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# BOGOR CONFERENCE

NOVEMBER 11 - 12, 2009

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**CLIMATE CHANGE  
MITIGATION AND ADAPTATION**  
Strengthening SEA-EU S&T Collaboration  
to Find Common Solutions

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**PROGRAMME BOOK**

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## GLOBAL CLIMATE CHANGE AND ENERGY SECURITY

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Global warming and climate change is one of the major environmental problems on a global scale. Climate change is resulting in significant increase of the floods and droughts in the world. Rainfall has increased in northern parts of Europe and in some parts of the Asia and America, whereas has decreased in Mediterranean, and some parts of Asia and Africa. Global warming due to GHGs will continue for many years even if we stop releasing the CO<sub>2</sub> emissions. Turkey is a country located at Southeastern Europe and Eastern Mediterranean defined as vulnerable to the adverse impact of climate change.

According to recent Decision-CP.13 in Bali Action Plan, enhanced national and international action on mitigation of climate change and enhanced action on adaptation into sectoral and national planning is required. Furthermore, the sector specific planning in the Action Plan can allow new progresses in technology transfer especially for the developing countries. Energy is essential to all activities for development. Climate change and energy security is related to national security. Energy security is also related to economic security, with increasing energy prices having been indicated in macroeconomic disturbances. In the long term, national energy security is enhanced by a greater variety of energy supply sources. Increased energy efficiency reduces vulnerability to energy price peak fluctuations.

Today coal is a key contributor to the EU's security of energy supply. Coal provides potential energy security benefits for several countries in the world such as Turkey but it is a CO<sub>2</sub> intensive fuel. Natural gas has national security implications and does emit CO<sub>2</sub> which creates global warming.

The primary energy sources for new capacity and energy efficiency measures need to be chosen using some kind of quantitative risk-assessment scheme. In the long term new energy technologies are essential for energy security. Even with strategies to increase energy efficiency and use of renewable sources, coal will remain a significant option for many years. Furthermore, energy efficiency and renewable energy creates cleaner environment and stronger economy. Solar and wind plants are in development, however these have long term availability problems.

*In this study, an assessment of climate change and energy security and mitigation potential in electricity sector considering energy efficiency and renewables will be presented. For this purpose we propose that a portfolio of energy efficiency policy including renewables in electric energy industry in Turkey should be established.*



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