

The key challenge of climate change for the BSEC region

By Prof. Dimitrios Mavrakis
Coordinator of “BSEC – Green Energy Network”

The explosion of the human population and the observed climate change define the key challenges of the 21st century. The United Nations forecast that the current world population of 7.3 billion will reach to 8.5 billion by year 2030, 9.7 billion in 2050 and 11.2 billion in 2100¹.

Given the dependence of the global economy on fossil fuels, the associated GHG emissions could lead to unaccepted increase of the average atmospheric temperature, threatening our own survival.

Over the past decades global GHG emissions have been increasing steadily, with small variations. In year 2014, the total global Kyoto-GHG emissions amounted to about 52.7 GtCO_{2e} (range: 47.9-57.5) and global carbon-dioxide (CO₂) emissions from fossil-fuel and industry at 35.5 GtCO₂ (range: 32.5-38.5) (UNEP, 2015)². Conclusions in the fifth IPCC assessment report refer to the limitation of global warming to below 2°C, by achieving a level of 1000 GtCO₂ for the remaining cumulative CO₂ emissions – the so-called carbon budget (UNEP, 2015). However, although this remaining budget can be utilized in different ways, the net global carbon emissions will need to be reduced to zero during the time interval of 2060 - 2075 (UNEP, 2015).

Following a Business As Usual (BAU) approach, global GHG emissions would rise to about 59 GtCO_{2eq} in 2020, resulting to an estimated gap of 8 – 10 GtCO_{2eq} from emission levels consistent with the 2°C target for this year while the relevant estimations show 68 GtCO_{2eq} in 2030 and 87 GtCO_{2eq} in 2050 indicating that global emissions are not expected to “peak” and much more to reach “carbon emissions neutrality” or “net zero emissions” unless robust reduction policies will be implemented.

The 21st Conference of the Parties of the United Nations Framework Convention on Climate Change, known as COP21, that took place in Paris last December, in its final agreement, the “Paris Agreement”³, reiterated their decision of holding the increase of the global average temperature to well below 2°C above the industrial levels and pursuing efforts to limit the temperature increase to 1.5°C, recognizing that this would significantly reduce the risks and impacts of climate change (Art. 2, Parag. 1.a). The “Paris Agreement” actually describes the state of global efforts to confront the challenge of climate change.

In this context the key questions are: i) how can these emissions be best spread out over time, ii) when exactly should the peak of global emissions be reached, iii) when is the net carbon dioxide emissions expected to fall to zero, iv) how much of the carbon budget can we spend at different time periods in the future and still stay

¹ <http://www.un.org/en/development/desa/news/population/2015-report.html>

² UNEP, 2015. The emissions gap report 2015. At:
http://uneplive.unep.org/media/docs/theme/13/EGR_2015_301115_lores.pdf

³ http://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf

within the temperature limit and finally v) what mixture of institutional, technological and financing instruments offers the most cost-effective adaptation pathway to our economies.

There is scientific consensus that the time period up to 2020 should be consumed for the preparatory actions that will define the policies and measures capable to achieve the peak of emissions around 2030, global carbon neutrality sometime between 2055 and 2070 and net zero total global GHG emissions between 2080 and 2100.

It is thus clear that the global community has to make and implement urgent decisions having in mind that the higher the emissions in the near term are, the higher the level of negative emissions will be needed later in the century as offset.

Postponing now stringent emission reduction measures will cause additional costs and higher risks in the future while the feasibility of these measures is still uncertain without a clear understanding of the associated social, economic or even environmental impacts.

It was clear, before the start of the COP21, that even in the case that pledges of the INDCs were to be implemented, the 2°C target could not be achieved. Furthermore, even if the financing instruments could sufficiently support these pledges, the 3°C increase is unavoidable.

The “Paris Agreement” is structured around the submitted Intended Nationally Determined Contributions (INDCs) and fails to set clear milestones and conclude with resulting mechanisms and financing instruments capable to confront the global challenge of Climate Change. In addition, there is no reference and measures concerning the interrelation of international trade, maritime transportation, international aviation and activities of energy supermajors that should be incorporated in the international efforts to tackle climate change.

Nevertheless, the “Agreement” defines a framework of actions that facilitate voluntary actions of parties, like the European Union, committed to pursue a green growth pathway and parties that have already started switching from coal to hydrocarbons and renewables like USA or understand the benefits from greening their economies like China.

The green transformation of the global economy and the convergence of world leaders to comply with the initially mentioned global climate change targets seem to be unavoidable regardless of the temporary insufficient agreements, delays and incomplete strategies.

The twelve (12) Member States of BSEC have submitted, together with the rest countries, their INDCs describing their pledges to contribute in achieving the global target of keeping the increase of the mean atmospheric temperature below 2°C in regard to the pre-industrial period. It is worth mentioning that BSEC member states have failed to leverage the BSEC – PERMIS procedures to conclude with homogenous reports facilitating regional synergies and thus optimizing the benefits for their economies.

PERMIS can facilitate its member states due to the advantages of regional economic organizations as these are described in article 4, para. 2, 16, and 18 of the

“Agreement”, provided that it will be registered as a “no voting signatory” (observer) party to the “Agreement”. In such a case, BSEC can function as a focal point for capacity building and facilitator for the implementation of the agreement’s provisions, especially those related with the Technology and Financial Mechanisms and the associated financial support that will be provided to developing country parties, as they are described in article 10 of the “Agreement”.

A careful reading of the “Paris Agreement” in relation with the strengths and weaknesses of the BSEC member states provides the ground for the development of a concrete and beneficial action plan for the countries of the region. PERMIS could undertake, as party (observer) to the Convention, to facilitate cooperation among its member states in the context of articles 7 and 8 of the “Paris Agreement”.

Reading the provisions of the “Agreement” and having in mind the EU policies and the foreseen international financing instruments for its implementation we estimate that the signatories will need an increased volume of technical and financial support and coordination in order to fulfil their pledges deriving from their submitted INDCs. PERMIS cannot only facilitate them in implementing them but also optimizing their impacts in their societies and economies.

“PROMITHEAS” and “BSEC-Green Energy” networks with established relations with prominent academic institutes in Europe and globally can provide the necessary support in case that PERMIS could undertake the initiative to become a “no voting” (observer) signatory party to the “Paris Agreement”.

BSEC as a regional economic organization can play a decisive role in accelerating green transformations in the region encouraging the active involvement of policy makers, market stakeholders and scientists.

We enter a period of global changes and inevitable structural transformations of our economies with the issues of the green growth gaining increasing importance for our lives and societies.

In this context, the development of the “BSEC-Green Energy network” constitutes an initiative that aims to facilitate policy makers, academia and market forces in their efforts to promote the implementation of Renewable Energy Sources and Energy Efficiency and to support knowledge transfer and business in the BSEC countries.

The network already includes 40 partners and remains open to new participants. Those interested to receive more information may contact epgsec@kepa.uoa.gr.