

- Climate Change -

European Contribution to the Global Response to Climate Change

Working Paper
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1. Introduction

YEPP believes that we all need to act responsibly to prevent a potential catastrophe. "The environment is not something we inherit from our parents; it's something we borrow from our children."

Our planet is warming up and our climate is changing. These changes have already started to influence our daily life and will increasingly continue to do so.

Average Earth temperature has increased by 0.7 °C in the last century and it is expected to increase even more in the next one. Such changes have the ability to significantly modify the current ecosystems. In the same period the sea level has increased by 20 cm. Further increases could directly threaten the livelihood of millions of people around the world.

Climate conditions are also a strong factor in the overall state of the economy. Agriculture, tourism, fisheries and forestry being just the most obvious examples of directly affected areas. We are witnessing more of heat waves, droughts, floods and ice melting which call for immediate action to address the challenge of climate change and to adapt to the changes. Potential water shortages resulting from global warming would have devastating effects in a wide range of industries and on the overall standard of life. Such effects would create an additional strain especially on the developing countries resulting in further erosion of social cohesion.

YEPP finds the debate on what exactly started the global warming less relevant as it agrees that, since the beginning of the industrial age, humans have at least speeded up the process.

YEPP supports the European Union in its efforts to find a global solution for this global problem. The EU is the world's strongest climate change lobbyist and it also strives to give the best example in the fight against climate change. The EU is committed to finding solutions in order to reach the targets defined by the Kyoto Protocol and has already set bold internal carbon emissions targets for the post Kyoto period. The European Climate Change Program establishing the Emissions Trading Scheme and supporting the use of renewable energy sources was internally a significant step forward. But even if the EU manages to fulfil its ambitious targets, the effects on the global environment will not be significant if China, USA, India and other major polluters do not follow.

Noting the YEPP resolution on climate change, adopted by the YEPP Council in Moldova in March 2006;

Acknowledging the policy development on Energy Security adopted by the YEPP Council in Rotterdam in January 2007.

2. European and Global Policy on Climate Change

The subject of climate change has become a matter of interest to the international community and global organisations in the second half of the twentieth century when relevant data were published showing the harmful effects mankind's activities were having on the climate.

Following the two Earth Summits and the creation of the Intergovernmental Panel on Climate Change (IPCC), established in 1988, the most important policy document for addressing the issue of climate change, the Kyoto Protocol, was adopted on 11th December 1997. Norms of the Kyoto Protocol obligated parties to the convention to reduce or limit greenhouse gases (GHG) emission. According to Annex B of the protocol each of the parties included in this annex was committed to a quantified emission limitation or reduction. For the EU this meant an 8% CO₂ reduction by 2012 based on the level of 1990. The Annex also opened the possibility for parties to transfer emission reduction units to one another which opened the space for developed countries to buy additional units. For the first time market mechanisms were applied to policy affecting climate change. Thus, the use of Kyoto Protocol mechanisms, Emission Trading (ET), Joint Implementation (JI), and Clean Development Mechanism (CDM) created a possibility to reduce the GHG emissions where it is most cost effective. A compliance system has been established to control the fulfilment of the Kyoto Protocol parties' obligations.

Placing climate change on the top of its own policy agenda the European Union played an important role in the international negotiations on the subject. In March 2000, the EU launched the European Climate Change Programme (ECCP) which was the first step in the efforts to tackle the broader problem and more immediately to reach the targets set by Kyoto. It is a stakeholder structure where representatives of the Commission meet with industry and NGOs to discuss appropriate policies. Setting up the structure was in itself recognition of the importance and urgency of combating climate change. The ECCP has led to the adoption of new measures on European level. On 10th January 2007 the European Commission adopted a Communication entitled "Limiting Global Climate Change to 2 degrees Celsius: The way ahead for 2020 and beyond" which set out proposals on post-Kyoto policy.

In February 2007 the European Parliament adopted a resolution on climate change in 44 articles which follows the European Commission's documents and in some ways goes beyond in setting reduction targets.

YEPP supports the Resolutions and underlines the importance of fulfilling set goals:

- i) To limit the average global temperature increase to 2°C above pre-industrialization levels;
- ii) Having in mind that temperature is directly correlated with GHG emissions to undertake overall emission reductions for all industrialized countries of 30% in comparison with 1990 emission levels by 2020 with a view to achieving a reduction in the order of 60 to 80% by 2050, in the contexts of the international negotiations with broader UNFCCC parties participation. Until an international agreement is concluded, the EU decided to take on a unilateral commitment to a 20% reduction of its GHG emissions by 2020.

Europe is leading the way in setting out and proposing what should be future obligations for industrialised countries as well as for countries in transition. EU policy delivers good practices that can serve as the basis of a future global document to be reached in the period after 2012 when the Kyoto Protocol's targets expire.

YEPP Statements on European and Global Policy on Climate Change:

- YEPP supports the proposal set in the European Parliament's resolution on climate change stating the intention of the European Union to retain the leading position globally in combating climate change, to set this issue as an overarching priority and to speak with a single European voice.
- YEPP calls on all European countries to work towards a future agreement for the post-Kyoto period and to insist that the agreement be reached with regards to targets set in European Union documents, the emission reduction of 30% by 2020 and increasing the share of renewable energy to 20% for 2020 with a view to achieving a reduction of 60 – 80% reduction of emissions by 2050.
- Developed countries are responsible for three quarters of GHG emissions in the atmosphere. We urge the EU to keep constant dialogue with those developed countries which have still not ratified the Kyoto Protocol and to work on full global acceptance of the future agreement.
- YEPP believes the EU must not remain alone in the fight against climate change. There is a need for global solutions. Developed countries have both the technology and the financial capacity to lead the way in reducing their emissions in the immediate future. They must be followed by developing countries. According to projections, these countries are expected to account for half of the global emissions by 2020. It is imperative that they start reducing the *growth* of their emissions in the near future and prepare for a reduction in absolute terms by 2020. The EU uses its weight in areas of economic cooperation and development cooperation to engage in a strong strategy of green diplomacy.
- YEPP applauds applying market notions to GHG emissions making climate aware policies and practices conform to the logic of cost-effectiveness.
- YEPP feels a future global agreement should set strong commitments for the participating parties and effectively stimulate use of energy efficient technologies and reduction in carbon production in all industrial sectors.

3. EU Contribution to the Global Climate Change Response

Climate change is one of the fields in which the EU has a strong unified position. This allows the EU to act as a strong lobby power externally and it also encourages creation of advanced internal policies. Implementation of these policies can serve as proof of strong EU resolve to combat climate change thus further establishing it as a worldwide leader on this important issue. This resulted in the creation of the European Union Greenhouse Gas Emission Trading Scheme (EU ETS).

EU ETS was created as an internal cap and trade scheme which is first of all made to comply with the Kyoto protocol. Aware that EU ETS will create a new potentially big and complex market, the implementation was divided into Phase I (2005-2007) and Phase II (2008-2012). Phase I is envisioned as the build up phase and it included around 12 000 installations representing approximately 45% of EU CO₂ emissions. As this phase is approaching its completion, YEPP is becoming discouraged by its results. Almost all member states placed the cap for the power sector too high and in some cases even above the baseline year. This created a huge surplus of CO₂ credits and in turn destabilized the market. Furthermore, it even led to an increase of CO₂ emissions, completely defiling the whole purpose of the scheme.

Even though the EU ETS is a young scheme and the carbon market is still unstable, the market has been created and all necessary procedures, enabling the Phase II to be implemented, have been established. Phase II is to allow trading of all greenhouse gases, include air traffic emission (from 2011), and is supposed to be extended over some non-EU member states, namely Norway, Iceland, Liechtenstein and Switzerland. If Phase II is properly implemented, EU might still manage to reduce GHG emissions by 8% as it is obligated to do under the Kyoto protocol. Failure to do so would have far reaching consequences on the EU foreign policy and future lobby power, especially in climate change field. YEPP urges the EU to put in place a better system of cap overview and continue to expand the scheme in order to fulfil the Kyoto obligations.

Still not all issues connected to EU ETS have been defined and there is still room for improvement. The carbon dioxide (CO₂) sink, although it is envisioned by the Kyoto protocol, is still one of the highly debated issues. The idea that states or companies could plant new trees or preserve current forests in order to reduce the effect of carbon emissions thus gaining additional emission credits is not included in EU policies. But a lot of industries are lobbying for this, claiming that it would ensure a more stable emissions market. Companies are concerned with the possibility of the unstable market creating unpredictable expenditure that would influence their profits.

In its constant effort to stay proactive in this field, EU made an internal goal to reduce GHG emissions by 20% by 2020 as well as to increase the share of renewable energy sources to 20%. YEPP supports these goals which entitle the EU to a high level of ambition in the post Kyoto negotiations.

YEPP statements on EU Contribution to the Global Response to Climate Change

- YEPP calls on the EU to persist in the implementation of the EU ETS and of the specific measures which will lead to the achievement of the set goals related to GHG emissions reduction and renewable energy sources amplification.
- YEPP believes that the ETS will prove to be a crucial instrument that would help developed countries to reach their targets cost-effectively. Comparable and compatible structures are being developed elsewhere which would create a global market thus reinforcing the ETS and the idea behind it and avoid "carbon leakages".
- YEPP feels that reinforcing ETS would also have to include introducing structural measures giving incentives to environment friendly technologies creating demand that would reflect better consumer climate awareness.
- In this respect YEPP acknowledges the link between climate change policy and the Lisbon Agenda. The benefits of climate change strongly outweigh the costs and mitigating climate change does not curb growth. According to recent studies the measures that would be needed in order to keep the global temperature average below a 2°C rise from pre-industrial levels would mean a 0.12% reduction in the annual GDP growth rate.
- YEPP believes tackling climate change is a long-term growth policy. Firstly, it limits the damages climate change can inflict on most affected sectors, and secondly it creates a new market of "green" technology where the EU has the financial resources and the innovation and research capabilities to be at the forefront. This would also contribute to the Lisbon goal of more growth and jobs.
- YEPP calls on the EU to work together closely on climate change, so that its industrial policy and transport, agriculture, research and development and other initiatives are better coordinated with climate change targets. We believe climate change is a cross-cutting issue that should not be regarded purely as an environmental issue.
 - noting the imminent inclusion of the aviation industries in the IPCC figures for EU CO₂ emissions, urgent action is necessary to curb the impact of aircraft flights on emissions levels
 - YEPP repeats its call for maritime transport to be included in indicators of CO₂ emissions and suggests the inclusion in the emissions trading system

4. Climate Change and Energy

World is constantly hungry for energy. As developing countries are becoming strongly industrialized their energy demands are rapidly increasing. If world governments continue to support the current policies, it is projected that the energy demand will increase by more than 50% by 2030. This could in turn result in almost 60% increase in CO₂ emissions.

Today, around 80% of the world's energy comes from oil, gas and coal and that is not expected to significantly decline in the foreseeable future. If mankind really expects to reduce the amount of greenhouse gases, changes in the energy mix will have to be made.

The number and range of potential alternative technologies is truly great. Generally the most supported group of technologies is energy production from renewable sources. They harvest the power of wind, sun, water, waves, tides, earth's heat, biofuels and biomass. Renewable sources are first of all abundant and most of the technologies using renewables do not produce any greenhouse gases. Currently they account for almost 14% of world's energy production. With almost a 65% share, hydro power is by far the most commonly used renewable source. Because of high EU subsidies and overall affordability, wind power has the fastest growing share. It is expected to overtake biomass and rise to the second position in the next 20 years. Solar power is still too expensive but future advances are expected to make it more competitive. CCS, Carbon Capture and Storage is also too expensive and needs future development in order to be deployed after 2020. Biomass and biofuels are considered renewable and "carbon neutral" because they are a part of the carbon cycle (although fossil fuels are a part of the same cycle their extensive use has created an excess CO₂ in the atmosphere). Biomass and biofuels are seen as some of the best currently available sources for the transitional period. Other sources do have potential but are either limited to very specific conditions or the technology is too new to have a significant impact on the market in the next few decades.

The remaining share of more than 6% of world's energy consumption comes from nuclear power. Currently, it is the only technology with low emissions, which is really able to fully compete economically with fossil fuels

One third of electricity in Europe is generated from nuclear fuel. Although recognising the contribution made by the nuclear industry in reducing CO₂ emissions, nuclear power has remained excluded from Kyoto mechanisms aimed at rewarding emission reductions in developing countries. The issue of nuclear power is still known to raise controversies for some countries, although they recognise that nuclear technology is well advanced to be considered safe, a potential risk of radiation leakage and radioactive waste storage outweighs any benefits. As a result of the power plant life span, it is expected that three quarters of current Europe's nuclear capacity will disappear by 2030 while the worldwide capacity will increase. Europe will soon need to answer the question of the role of nuclear energy play in its future, bearing in mind that declining the use of nuclear energy would in fact mean the increase in use of fossil energy sources.

Constant rise of oil prices has created a worldwide hype for investment in search of alternative fuels and energy sources. However, the successful implementation of new technologies still depends on actual government support. EU needs to stimulate investment into research and development of new technologies. A lot can still be done through supporting modernization and improvement of current technologies, creating stricter regulation and, if necessary, adding additional control. YEEP believes these changes and investments are fully in line with the provisions of the Lisbon convention. Opening new markets of "green" technology can create more jobs and boost EU economy. Reduction of dependence on imported fuels would also contribute to a greater energy stability and security.

One example where green technology can be successfully utilised and where indeed the energy consumption is increasing is the automotive industry and the transport sector. First in 1998 the EU signed an agreement with European Automobile Manufacturers Association to reduce the amount of CO₂ emissions by 25% before 2008. Then in 2001 EU issued a directive that aims to replace 5.75 % of fossil fuels with biofuels by 2010. Although it is at present doubtful that these goals will be truly fulfilled, these policies have helped raise public awareness on the issue. Biodiesel, ethanol mix, hybrid/electric car, hydrogen car and even air car are widely familiar concepts today. Proper infrastructure is still lacking but these car concepts are slowly increasing their sale shares. But again the real value of these changes is not only in carbon emission reduction but also in energy efficiency increase and greater energy security. Biofuels implementation is also creating new markets and shifts in different industries. Biofuels production from food crops and possible farmers move to more biofuels suited crops has raised some controversies about possible food prices increase on one hand or final solution for food crops surplus on the other.

A lot of the progress is also being made in improving overall energy efficiency. In this field it is not just the industry that can make more positive changes but the general population as well. Raising public awareness has reached a point where majority of the population do see climate change as a factor in their future life. But from a global perspective people are still not prepared to change their current habits for the sake of a potential future threat. If small changes like more energy efficient light bulbs and house appliances were to become truly wide spread it would have a strong synergy effect. Open market would signal the industry to invest even more in green technologies. It could even signal a stronger political mandate to the policy makers to create and more importantly implement bold but necessary changes.

YEPP statements on Climate Change and Energy

- YEPP believes there is enormous potential for emissions reductions in the field of energy efficiency and therefore invites all European countries to work on energy-efficient technologies and renewable industry resources. The EU member states should provide additional funds from their budgets for research and development of new technologies in this field and additional support for their implementation, including as a central element of this strategy public-private partnerships YEPP calls for urgent deployment of renewable energy and environmentally friendly technologies which would decrease the use of carbon and lead to the GHG emission reduction and calls on the EU to immediately remove import levies on energy saving products, particularly energy saving light-bulbs.
 - YEPP calls for a more decentralized energy production and support greater domestic energy generation in order to reduce and eliminate the transmission of electricity.
 - Investment in the most advanced electricity power lines and smart grids should be a priority in this regard
 - Green technologies can be one of Europe's future trademarks with big potential for employment, especially of young experts.
 - YEPP encourages the direct involvement in mitigation efforts at European citizen level, as well as the reinforcement of the awareness-raising activities.
- YEPP calls for educational campaigns on sustainable development and energy efficiency based on scientific facts and especially targeted for young people.

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