossil fuel subsidies

All the CAN EECCA countries have fossil fuel subsidies in place, but only some countries have subsidy programs for RES and strong energy efficiency measures available. CAN EECCA calls for fossil fuel subsidies to be gradually abandoned and for direct state support for energy efficiency and RES programs..

A study carried out by the IMF shows that only 7% of fuel subsidies in poor countries reach the most low-income households (20%). 43% of the subsidies are appropriated to 20% of the most high-income population. Gasoline subsidies are especially inefficient (and lead to higher pollution) because rich people more often use cars. Saved funds could be used for direct, targeted aid programs for poor population [14]

Many EECCA countries do not publish their information on fossil fuel subsidies, while in some countries the cross subsidy system is so complicated that it is rather difficult to assess the volume of state support. Below is a chart

with fossil fuel subsidy data for EECCA countries in % of the total national budget. Since data in some countries does not include all categories of fossil fuel subsidies, they cannot be compared.

Table 9. Fossil Fuel Subsidies in EECCA Countries in 2011

	Country	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tadzhikistan	Turkmenistan	Ukraine	Uzbekistan	World average
Subsidies before tax in % of the total national budget in 2011	Gasoline	0,84	0,45	0	0,55	0,65	3,47	0	0	0	6	0	0,02	0,3
	Electricity	0,73	0,5	0,26	n.a	0,94	5,43	n.a	0,99	1,95	2,32	1,61	5,71	0,22
	Gas	1,16	n.a	n.a	n.a	0,15	n.a	n.a	1,09	n.a	14,8	3,59	18,88	0,16
	Coal	0	n.a	n.a	n.a	0,28	n.a	n.a	0	n.a	n.a	n.a	n.a	0,01
	TOTAL	2,73	0,95	0,26	0,55	2,02	8,9	0	2,08	1,95	23,12	5,2	24,61	0,69

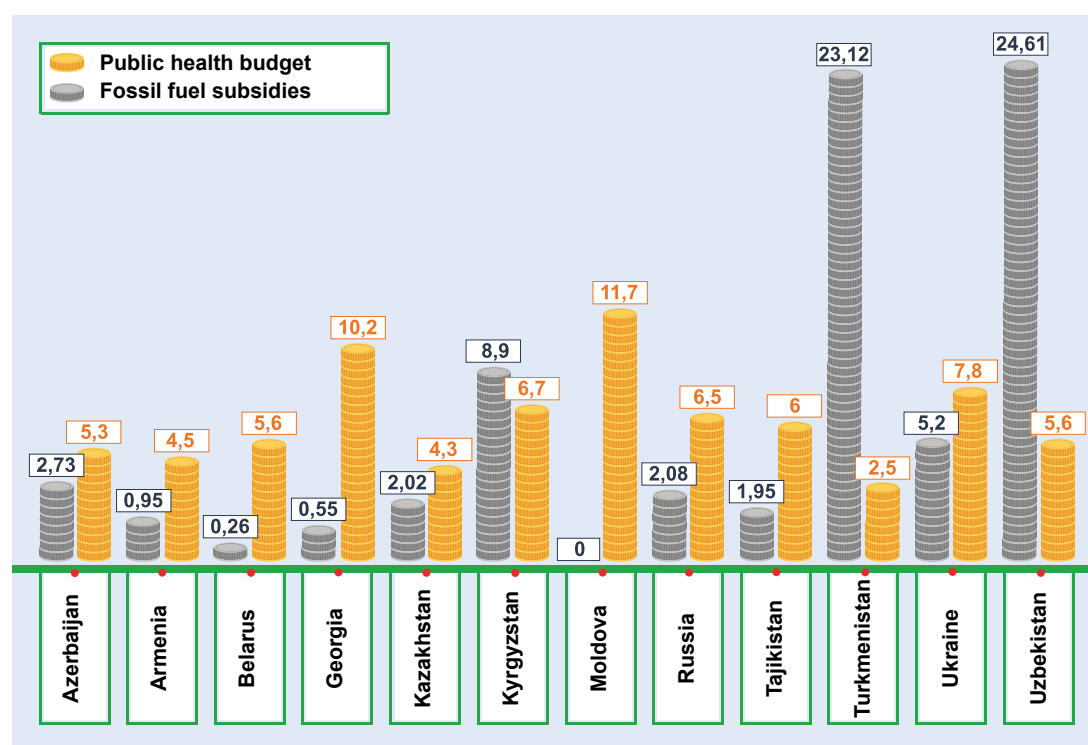
Source: [14]

Example of Russia: Investments in RES

State budget funds - approximately USD 3 million (negligible, about 1% of the investments in fossil fuel extraction).

The total volume of investments in RES - USD 500 million, also constitutes approximately 1% of the investments in fossil fuel extraction. By 2020, new RES are expected (without large HPP), for a total capacity of 6 GW, corresponding to 1% of RES in China, although the Russian GDP volume is about 20% of China's [27].

Figure 20. Fossil fuel subsidies and public health budget
(in % of the national budget)



Source: [14]. Since data in some countries does not include all categories of fossil fuel subsidies, they cannot be compared.

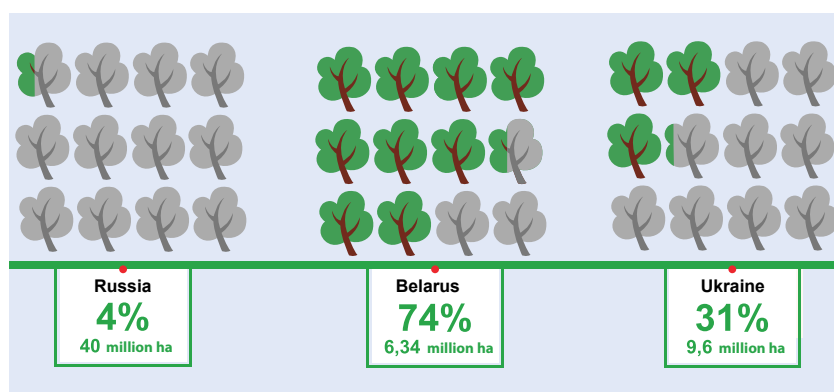
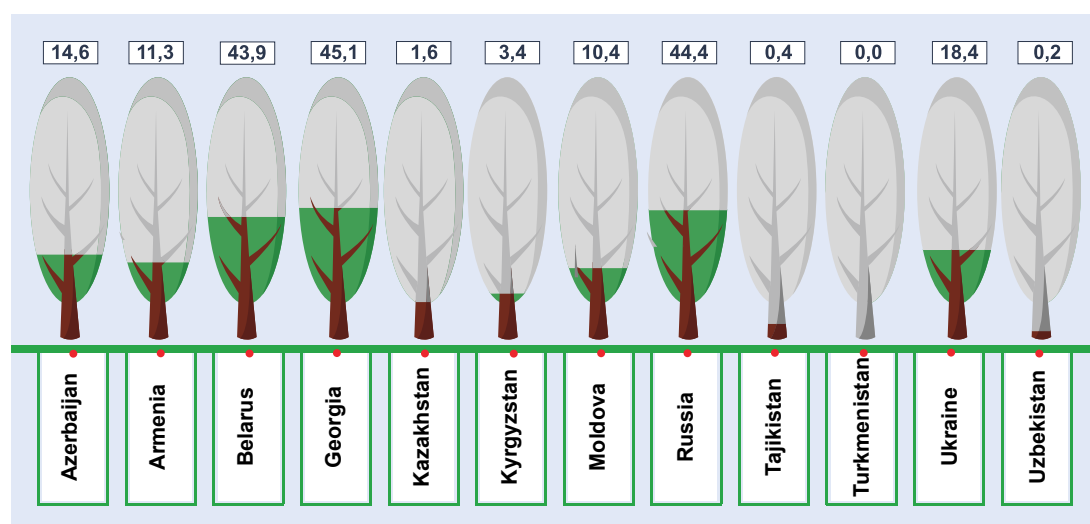
2.5

Forests in EECCA

To provide unified information on the dynamics of the forestry sectors in EECCA countries, we used data compiled by Global Forest Watch (GFW). GFW is a dynamic online forest moni-

toring system, which uses satellite data to provide reliable and true information on forest cover and forest cover loss.

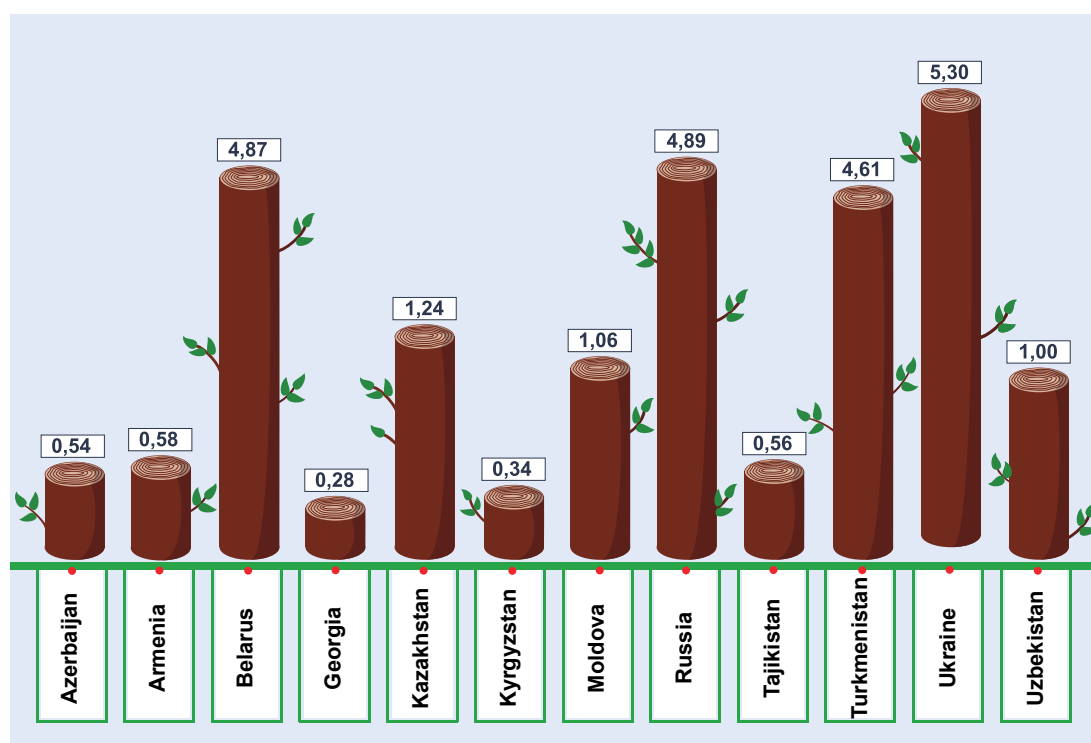
Figure 21. Share of forest cover (%) in the country's overall area for 2012



According to a request to the FSC office, only three countries in the EECCA region have forests certified according to the Forest Stewardship Council (FSC) system. The square area of certified forests and their percentage of the total forest cover amounts to 6.34 million ha (74%) in Belarus, 9.6 million ha (31%) in Ukraine, and 40 million ha (4%) in Russia [27, 28]. It should be noted that Belarus is one of only a few countries, where the quantity of FSC certified forests exceeds 50%.

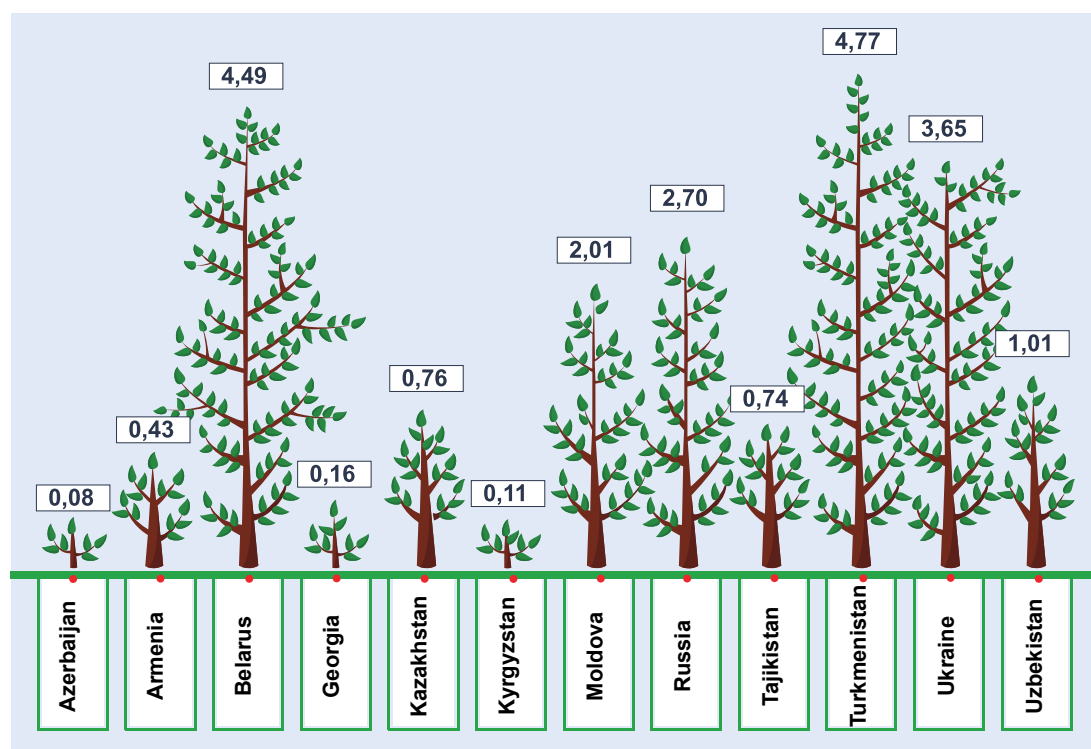
CAN EECCA calls on the governments of EECCA countries to significantly increase the quantity of forest areas certified according to the international forest management system, FSC.

Figure 22. Loss (%) of forest cover (2001-2013) for EECCA countries from its total area in 2000



Definitions for data: Forest cover is defined as all vegetation with a height above 5 m. Forest cover is the biophysical presence of trees and can be in the form of natural forests or plantations. "Forest loss" means cutting or destruction of forest cover and includes different factors, such as commercial cuttings, fire, forest disease, or damage from hurricanes. Forest cover is determined on sites of 30x30 meters with a density of more than 30%. Due to variations in the investigation methodologies and/or temporary points of data input for the state of forest cover, losses and restorations cannot be directly compared. Accordingly, total forest losses cannot be calculated by obtaining the difference between the figures for the losses and restoration of forest cover. Similarly, the current state of forest cover cannot be obtained by subtracting annual forest losses beginning from 2000.

Figure 23. Restoration (%) of forest cover (2001-2012) for EECCA countries from its total area in 2000



Source: [11]

2.6

Financial liabilities

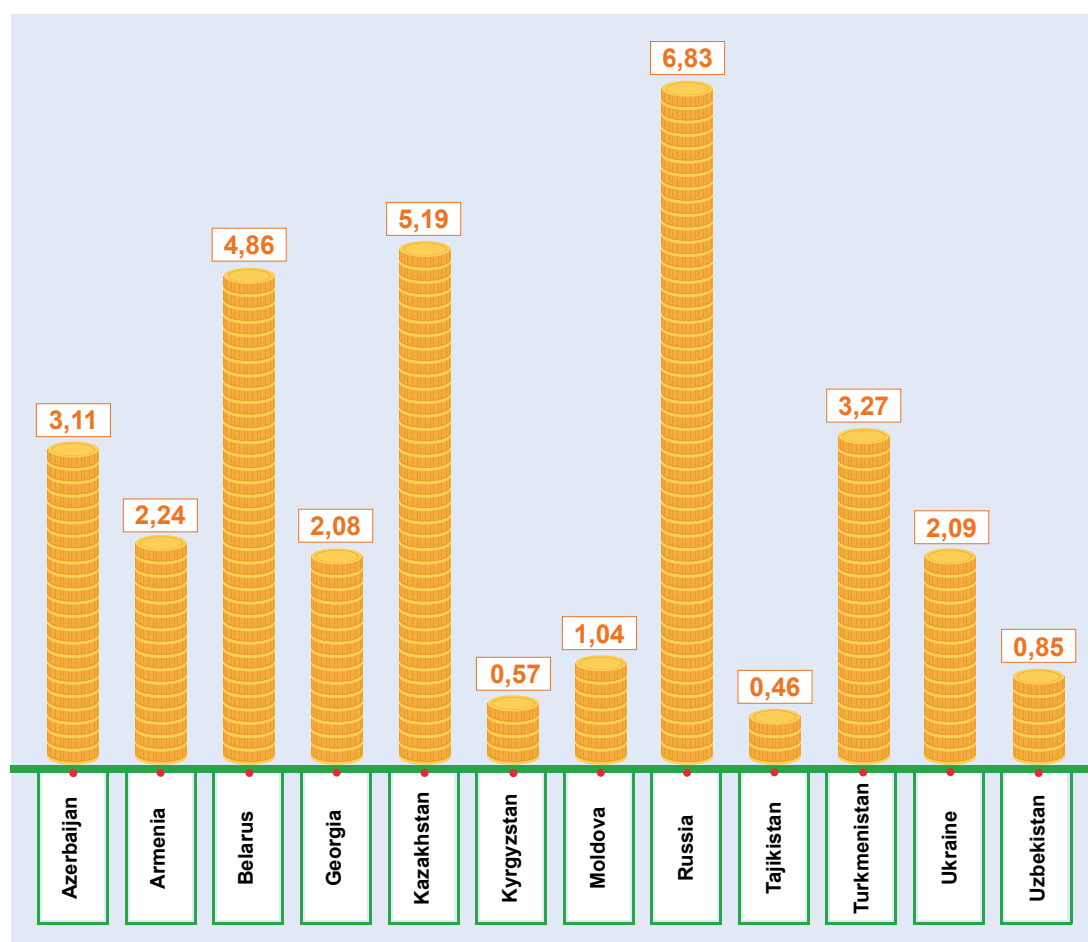
None of the countries from the EECCA region are included in Annex II under UNFCCC, and therefore none of the countries provide public funds for climate change adaptation and mitigation to developing countries.

CAN EECCA believes that, considering the historical responsibility for greenhouse gas emissions, Russia, and further Kazakhstan, should consider the possibilities of voluntary aid to the most vulnerable countries from the EECCA region in support of adaptation to the consequences of climate change.

According to the lists of Official Development Aid providers and recipients, the group of “developed economies” does not include any country from the EECCA region. Russia and Kazakhstan are the closest countries to this group in terms of GDP level per capita and industrialization level.

Russia has the status of a voluntary donor, allocating official aid to developing countries to the extent possible. NGOs call to strengthen this aid, primarily to the most vulnerable and poor countries in Central Asia.

Figure 24. GDP (PPP) per capita in EECCA countries (2005 USD ppp), 2012



Source: [13]

2.7

Low-carbon development strategies

The low-carbon development strategy is a national strategy integrating both issues of economic development and the need for a global reduction of greenhouse gas emissions. According

to the decision of the Conference of the Parties to the UNFCCC in Cancun, all developed countries should develop low-carbon development strategies and encourage the development of low-carbon strategies by developing countries in the context of sustainable development.

The table below details the state of preparation of low-carbon development strategies in EECCA countries.

Table 10. Preparation of low-carbon development strategies in EECCA countries

Country	How is the process organized at the national level?	Degree of integration into national legislation	Long-term objective for climate
Armenia	The national strategy has been proclaimed, with its implementation scheduled for 2020.		
Azerbaijan	There are a number of national programs concerning issues of emission reduction and adaptation to climate change.		Reduction of CO ₂ by 30 million tons by 2020
Belarus	There is no unified strategy. However, some measures are prescribed and implemented at the level of sectoral programs.	The sectoral programs include measures for the reduction of emissions and the boosting of GHG emissions absorption.	No
Georgia	Within the National Communication to UNFCCC, a state strategy was prepared and subsequently adopted by the government for 2010-2025.		
Kazakhstan	There is an expert document for the Low-Carbon Development Strategy. However, it was not adopted. There is a Concept for Transition of the Republic of Kazakhstan to Sustainable Development for 2007-2024 in force. There is a greenhouse gas emission trading system in force.	The Concept for Transition of the Republic of Kazakhstan to Sustainable Development specifies sectoral indicators and measures.	No
Kyrgyzstan	There is a Program for the transition of Kyrgyzstan to sustainable development for 2013-2017 in force.	There is a process of development of industry-specific and ministerial plans under way.	No
Moldova	A strategy for low-carbon development up to 2020 has been developed.	The strategy includes sectoral plans.	Reduction of emissions by 20% from the "business-as-usual" level by 2020 with sectoral indicators.
Russia	There is no low-carbon development strategy in place. There are strategies and plans available for certain sectors of the economy. The main documents are the energy strategy and state program on energy efficiency improvement measures and some measures for RES.	Integrated but not as a direct low-carbon development task, but as a task of reducing the energy intensity of the economy.	
Tajikistan	There is no low-carbon development strategy in place or under development, but there is a sustainable development strategy.		
Ukraine	With the support of the UNDP, Ukraine is preparing an analytical report for low-carbon development opportunities. The report was not published as of April 15, 2015.	No	No
Uzbekistan	No data available		

2.8

Preparation of NAMAs and TNAs according to the UNFCCC

NAMA (National Appropriate Mitigation Actions) refer to any action that reduces emissions in developing countries and is prepared under the umbrella of a national governmental initiative. They can be policies directed at transformational change within an economic sector, or actions across sectors for a broader national focus. NAMAs are supported and enabled by technology, financing, and capacity-building and are aimed at achieving a reduction in emissions relative to 'business as usual' emissions in 2020 [22].

There is also information on the Internet regarding NAMA in other countries of the EECCA region, e.g.: NAMA project for the modernization of small coal boiler houses in Kyrgyzstan, a project for sustainable management of the forestry sector in Tajikistan, NAMA projects within the National Communication on climate change in Moldova, NAMAs for energy efficiency improvement of buildings in Armenia. However, the implementation status of these projects is not specified and they are not listed in the UNFCCC NAMA registry.

TNA (Technology Needs Assessment) is a set of measures initiated by countries to determine necessary technologies for adaptation and emissions reduction. The process of preparation includes consultations with stakeholders and is focused on determining barriers to technology transfer, as well as searching for necessary measures to overcome these barriers by sectoral analysis. These measures may include both "soft" and "hard" technologies, such as technologies for adaptation and emissions reduction, regulatory instruments, fiscal and financial incentives, capacity building, etc [24].

CAN EECCA calls on non-Annex I countries in the region to prepare and submit to the Secretariat NAMAs and carry out activities for TNA for climate change adaptation and low carbon growth, to make the best use of the existing and future technical and financial mechanisms within UNFCCC.

Table 11. NAMAs Requiring Support for the Preparation and Implementation

	NAMAs requiring support for the preparation	NAMAs requiring support for the implementation
Azerbaijan	National measures for GHG emission reduction for end users in Azerbaijan.	
Georgia		Adaptive sustainable forest management in the Borjomi-Bakuriani region
Kazakhstan	Nationally appropriate mitigation actions for low-carbon urban development in Kazakhstan	

Source: [22]

Table 12. Preparation of TNAs in EECCA Countries

Armenia	TNA, 2003	–
Azerbaijan	TNA, 2001	Mitigation TNA 2012, Adaptation TNA 2012, Mitigation Barriers 2012, Adaptation Barriers 2012, Mitigation TAP 2012, Adaptation TAP 2012, Mitigation Project Ideas 2012, Adaptation Project Ideas 2012
Georgia	TNA 2002	Mitigation TNA and TAP 2012, Adaptation TNA and TAP 2012
Kazakhstan	–	Mitigation TNA 2013, Adaptation TNA 2013
Moldova	TNA, 2002	Mitigation TNA 2012, Adaptation TNA 2012, Mitigation Barriers 2012, Adaptation Barriers 2012, Mitigation TAP 2013, Adaptation TAP 2013, Mitigation Project Ideas 2013, Adaptation Project Ideas 2013
Tajikistan	TNA, 2003	
Uzbekistan	TNA, 2001	

2.9

National Activities for Adaptation

According to the conclusions of IPCC scientists, even if global warming is held to 2° C, nearly every country in the world will face negative consequences, which require adaptation. Some countries and regions in EECCA are already

experiencing considerable damage from the changing climate and have a very limited capacity to adapt.

According to a survey of public organizations in EECCA countries, practically all the nations either carry out, or are developing, activities for adaptation. Adaptation activities are primarily implemented with support from international aid projects, within the preparation of national communications, or at the expense of grant funds.

Table 13. Adaptation activities in EECCA countries

Country	How is the process organized at the national level?	What is the degree of integration of adaptation issues into other sectors of the economy?	What specific measures have already been implemented at the sectoral level?
Armenia	Preparation of a National Adaptation Plan by the end of 2015 has been assigned under the Government Resolution.		An UNDP/GEF project has been implemented for adaptation of the forestry sector in the Siunik Raion of Armenia.
Azerbaijan	There is no separate adaptation plan, but there is a national plan for protection of the environment and natural resources for 2014-2020 in place, which includes adaptation measures.		
Belarus	There is no unified climate change adaptation program, but there are sectoral climate change adaptation plans in place.	There are sectoral action plans for adaptation to climate change.	A number of sectoral measures.
Georgia	The adaptation strategy was developed in preparing the 2nd National Communication in 2009 and contains sectoral measures.	The strategy only includes sectoral measures.	Most adaptation measures from the strategy have been implemented in different sectors of the economy.
Kazakhstan	Issues of adaptation are included in the responsibility of the climate change department of the Ministry of energy. There is no adaptation strategy in place.	No, but there is a group under an UNDP project. There are a number of sectoral programs, which concern adaptation issues.	At the level of UNDP projects, under sectoral programs.
Kyrgyzstan	A document has been adopted "Priority Areas of Adaptation to the Climate Change in the Kyrgyz Republic up to 2017".		Several projects were implemented within the scope of international aid through the GEF.
Moldova	There is no separate adaptation strategy developed.	There are sectoral plans of adaptation measures in place, with no funds allocated to a great extent.	
Russia	There are documents and decisions at the national level, which are not supported by financing. In fact, the country's regions have to solve it themselves. An adaptation program is only under development by the Ministry of natural resources and ecology.	The main problem is related to the lack of rights of the country's regions to apply for state budgetary funds. This is an issue falling far beyond the scope of the adaptation problem and will require a lot of time to be solved. Another aspect – the adaptation of approaches to nature conservation, where activities are under way, and adjustment of the Law "On nature conservation," is likely to take place in the coming 2-3 years.	Nothing has been done at the national level. At the regional level and in big cities (Moscow, Saint Petersburg, etc.), health professionals conduct many measures in an effort to reduce mortality during heat waves. Quite a bit is being done in the Arctic regions for nature conservation (polar bear protection, etc.), and for adaptation to the increased erosion of slopes. However, all these are local initiatives based on the principle of response, rather than systematic measures to reduce vulnerability and adapt to the changing climate.
Tajikistan	There are no state adaptation programs in place; the National Adaptation Strategy is under preparation under the PPCR project of the World Bank.		A number of measures have been implemented under the PPCR project of the World Bank.
Ukraine	There are two versions of the National Adaptation Plan, none of which have been approved. A request has been filed from the Ministry of Environmental Protection to the Cabinet of Ministers to cancel the task of developing a national adaptation plan and to develop a climate change adaptation strategy instead.	Sectoral programs include measures contributing to adaptation, but they are not highlighted as adaptation measures.	Workshops with local authorities for planning adaptation measures and scientific research. Private sector in agriculture is implementing adaptation measures.
Uzbekistan			A project "Development of Climate Resistant Farming Enterprises and Dehqan Farms on Drought-Prone Territories in Uzbekistan" has been launched, which is a joint project of the Uzbekistan Government, UNDP and UNFCCC Adaptation Fund.

Source: Data of national communications on climate change ([1], [3], [4], [6], [7], [8], [16], [17], [18], [19]) and other national documents, information provided by CAN EECCA network members. Data may be outdated and may not reflect the latest changes in the legislation. Additionally, considering that the data was collected from different sources, it is not unified or mutually comparable.

2.10

False solutions in climate protection policy

In choosing solutions to prevent climate change, it is important not to rely on ambiguous, hazardous and economically unjustified technologies and solutions such as the nuclear power industry, the development of the coal industry, or shale gas production.

Arguments against further development of the nuclear power industry:

- 1. Large-scale nature of accidents.** Nuclear power accidents are simply more dangerous and far-reaching in scope; tens or hundreds of thousands of people may have to evacuate or have severe health problems, large territories may become contaminated and incur significant economic losses.
- 2. High cost of production.** The nuclear power industry is often positioned as cheap, but data on the cost of nuclear energy production does not include expenses for nuclear waste storage, expenses for decommissioning reactors and, notably, insurance compensations. Should these expenses be initially taken into account, the price for the produced energy would be comparable with energy produced from renewable sources.
- 3. Threats of terrorist attacks on NPP** Fukushima 1 NPP accident showed to the whole world how easily a nuclear meltdown can be caused by the simple destruction of its cooling system. Accordingly, such power supply systems may be subject to terrorist attacks.
- 4. Reduced application of plutonium and its use for military purposes** will subsequently also reduce the expenses for radioactive waste storage, thereby mitigating environmental risks for future generations.
- 5. It is possible to restrain warming up to 2° C without increasing capacities of the nuclear power industry.** Many studies indicate that ambitious reduction of greenhouse gas emissions can be also achieved without the nuclear power industry at the expense of only 1% of global GDP. Moreover, these studies do not include additional benefits from measures for climate change. Consideration of such benefits would increase the economic attractiveness of the climate protection measures (adapted from [25]).

Arguments against further development of the coal industry:

- 1. Frequent accidents and high mortality at coal mines.** Not too dissimilar to one hundred years ago, coal extraction involves multiple human losses (for example, see the explosion at a coal mine in Soma²). Accidents at coal mines end thousands of lives throughout the world, annually. The problems of mine safety remain unsolved.
- 2. Air pollution by toxic substances and harm to population health.** Emissions from coal power plants pollute the air with toxic ash microparticles, sulphur and nitrogen oxides, as well as secondary ozone, generated as a result of photochemical smog in the atmosphere. These pollutants present a serious threat to human health and provoke the development and exacerbation of chronic diseases [13]. In addition, the entire coal industry complex - mines, open pits, dressing

² Explosion at a coal mine in Soma
http://ru.wikipedia.org/wiki/%D0%92%D0%B7%D1%80%D1%8B%D0%B2_%D0%BD%D0%B0_%D1%88%D0%B0%D1%85%D1%82%D0%B5_%D0%B2_%D0%A1%D0%BE%D0%BC%D0%B5

Further development of the nuclear power industry is planned in Ukraine, Russia, Belarus, Kazakhstan and Armenia.



plants, electric power plants, and transport infrastructure - creates many environmental problems.

3. We need to phase out fossil fuels by 2050 to keep the temperature growth within 2° C. If construction of coal power plants is planned today, then we will likely see their operation for 30-50 years. Binding ourselves to coal will only complicate the emission reduction process in the future. Accordingly, to minimize risks of non-performance of future international climate agreements, it is necessary, even now, to invest maximum funds in energy saving and gradual transition to renewable energy sources.

4. Economic inexpediency. Many EECCA countries have a great potential to improve energy efficiency in different sectors of the economy. Therefore, from the viewpoint of the rational use of state funds, it would be more economically feasible to invest in energy efficiency rather than in the construction of new coal mines.

Further development of the coal industry is scheduled in Ukraine, Russia and Kazakhstan.



Arguments against the development of shale gas:

1. Ground water pollution. Hydraulic fracturing technology requires a large quantity of water. Multiple chemical compounds are added to this water, which are toxic, allergic, carcinogenic and mutagenic. In four US states, where shale gas is actively produced, there are officially confirmed cases of ground water pollution.

2. High price. Shale gas will not be cheap. According to calculations by ZEW Economic Research Institute [26] investments can only be recovered at a price of USD 560-650 per 1,000 m³.

3. Lack of fracking water utilization technologies. There is no economically justified technology in the world for the treatment and processing of fracking water, which renders it safe for people and the environment. The currently preferred methods of disposal are underground injection and outdoor storage, resulting in increased risks of earthquakes, ground water pollution, evaporation, and underground leakage.

4. Risk of accidents. The US experience shows that shale gas production carries a reasonable risk of accidents.

Shale gas production is planned in Ukraine.



2.11

Institutional basis for climate protection actions in EECCA countries

The institutions responsible for climate change issues in countries of the EECCA region include Hydrometeorological Centers, climate change centers at the Ministries of Ecology, separate agencies, departments in the Ministries of Environmental Protection, and, in the case of Kazakhstan, a department at the Ministry of Energy. In many EECCA countries, interministerial commissions were created, headed by the Vice Prime Minister and representatives of relative ministries. In Ukraine, such a commission also includes a representative from the network of public organizations dealing with climate change issues.

CAN EECCA believes that the national authority responsible for the implementation of climate protection policy should have certain authority to influence the development of state policy in the areas of energy, transport, industry, agriculture and forestry – vitally important areas, which must spearhead the necessary measures for emissions reduction. It is important to ensure availability of sufficient human resources to work on climate change mitigation and adaptation issues. It is of critical importance that employees engaged in climate change issues and those participating in international negotiations of the United Nations understand and speak English.

In the new agreement, which is due to be signed in Paris in 2015, more active participation from developing countries is expected in the form of “emission reduction contributions.” It is also likely that we will see more ambitious commitments from developed countries. This means that representatives of official delegations and authorities responsible for issues of climate change in their countries **should have sufficient power to organize a national discussion of potential sectoral “emission reduction contributions” and influence the policies and strategies of other relative ministries, in order to encourage implementation of these “contributions”.**

For example, in the European Commission, climate change is the responsibility of the Energy and Climate Change unit. Further, there is a Commission for Climate Change in China at the Cabinet of Ministers, standing over other ministries and directly influencing the national policy in the area of energy, industry and transport.

Many NGO have noticed a problem of insufficient staff in state authorities engaged in climate change issues, as a result of which the existing staff is physically unable to cope with all the tasks. For example, international negotiations involve simultaneously several negotiation sessions on different matters, and if the delegation consists, for example, of 1-2 people, it is unable to work effectively. This situation requires improvement.

Another important factor for effective operation of an authorized body on climate change issues is knowledge of the English language. All working negotiation groups and meetings are held in English, and most of the scientific and working materials are prepared in English..

Table 14. Institutional Organization of Climate Change Activities in EECCA Countries

Country	What is the name of the authorized body for the UNFCCC and to which state authorities is it subordinated?	Representatives of which state authorities usually participate in UNFCCC negotiations? Who coordinates activities of the delegation?	Does the responsible body for the UNFCCC have authority to submit proposals for discussion to the Cabinet of Ministers?	Does the responsible body for the UNFCCC have authority to influence the formation of the national energy policy?
Armenia	Ministry of Nature Conservation	Ministry of Nature Conservation	Yes	Yes
Azerbaijan	Ministry of Ecology and Natural Resources	Ministry of Ecology and Natural Resources, sometimes Ministry of Foreign Affairs and SOCAR (state-owned oil company)	Through the Cabinet of Ministers, as well as through the UNFCCC Implementation Commission which can be headed by the deputy prime minister.	The Ministry of Ecology and Natural Resources may submit proposals.
Belarus	Ministry of Natural Resources and Environmental Protection	Ministry of Natural Resources and Environmental Protection, 1-2 employees of the Department for Hydrometeorological Activities, employees of the Ministry of Foreign Affairs and hydrometeorological center, as well as several expert consultants (employees of UNDP projects) also participate in the COP. In general, the number of staff engaged in climate change issues is critically insufficient	Yes	Yes
Georgia	Ministry of Environmental Protection and Natural Resources	Ministry of Environmental Protection and Natural Resources		
Kazakhstan	After administrative reform, the powers were delegated to the Ministry of Energy	Previously, the Ministry of Environmental Protection and experts from Zhasyl Damu JSC	Yes	Yes
Kyrgyzstan	State Agency for Environmental Protection and Forestry at the KR Government (SAEPF)	State Agency for Environmental Protection and Forestry at the KR Government, sometimes the Ministry of Foreign Affairs	Chairman of the Climate Change Coordination Commission - Vice Prime Minister of the KR Government	Member of the Climate Change Coordination Commission - Minister of Energy and Industry of the Kyrgyz Republic
Moldova	Ministry of Ecology, Climate Change Office	Ministry of Ecology, Climate Change Office	Yes	Yes
Russia	Russian Federal Service for Hydrometeorology and Environmental Monitoring (Rossgigromet), subordinated to the Ministry of Natural Resources and Ecology	Russian Federal Service for Hydrometeorology and Environmental Monitoring (Rossgigromet), Ministry of Foreign Affairs, Ministry of Economy, Presidential Administration	Yes, but coordination of proposals with other ministries takes place first	Essentially, no
Tajikistan	State Agency for Hydrometeorology at the Committee for Environmental Protection Subordinated through the committee to the Government of the Republic of Tajikistan	Representatives of the State Agency for Hydrometeorology, Committee for Environmental Protection, executive apparatus of the President (Department for Agriculture and Ecology), less frequently of the Ministry of Foreign Affairs and Ministry of Finance	It is possible through the Committee for Environmental Protection with the help of the PPCR Coordinator or Vice Prime Minister	There is a possibility through the Committee for Environmental Protection - as a state authority it has a right to vote in solving all political issues.
Ukraine	The State Agency for Environmental Investments has been liquidated, and climate change issues have been delegated to the Ministry of Environmental Protection. Besides, an Interministerial UNFCCC Implementation Commission was created, headed by the Vice Prime Minister, with the membership of all the relative ministries, deputies, National Academy of Sciences of Ukraine, public representatives.	Representatives of the State Agency for Environmental Investments. Sometimes, in addition, deputies, representative of the Ministry of Foreign Affairs, Cabinet of Ministers	The State Agency for Environmental Investments had no such power directly, and proposals could only be submitted through the Ministry of Environmental Protection.	There is no such power directly. Only through the Ministry of Environmental Protection
Uzbekistan	Center of the Hydrometeorological Service at the Cabinet of Ministers. A Climate Change Commission has been also created, headed by the Deputy Prime Minister of the Republic of Uzbekistan.			

Source: National communications on climate change ([1], [3], [4], [6], [7], [8], [16], [17], [18], [19]), information from CAN EECCA network members. .

2.12

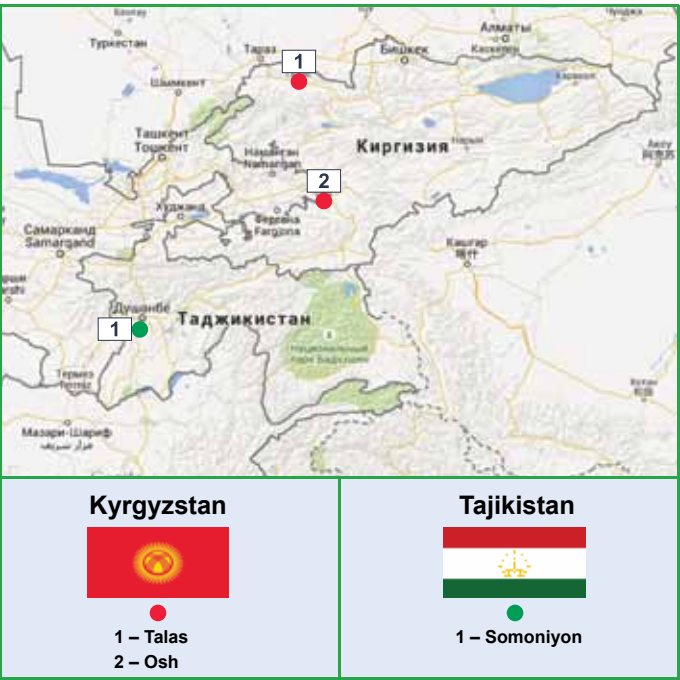
Positive Regional and Local Initiatives

C40 is a network of global megacities taking measures to reduce greenhouse gas emissions. Moscow is a participant of the C40 initiative from the EECCA region [21].

Covenant of Mayors is a flagship initiative of the European Union, uniting local, regional and national authorities to fulfill their commitments to reduce CO₂ emissions by at least 20% by 2020 by means of contribution to the development of the “green economy” and improvement of the quality of life [9].

Figure 25. EECCA cities, which joined initiative Convent of Majors.





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Annexes

Table 15. Key Energy Data for EECCA Countries

Country	Azerbaijan	Armenia	Belarus	Georgia	Kazakhstan	Kirghizia	Moldova	Russia	Tadzhikistan	Ukraine	Uzbekistan	Ўзбекистан
Total energy consumption (million TOE) 2012	13,69	2,97	30,5	3,71	74,85	4,13	3,28	756,59	2,27	122,66	48,28	0,02
Total energy consumption (million TOE) 2005	13,84	2,56	26,59	3,21	52,44	2,8	3,56	646,68	3,46	143,24	47,04	5,71
Dynamics of the total energy consumption 2005-2012 (%)	-1,08	16,02	14,70	15,58	42,73	47,50	-7,87	17,00	-34,39	-14,37	2,64	18,88
Primary energy intensity (in terms of PPP), 2012, kgoe	0,1	0,15	0,21	0,14	0,23	0,29	0,25	0,35	0,14	0,36	0,39	n.a
Primary energy intensity (in terms of PPP), 2005, kgoe	0,37	0,19	0,39	0,24	0,53	0,32	0,45	0,47	0,44	0,5	0,98	24,61
Dynamics of the primary energy intensity 2005-2012 (%)	-72,97	-21,05	-46,15	-41,67	-56,60	-9,38	-44,44	-25,53	-68,18	-28,00	-60,20	
GDP (PPP) 2012	131,65	19,3	142,31	26,78	321,89	14,23	13,6	2178,44	16,57	338,64	124,86	
GDP (PPP) 2005	37,44	13,27	68,86	13,4	105,87	8,82	7,86	1380,75	7,85	286,82	48,02	
GDP dynamics 2005-2012	251,63	45,44	106,67	99,85	204,04	61,34	73,03	57,77	111,08	18,07	160,02	
CO ₂ emissions: tons per capita 2012	3,15	1,83	7,51	1,52	13,45	1,7	2,14	11,56	0,34	6,16	4,41	

Source: IEA, Key World Energy Statistics.



CAN is a global network of more than 900 international and national public organizations working together to prevent the catastrophic consequences of climate change.

CAN EECCA is a regional CAN network in Eastern Europe, the Caucasus and Central Asia, comprising more than 30 organizations from 10 countries.

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