



## **Organization for Security and Co-operation in Europe**

### **The Secretariat**

**Office of the Co-ordinator of OSCE  
Economic and Environmental Activities**

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#### **21st OSCE Economic and Environmental Forum: “Increasing stability and security: Improving the environmental footprint of energy-related activities in the OSCE region”**

##### **BACKGROUND PAPER ON THE THEME OF THE FORUM**

In accordance with PC.DEC/1047 the theme of the 21<sup>st</sup> Economic and Environmental Forum (EEF) is “Increasing stability and security: Improving the environmental footprint of energy-related activities in the OSCE region”.

This paper was prepared with the goal of presenting to participating States some of the main issues related to this year’s Forum process and recall the relevant OSCE documents and meetings.

The aim of the 2013 EEF process is to focus on the environmental impact of issues related to energy production, transportation and consumption in a way which is relevant to all participating States (pS). Indeed, environmental degradation as a consequence of energy-related activities can have an impact on security. Energy activities may cause an environmental situation that negatively impacts health, soil and water quality, loss of biodiversity and in the long run can become an impediment for sustainable growth and development as well as a source of conflict.

In adopting the PC.DEC/1047 participating States agreed that the EEF should focus on:

- Addressing environmental challenges and risks stemming from energy-related activities and their security implications, including through sustainable management of energy resources; and on:
- Improving the environmental footprint of energy production, transportation and consumption in the OSCE area including through strengthening the co-operation between the participating States on promotion of green economy, new and renewable sources of energy and energy efficiency, as well as good governance and transparency in the energy field and public-private partnerships.

As such, discussions which will be held throughout the year will be based on the relevant OSCE documents adopted by the pS, including MC.DEC/12/06 on *Energy Security Dialogue*

*in the OSCE; the 2007 Madrid Declaration on Environment and Security (MC.DOC/4/07), MC.DEC/6/07 Protecting Critical Energy Infrastructure from Terrorist Attack; MC.DEC/6/09 on Strengthening Dialogue and Co-operation on Energy Security, the 2010 Astana Summit Commemorative Declaration, and the 2012 Dublin Ministerial Declaration on Strengthening Good Governance and Combating Corruption, Money-Laundering and the Financing of Terrorism (MC.DOC/2/12).*

Moreover the 21<sup>st</sup> EEF represents the logical continuation of an on-going dialogue on energy issues in the OSCE framework also based on the recommendations of previous EEF meetings and the follow-up activities implemented by the Office of the Co-ordinator of OSCE Economic and Environmental Activities (OCEEA) and the OSCE field operations. The 1998 Economic Forum (under the Polish Chairmanship) and the 2011 EEF (under the Lithuanian Chairmanship) focused on energy while some energy-related topics were also discussed in other years, such as the issue of oil spills prevention during the 2008 Finnish Chairmanship. In recent years, the OSCE has conducted and co-organised meetings and conferences on “Strengthening Energy Security in the OSCE Area” (July 2009, Bratislava), “Strengthening Regional Co-operation in Central Asia for Promoting Stable and Reliable Energy within Eurasia” (May 2010, Ashgabat), “Assessing the OSCE’s Future Contribution to International Energy Security Co-operation” (September 2010, Vilnius), and the Chairmanship Conference “Integrating Global Energy Markets – Providing Energy Security” (November 2011, Ashgabat).

OSCE attention to this topic fits into the broader context: In December 2010, recognizing the importance and urgency of energy challenges, the United Nations General Assembly declared 2012 the International Year of Sustainable Energy for All. The UN Secretary-General has launched the Sustainable Energy for All Initiative (SE4ALL), which seeks to identify and mobilize action by all stakeholders in support of energy access, energy efficiency and increasing the share of renewable energy.

## **1. Environment and energy links**

Significant progress has been made in the OSCE region to protect its natural resources and the environment, resulting in improved urban air quality, greater use of renewable energy, improved water and land management, increased protected areas and phasing out of ozone depleting substances. However, in many countries, environmental issues still do not have the priority they deserve in view of their potential consequences for human health, well-being and future economic growth.

Reducing the environmental impact of energy-related activities is one of the challenges faced by OSCE participating States. The production, transportation and consumption of energy can negatively impact the environment in several ways: for example, the extraction and transportation of fossil fuels (oil, gas and coal) can cause air, land and water pollution, and their consumption can cause health problems and contribute to climate change.

Additionally, natural disasters can affect the security and well-being of the population in the OSCE region: earthquakes, extreme weather events like floods, storms, sea surges, heat waves and droughts can pose a threat to energy infrastructure with consequences on energy demand and supply.

Improving the environmental footprint of energy-related activities offers an avenue for co-operation among the OSCE participating States. The promotion of renewable energy sources (sharing technology, legislative frameworks and regulatory examples), co-operation on best practices on resource extraction, environmental impact assessment and transparency in the resource sector are among the most effective ways to reduce the adverse environmental impact of energy. The OSCE includes net energy producers and exporters as well as transit countries and is therefore well-placed to act as a platform for dialogue on energy-related issues.

## 2. Environmental risks and challenges of energy-related activities

**Air pollution** through the release of substances such as dust, smoke and harmful gases caused i.a. by the combustion of fossil fuels, can pose a serious health hazard. It is a risk factor for multiple health conditions. The biggest effect of air pollution on the environment is the formation of “acid rain”, which can affect forests, soils, and water bodies, as well as buildings and infrastructure.

According to the Intergovernmental Panel on Climate Change (IPCC), the environmental and social costs of **climate change** such as sea-level rise, water scarcity, reduced food supplies, and damaged ecosystems are increasing. Balancing energy security and climate change might prove to be one of the greatest challenges of the 21st century: achieve an adequate, reliable, and affordable energy supply, while at the same time reducing harmful emissions into the atmosphere. Most of the world’s energy still comes from burning fossil fuels such as coal, oil, and natural gas, which are major sources of greenhouse gases and continued dependence on these fuels will jeopardize our climate. Low-carbon replacements for these fuels are urgently needed, while ensuring that actions to reduce emissions will not destabilize the current energy system. The challenge the world must figure out is how to achieve energy security while at the same time protect the Earth’s climate.

**Oil spills** can have devastating impact on the ecosystems seriously disrupting ecological services provided by them. As experience shows, they may also have an impact on economic development. There are several international legal frameworks which are supporting countries to combat this risk. Many of the OSCE participating States are Parties to the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC 1990). It provides a framework for international co-operation and mutual assistance in preparing for and responding to the major oil pollution incidents in maritime environment. Since 2007 the OSCE has been supporting a number of activities aiming at enhancing international oil spill preparedness and response through the promotion, ratification and implementation of key UN conventions.

State legislatures and natural resource managers have traditionally addressed **water and energy** as two separate issues. However, water and energy are deeply connected and sustainable management of either resource requires consideration of the other. Detailed understanding of the interdependencies of water and energy systems and of new technologies to reduce water use and loss, advancing water and energy system forecasting, scientific innovation, and the implementation of management systems are necessary. The involvement of state lawmakers and constituents in this process is critical given their responsibility in formulating policy, convening stakeholders, facilitating negotiations, and ratifying agreements.

The safety of dams and other water control facilities, particularly regarding trans-boundary rivers, is a matter of concern. Ageing dams and their inadequate maintenance can result in increased risks to life, human health, property and the environment. Effective national regulatory frameworks for dam safety and sub-regional collaboration on dam safety are therefore crucial.

The considerable damage brought on by hurricanes in recent years illustrates the **threat posed to energy infrastructures by natural disasters**. Earthquakes, tsunamis and volcanic activities, which are regularly encountered by a number of OSCE participating States, could potentially affect energy networks. The disruption to energy infrastructure as a result of natural disasters has negative effects on essential areas vital to human well-being. Earthquakes have the potential to knock out local electricity supplies and hamper rescue efforts. Power grid components are especially vulnerable since most of the critical equipment is exposed in surface level facilities which can hardly be shielded against severe natural occurrences.

In recent years, the number of frequent catastrophic **floods** has increased and their economic, social and environmental impacts have worsened, also leading to increased casualties. The expansion of climate variability and expected climatic changes may exacerbate this trend. Floods very often have trans-boundary dimensions, so that risk management can only succeed through a cooperative and coordinated approach.

**Mining operations** have a large potential to seriously impact the environment and there is a corresponding need for appropriate forms of control. Abandoned unreclaimed mining areas tend to be used as dumping ground for waste – including toxic waste, which exacerbates the problem. Impacts on the environment stemming from mining may also have trans-boundary effects and potentially cause tensions and even security problems in the affected regions.

**Environmental impact assessment** is a tool to address the concerns and contribute to reducing the negative environmental effects of new activities. The 1991 UN Convention on Environmental Impact Assessment in a Trans-boundary Context, the so-called Espoo Convention, sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries, including energy-related activities.

### 3. Opportunities for environmental co-operation on energy-related activities

For the past decades the use of **alternative energy sources**, particularly **renewable energy**, has increased. Against the background of high and unstable prices for fossil fuels and increased environmental considerations, countries have put in place energy diversification strategies with a view to increase energy independence and security. National programmes for renewable energy development have been adopted in more than 60 countries of the world. Renewable energy has become a base for regional and/or local energy supply, also through public-private partnerships.

While traditional types of renewable energy sources, such as hydropower, wood and wood waste biomass, still dominate, a remarkable growth in the use of non-traditional renewable energy sources can be observed: solar and geothermal energy, energy of wind and waste, and

tidal and wave energy are becoming increasingly relevant and important. This development has opened opportunities for engaging private and international financial institutions, provided incentives for the business sector and led to price decreases for renewable energy technologies.

**Energy efficiency and energy savings** as way of managing and restraining the growth in energy consumption offer powerful and cost-effective tools for achieving a sustainable energy future. According to the International Energy Agency, improvements in energy efficiency can reduce the need for investment in energy infrastructure, cut energy bills, improve health, increase competitiveness and improve consumer welfare. Environmental benefits can also be achieved by the reduction of greenhouse gases emissions and local air pollution. Energy security – the uninterrupted availability of energy sources at an affordable price – can also profit from improved energy efficiency by decreasing the reliance on imported fossil fuels.

The OSCE pS have repeatedly supported the exchange of best practices and capacity building on energy efficiency and renewable energy, an engagement that is continuing. The Rio+20 Outcome document “The Future We Want” reaffirmed support for increased use of renewable energy sources and other low-emission technologies, and the sustainable use of traditional energy resources and recognized that improving energy efficiency, increasing the share of renewable energy, cleaner and energy-efficient technologies are important for sustainable development, including in addressing climate change

**Good governance** is key for developing appropriate natural resource management policies. There are a number of international initiatives in this field. The 2006 G-8 St. Petersburg Principles on Global Energy Security include a strong emphasis on the importance of transparency and predictability. The Extractive Industries Transparency Initiative (EITI) is another example which aims to strengthen governance by improving transparency and accountability in the extractives sector and which supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas and mining.

In support of the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention), the OSCE, since 2002, has supported the establishment of Aarhus Centres and Public Environmental Information Centres. As of January 2013, there are 41 OSCE-supported Aarhus Centres in 12 countries (Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Serbia, Tajikistan and Turkmenistan). **Aarhus Centres** provide a space where the public and governments can come together to discuss and take action on their shared responsibility for all issues concerning environmental governance including challenges stemming from energy-related activities.

#### 4. **Some suggested goals of discussions during the Forum process :**

- Promote co-operation and exchange of best practices on national legislation and policies to prevent environmental risks from energy-related activities;
- Enhance co-operation and exchange of best practices to promote renewable energy, energy efficiency and energy savings, fiscal incentives and technology transfer;

- Promote and support environmental governance, public participation in decision making, the Aarhus Convention and Aarhus Centres;
- Strengthen public-private co-operation on the way to a “Green Economy”, contribute to engaging private and international financial institutions and providing incentives for the business sector;
- Support existing multilateral and UN processes for increased co-operation on issues such as: air pollution, climate change, oil spills, water and energy issues, dam safety, natural and man-made disaster prevention and risk reduction, legacies of energy-related activities as well as sustainable energy;
- Promote good governance in the energy sector and sustainable management of energy resources;
- Promote technology transfer initiatives and mechanisms within and between countries, promote co-operation on research and development for new technologies.