

Climate change and energy security in EECCA

- Iryna Stavchuk



Outline

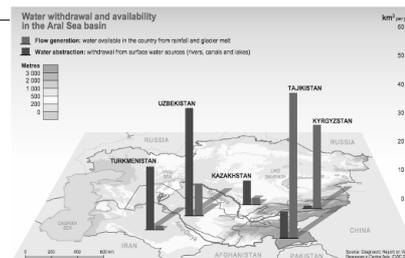
- Climate change impacts in EECCA
- Would national energy policies be triggered by climate change? Country positions at negotiations
- Energy security and climate change - positive synergies
- Energy security and climate change trade-offs

Climate change impacts

- Precipitation change (%/century)
 - CA: from -60% to +40% in summer
 - EE: from -40% to -10% in summer
- Temperature change in CA: from +2C till +8C

Water shortage in CA

- The biggest potential threat in CA is **water shortage** (both a key resource for agriculture and a strategic resource for electricity generation).
- The glaciers in Tajikistan lost a third of their area in the second half of the 20th century alone, while Kyrgyzstan has lost over a 1000 glaciers in the last four decades.



- Accelerated glaciers melting might cause increase in water streams for the next few decades (with increase in flooding and stone-fall);
- Afterwards water sources would disappear with much decreased river streams;

other impacts

- More extreme weather events;
- Permafrost degradation (infrastructure instability)
- Agriculture yields go down;
- Decrease of productive agricultural land;
- More droughts and flooding;
- Health related problems;
- Ecosystems break down;

Impacts on energy infrastructure

- Hydro power plants in Tajikistan and Kyrgyzstan;
- Oil and gas infrastructure in permafrost areas;
- Risk for nuclear power plants operation with high temperatures;

Climate change in policy agenda in EECCA

- Current situation:
 - Under Kyoto Protocol only 2 countries have obligations: Ukraine and Russia. Actual emissions are much less than the target;
 - Belarus and Kazakhstan are interested to be part of agreement just for economic interests;
 - Other countries are non-Annex 1, not very much involved in negotiations;
 - For all countries climate change is a side issue, it is not taken seriously, it is not integrated into national policies

Post-2012 process

- December 2009 post-Kyoto agreement to be finalized and signed;
- UK, RU, BE are to take targets. Science says for Annex1 -40% by 2020 from 1990. The current ambition is extremely low (Ru -10%, Uk-20%, Be -10%).
Kazakhstan?
- Bali Action Plan: Non-Annex 1 are also to take actions on mitigation from the level of BAU with financial and technical support from Annex 1

Would climate change trigger strong energy policies?

- **RATHER NOT**
 - UNFCCC process is focused on big players, others would follow;
 - Climate change itself is not high on political agenda even in countries to suffer mostly;
 - Unable in setting and implementing strong energy policies even in case of energy security conflicts, while climate change is not perceived as a serious threat;
 - All countries except for Russia expect international support and unlikely to have strong actions without it;

Possible opportunities

- CDM is to continue
- Possible new mechanisms to trigger climate change mitigation actions with international support
- Would these opportunities be picked up?
 - Countries are to be aware about opportunities;
 - Countries are to have political will for right actions;
 - Countries are to analyze and plan measures;
 - Countries are to implement the plans with certain national budget spent;
 - Countries are to monitor and report results;
 - such work is not easy and challenging...

ENERgy security and climate change - positive synergies

- Energy efficiency;
- Renewable energy development;
- Local jobs, less air pollution, stronger economy;
- Right planning for future since energy resources are depleting and there will be more tense relationship over energy resources

«GHG emission reduction measures go in line with goal of energy security» - NGO WG in Ukraine

The problem is in implementation

- Some countries are reach on fossil fuels and therefore there is no urgency;
- Still RES are not developed in EECCA, support policies are still lacking or incomplete;
- Low energy prices as a past from Soviet Union tradition, politically unpopular to rise tariffs - no trigger to energy efficiency;
- Weak knowledge on policy instruments and the role of government;

Energy security and climate change trade-offs

- In the case of energy security the goal is to move away from the risk-prone fuels; while in the case of climate change mitigation, it is to reduce the carbon intensity of the fuelmix.
- Therefore focus on local resources and diversification of energy imports -> as a result new pipelines are built;
- Since climate change is not on agenda and impacts are not clearly realized some political decisions on energy security might bring negative results for environment;

- Ukraine: plans to increase nuclear, coal production 2 times, switch from gas to electricity. It is more expensive than buying gas, it is much more expensive than invest into energy efficiency. Although Russia is perceived as a «bad neighbor» it was the only trigger to energy efficiency in Ukraine
- Tajikistan: Plans to build new big hydropower plant. However, experts say that it is not economically feasible for current energy infrastructure and more efficient to invest in losses decrease and efficiency.

- «Energy security and climate change objectives are compatible as energy security can only be achieved in the long-term through sustainable resource use, that is to say renewable forms of energy»

. *Climate Change and*
. *Energy Security in Europe*
. *SIEPS 2009:4*

Thank you for attention

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