Energy Security and Climate Change

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Statement by the Asia-Europe People's Forum – Environmental security workshop

The civil society representatives gathered at the Asia-Europe People's Forum for enrvironmental security workshop wanted to deliver their messages to ASEM 6 summit's parties. Focusing on ways to respond to the challenges of globalisation, parties should concentrate in creation of real global energy security. In order to make this happen, the following aspects should be taken into account:

The current energy planning processes ignore public participation and neglect environmental and social acceptability issues. Hence, there is a massive outcry from local communities affected by large-scale, destructive fossil fuel, nuclear or large hydro energy technologies.

A clean, secure, sustainable decentralized energy system needs to be in place, which puts greater emphasis on renewable energy and energy efficiency as well as internalizing social and environmental costs and displaces large scale, centralised fossil fuel and nuclear energy sources.

1. All energy production causes environmental impacts. Therefore the best way to create energy security is to **reduce global energy consumption** by energy efficiency and conservation.

2. Energy plays a key role in sustainable development and poverty reduction initiatives. **Access to modern energy** services has to be ensured for all people. That is far more important than ensuring luxurious energy consumption for the rich minority of the world.

3. Global warming has to be kept **under 2 degrees** compared to pre-industrial levels to avoid the dangerous effects of climate change.

4. To fight against climate change a common understanding of the **future of the climate regime has to be agreed upon within 2 years**. The EU along with Asian countries can play a key role in ensuring the success of the negotiations. The United Nations Framework Convention on Climate Change and the Kyoto Protocol include several elements i.e. binding targets for industrialised countries, flexible mechanisms that drive the transfer of technology and finance and climate mitigation and adaptation funds. These should be used as foundation stones and further developed in the negotiations, which are being continued officially at the Nairobi climate conference in November.

5. In the long run the global energy system has to be run solely on **renewable energy** sources. The external costs – e.g. environmental and health impacts – have to be internalized into the cost of fossil fuels and nuclear energy to create a level playing field for renewable energies, such as wind and solar energy.

6. The utilization of renewable energy sources may cause environmental and social problems too if sustainability aspects are not considered. **Global guidelines for the use of biomass and hydro power** are needed. The Convention on Biological Diversity could serve as the forum for this.

7. Nuclear energy and fossil fuel technologies create major environmental problems and are not part of a sustainable solution. They should not be directly or indirectly subsidised, financially or through technology transfers. ASEM 6 parties should call for **an end to the use of nuclear energy and fossil fuels** and set a timeline for removing the subsidies given to them.

8. New creative instruments for increasing sustainability of energy consumption and production are needed. One option would be **market-based instruments** that would also take into account the social impacts of such measures.

9. Environmental and energy concerns as well as those facing a potential increase of natural disasters should be considered from an **ethical point of view** and aspects of international solidarity should be emphasized.

As energy security and climate change are high on the ASEM 6 agenda we call for a follow up of these issues at the ASEM 7 summit.

Searching for a global solution to the excessive use of natural resources

The ecological balance of our planet is under threat due to the growing exploitation of natural resources. At the current rate, the overall consumption of goods will increase four-fold by 2030. Such growth is seriously undermining many ecosystems, some of which are vital to mankind.

At the ASEM 6 Summit, Asian and EU representatives will focus on ways to respond to the challenges of globalisation. Climate change – together with the massive increase of demand of energy and the dramatic price increase of fossil fuels – provides the biggest challenge experienced in human history. In order to maintain the carrying capacity of the globe, we have to find an effective way to reduce energy consumption and to promote the sustainable use of natural resources. Our primary objective should be to double our wealth while halving our use of resources within a generation – in other words to increase eco-efficiency worldwide, by a factor of four.

The introduction of market-based instruments, aiming at the decoupling of economic growth and environmental damage is gaining momentum in Europe. As the president of the EU, Finland has a unique opportunity in leading Europe to reduce the consumption of natural resources. In order to have a wider impact, however, such measures would require international agreement so as to achieve a level-playing field between European stakeholders and their global counterparts.

An objective for EU-Asian cooperation

How could an agreement on economic incentives and eco-efficiency be reached at international level? The ASEM 6 Summit could take a leading role in launching such discussions based on the numerous reports produced by the UN, OECD and the European Environmental Agency amongst others.

Asian and European statesmen should call for a revision of our present fiscal regimes, whereby an increase in the cost of energy and natural resources could be counterbalanced by using the resulting revenue to reduce income taxes or non-wage labour costs. This would benefit the environment while providing new opportunities for additional employment.

The main objective should be to propose appropriate market-based incentives which would effectively restrain environmental degradation caused by our economic activities, while generating the necessary resources to finance health, education and social security concernes.

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As ASEM 6 summit's parties are negotiating climate change and energy security they should:

- **Call for the reduction of greenhouse gases by introducing new market-based instruments in order to improve energy efficiency and to reduce the consumption of non-renewable natural resources.**
- **Provide strong economic incentives to support research and development of renewable energy sources and set common objectives to phase out government support for the extraction and use of oil, coal, brown coal and peat.**
- **Establish an international panel to promote efficient ways to use natural resources, and to assess and spread the scientific, technical and socio-economic information related to material flows.**

Combatting climate change in order to ensure energy security

Increased oil prices, political instability in the Middle East and the tension over gas in Europe has created concerns about energy security all over the world. At the same time international climate negotiations are at an interesting stage as the concluding date of the Kyoto Protocol in 2012 is approaching sooner than many of us would wish.

Fortunately, policies aimed primarily to respond to pressing regional energy security problems can be effectively combined with low greenhouse gas emissions. For example, reducing oil imports as a strategy to improve energy security offers a significant opportunity to reduce global emissions.

On the other hand, international climate policy can contribute in an important way to answering to the energy security concerns of countries. Multi-lateral climate policy can create more long-term stability and co-operation in the energy market and encourage the efficient use of domestic (and renewable) energy sources. Serving primary interests of an individual countries energy security concerns can therefore work as a key incentive for countries to participate in the international climate regime and to implement efficient climate policies imposed by such a regime.

At the moment the negotiations about post 2012 climate regime are at a hectic stage. To effectively take into account the numerous energy security concerns the future climate regime has to:

1. Integrate climate and sustainable development goals. Countries can contribute to global climate effort through initiatives that serve their development goals (including improvement of energy security). In developing countries, efforts will be most successful if supplemented by assistance, investment and access to clean technologies.

➔ Development of the clean development mechanism (CDM) included in the Kyoto Protocol supplemented possibly with policies and measures integrating climate and sustainable development goals.

2. Enhance development, transfer and diffusion of clean technologies should mean significant increase in the investment of R&D and international cooperation. Even more importantly, it should mean policies that create a demand-lead market for new low-carbon technologies, because finally it is the only way that technological development, learning from experience, economies of scale in production and related cost reductions can result.

➔ Provide new international funding for R&D co-operation and technology transfer in order to improve energy security in a climate-friendly way.

➔ Implement international and domestic climate policies in a way that creates market

incentives for climate-friendly investments.

3. Create a long-term framework for effective policies and investments. Climate and energy security policies have to be long-standing to truly take effect. We need an international climate regime, that gives necessary guarantee about the direction of the climate policy and creates a long-term price indication for investments. It can also provide a common global framework for these policies thus decreasing possible short-term competitiveness concerns countries may have towards these policies.

➔ Critical for such a framework is a common long-term goal that will guide the global effort. This goal can be a shared vision about the maximum temperature rise accepted or the emission reductions needed.

➔ The framework has to couple countries short-term initiatives, (e.g. commitments and commitment periods) with this long-term goal and give a timetable for future initiatives.

4. Encourage broad participation by providing flexibility. In order to provide a long-term common framework for climate and energy policy the future regime has to encourage broad global participation. This, in turn, means that it must provide flexibility enough to accommodate different types of national circumstances by allowing different types of commitments. The differentiation of these commitments have to be based on fair principles that take the common but differentiated responsibilities of the countries into account, while also being compatible with the long-term goals.

➔ Binding emission commitments for developed countries are needed at least to create effective incentives for investments, technology transfer and the use of CDM.

➔ Commitments for developing countries should evolve from sustainable development policies above, to a more demanding level of emission commitments in accordance with the long-term framework.

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As ASEM 6 summit's parties are negotiating climate change and energy security they should:

- **Prepare their own innovative initiatives to speed up negotiations during the UNFCCC COP/MOP2 conference in Nairobi.**
- **Enhance the development of the common long-term vision and framework for the future climate policy to ensure better global governance of energy sources**
- **Encourage dialogue between countries about their energy security concerns to include these worries in forthcoming negotiations regarding future climate policies.**

Palm Oil – Promising yet Fearing

Palm oil is the world's most in-demand vegetable oil. The product is mainly used in the food industry, but the global interest in the use of vegetable oils as a source of energy is increasing. Growing global needs for transportation fuels, creates additional pressure in the bio-fuels sector. The production of biodiesel is expected to grow dramatically from 4 million tons in 2005 to 20 million tons by 2008.

The European Union is the biggest buyer of palm oil and European investors and European development banks have been the most prominent in funding palm oil production. Huge expectations have been put on bio-fuels as they can be used to decrease dependency on oil and gas, develop rural areas and combat global warming. The Union has even launched a directive to promote the use of fuels made from biomass in transportation.

Palm oil is one of the cheapest sources of biofuels available, large scale production is possible and the environmental problems are confined to small areas in south-east Asia. In addition the oil palm has highest yield/ha of biodiesel feedstocks. However there are many obstacles in enhancing palm oil consumption and production.

Unsecure Impacts on Climate

As palm oil is a biomass based fuel, the UN process on climate change counts its effect on global warming as zero. However the climatic sustainability of palm oil is questionable. Palm oil plantations are usually established in rain forests and due to wood logging, the rain forests capabilities to work as a carbon sink is lost.

In addition, oil palm plantations established in swamp rainforests release methane from the ground into the atmosphere. On a practical side major forest fires are common as land is slashed and burned to be used as plantations.

Dramatic Effects on Biodiversity

The increase of palm oil plantations have been evaluated to be the most important single reason for the loss of biodiversity in the riches of the world's rain forests. Turning rain forest into plantations means a staggering loss of 80–100% of various species of mammals, reptiles and birds. In addition the palm oil production process affects the environment, for example, a badly managed plant creates a great threat to neighbouring rivers and waterways.

Social-Economic Problems

Palm oil has had a positive impact on the development of the Indonesian and Malaysian economies as production has rapidly increased. However the price of economic growth has been high, while plantations have already caused serious ecological and cultural problems. The high demand from the energy industry on biofuels has lead to competition with the other main user of palm oil, the food production industry.

The plantation business is the most conflict-ridden sector in Indonesia and most of the conflicts are related to land rights. Behind the conflicts there are disagreements between local people and the palm oil industry, as the plantations have taken over traditional livelihoods. Local people are hired to work on plantations, but that hardly helps their situation as the economic status of labourers in palm oil plantations is questionable. Wages are low, labor unions are crushed, working hours are long and employers are unconcerned about the labourers health and welfare. As a result the vitality of the culture is threatened by oil palm plantations.

Hard road to sustainable palm oil

The environmental threats of

palm oil production could be reduced by responsible governance. Palm oil could provide a sustainable raw-material source for both biofuels and the food industry. Sustainability certificates of palm oil would be remarkable steps towards reducing environmental impacts of production. However if the growth rate predictions of palm oil use become true, no certificates can follow all the plantations in all over south-east Asia.

Biofuels are one of the promising techniques for more responsible use of energy. However it is not a trick that solves all the energy problems all over the world without any problems. Global governance, co-operation between producers and buyers and common guidelines are needed to make the use of palm oil sustainable.

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As ASEM 6 summit's parties are negotiating climate change and energy security they should:

- **Start negotiations of global governance of palm oil production. Both producing and demanding countries need to have common governance over the use of palm oil.**
- **Producing countries should create tracking systems to execute the existing legislation.**
- **In European countries biofuels should not be seen as a way to continue the "business as usual". Biofuels should be integrated in a context of larger energy political aim of reducing the growth level of energy consumption in transportation.**

Nuclear power – no answer to energy security

Increasing nuclear power has sometimes been put forward as an answer to energy security. This should be dismissed as short sighted and dangerous marketing talk, which can lead many countries into a nuclear dead-end. Expansion of nuclear power would bring a new set of problems, and could lead to a new kind of energy insecurity in many areas. The risk of nuclear accidents, nuclear materials proliferation and pollution from radioactive waste make nuclear power an unsafe energy production method.

Nuclear power today meets less than 3 % of the worlds' commercial energy consumption. Even doubling this amount would require many hundreds of new reactors built worldwide, but the reduction in greenhouse gas emissions would be just a few percents. If a large scale nuclear expansion program were to take place, reactors would need to be built worldwide, including developing countries. The program would increase the risks of nuclear energy significantly.

New reactors would have to be shielded from all imaginable risks, political conflicts or natural disasters until they're decommissioned, which can take nearly a century. The nuclear waste produced would have to be shielded for hundreds of thousands of years from getting into the environment or into the wrong hands. The effects of a mistake can be irreversible. Just one serious accident can affect the standard of living for the whole hemisphere by long-term radioactive pollution.

Reactors are also sitting ducks for armed conflicts, as no reactor in the world can repel an intentional and sustained attack. The loss of control of a facility containing nuclear materials is a danger even if the reactor isn't damaged. The black market for nuclear information and materials needed for nuclear weapons is a reality today, although the worst consequences have so far been avoided. A nuclear weapon ending up in the hands of a non-governmental organization would change the international political landscape for good. The logic behind nuclear deterrence, MAD, mutual assured destruction would be broken, as there would be no country, which to target with a counter attack. The more nuclear programs there are in the world, the more probable it is, that nuclear material and information will get into wrong hands.

Obviously nuclear power is a very centralized method of power production, which increases its vulnerability further. If one reactor is threatened, reactors in the same location or with the same type may have to be shut down. Recently 4 out of 11 reactors in Sweden were shut down for weeks, because of simple electronic design faults. The fault was suddenly discovered, after it caused a serious incident in one of the reactors, endangering the safety in all of them. Decentralized energy systems, based on renewable energy sources, are more flexible, reliable, and often economic, not to mention safer for consumers.

Some nuclear industry people agree with the risks, but have argued, that only certain countries should be allowed to have nuclear projects. This policy obviously leads to high political tensions. In the end, a less problematic solution would be to support a phase out of nuclear energy worldwide and phase in a sustainable energy system, based on renewable energy and energy efficient solutions. Only this can bring true energy security.

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As ASEM 6 summit's parties are negotiating climate change and energy security they should:

- **Concentrate funding for projects to develop energy systems based on new renewable technologies, which can be used worldwide.**
- **Refuse to give public funding or consultation in technology transfer to new nuclear projects or facilities.**

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