

CHALLENGE EUROPE

Challenges and new beginnings: Priorities for the EU's new leadership

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A European response to the resource and climate challenge

Jo Leinen

The 20th Century was characterised by growth: the world population grew by four times and its economic output grew by 40 times. At the same time, the resource use and greenhouse gas emissions increased drastically. Only within the last two decades, the worldwide extraction of resources increased by over 50%.

With the expectation that the demand of resources will triple by 2050 and the demand for food, feed and fibre is projected to increase by 70%, there is no doubt that we will exceed our planet's boundaries, the safe thresholds within which humanity can continue to develop and thrive for generations to come. Crossing these boundaries could generate abrupt or irreversible environmental changes. Respecting them reduces the risk that human society and ecosystems will face irreversible damages.

The model on planetary boundaries has been developed by the Stockholm Resilience Centre¹ and its most prominent boundary is "human induced climate change" which is an ever increasing threat to humanity. The impacts of global warming have been researched and analysed in depth not at least by the International Panel on Climate Change (IPCC) and range from the increased risk of storms, droughts and floods until the rising sea level with unpredictable effects for society, environment and global economy.

In order to meet these challenges, the European Union (EU) aims to move towards a sustainable, resource efficient and low carbon economy. This ambitious transition demands the commitment of all stakeholders. The overarching objective of its resource efficiency and climate policies is to decouple resource use and greenhouse gas emissions from economic growth. Of course that requires more than a legislative approach; it requires changes in our behaviour as producers and consumers, and that in turn requires incentives across many policy areas. The EU must make this paradigm shift happen swiftly and successfully. Every gram of resource that is not extracted, transported and used will reduce the ecological footprint. Every measure to reduce the emission of greenhouse gases will limit climate change and bring the EU on a path towards sustainable development.

Accordingly, a vision for "living well, within the limits of our planet" has been formulated and agreed on in the identically named 7th Environmental Action Programme:

In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a global safe and sustainable society.²

A closer look at the size of the challenge of resource constraints and climate change

Knowledge and science on climate change, its impacts and the need for action have been well developed over the last years and ultimately led to the international goal to limit the increase in average global temperature below two degrees. This goal has been accepted by the international community under the United Nations Framework Convention on Climate Change (UNFCCC) and is the highest affordable rise in order to have a 50% chance to avoid the worst effects of climate change. Scientifically translated it means the concentration of carbon dioxide equivalent in the atmosphere should not exceed 450 parts per million with a current concentration of around 400 parts per million.

From a European perspective, the challenge is clear: the EU – together with other developed countries – has a historical responsibility for the large amount of emissions caused since the industrial revolution; the bills for energy imports are constantly rising and the dependency on few exporting countries increases accordingly which has been evident not at least in the context of the Ukraine crisis; altogether with the fact that the co-effects from burning fossil fuels (bad air quality and health impacts) have been increasing.

Already in the early 1970's, the European Union recognised the need for urgent action and subsequently committed itself to emission reductions under the Kyoto Protocol to fulfil its responsibility. With the adoption of the climate and energy package for 2020, the EU showed international leadership in being the first to adopt binding climate change mitigation targets as follows:

- the reduction of greenhouse gas emissions by 20% from 1990 levels;
- to reach 20% of renewable energy in the total energy consumption in the EU;
- to increase energy efficiency to save 20% of EU energy consumption and;
- to reach 10% of biofuels in the total consumption of vehicles by 2020.

It was agreed that the implementation shall take the triad of sustainability, competitiveness and security of supply equally into account. Furthermore the following measures were determined: completing of the internal energy market, ensuring security of supply and solidarity in times of shortages, making the energy mix more sustainable, setting up an emission trading scheme and, a coherent external energy policy.

Member States have made substantial progress towards reaching the aims and targets, yet the way towards an absolute decoupling from economic growth and greenhouse gases and reaching the goal of an 80-95% emission reduction is still long. The upcoming two years will be crucial as the 2030 climate and energy framework will be discussed and the UN Climate Summit 2015 in Paris has to be prepared – where an international climate change agreement shall be reached.

In the run-up to the Climate Summit in Copenhagen in 2009, the EU has shown leadership in the negotiations, especially after the ratification of the Kyoto Protocol, providing material resources, showing commitment and readiness to compromise. Its role as an agenda-setter

and as a continuous booster of ambitious climate policy goals had a significant impact on the negotiations. Its recognition as an important international actor in the climate regime was further strengthened through communication and integration of emerging and developing countries, as well as by providing them financial and technological support. In the upcoming months, all eyes will be on the EU, the level of ambition in the 2030 package and how the facilitation of reaching consensus on a global climate treaty progresses.

While the size of the climate challenge has been clearly defined by scientists and the political agenda is well elaborated, the resource agenda is still rather vague. The challenge is vast, and rather difficult to break down on a single indicator such as the concentration of carbon dioxide equivalent.

Already today, resource extraction and consumption exceeds the Earth's capacity to regenerate those resources. However, the very same planet with limited resource capacity shall feed 9 billion people by 2050, all with similar expectations for a high standard of life. Already by 2030, there will be an additional 3 billion middle class consumers which will thrive on providing for their demands. This is of course good news but worrying at the same time: If we continue with a 'business as usual' scenario it will put immense strain on many resources and could potentially limit the ability to grow and provide higher living standards.

Over the past years, some improvements in the efficient use of resources have occurred, but economic growth worldwide has outstripped these gains. Resource extraction and use continue to rise dramatically on a global level and lead to a high volatility in resource prices. The EU is poor in mineral resources and therefore the biggest importer of raw materials. We get 48% of our copper ore from abroad, 64% of zinc bauxite as well as 78% of nickel. We import all of our cobalt, platinum, titanium and vanadium. The challenge for the EU is thus to reduce the need of virgin raw materials, use resources more efficiently and become thus independent from other countries. In order to avoid the waste of valuable resources, the old concept of 'extract-use-throw away' has to be transformed into a more sustainable production and consumption mode. Especially as we have to expect an end of perpetually cheaper resources in the next decades. We need to leave this path and become a more resource efficient and resilient economy.

From a highly import dependent continent you would expect that resources are managed efficiently out of a logical, ecological and economical reasoning. Yet, it seems Europe is still locked into resource inefficient infrastructures, resource inefficient consumption and production patterns, resource inefficient economic systems and resource inefficient behaviour.

As mentioned above, it is difficult to say how big the transition shall be, but with regard to the fact that people in rich countries consume up to 10 times more natural resources than those in the poorest countries, it shall be indicative that the EU needs to reduce its resource use, drastically. This implies changing the business models and moving towards a society where the extraction of virgin raw materials, the absolute level of resource use and the waste of valuable resources is reduced. This can be achieved by moving to a "circular economy" (with a circular concept of extract-take-make-use-remake) where resources are reused and recycled.

The next passage will focus on how to meet the challenges of mitigating climate change and reduce the overall resource use.

Policy options for a sustainable, resource efficient and low carbon economy

To continue with the need for action in the field of resource efficiency, measures and recommendations shall be given hereafter as well as ways to tackle climate change, described afterwards.

According to a Commission study³, every percentage point reduction in resource use is worth around 23 billion to business and could create up to 100,000 to 200,000 new jobs in the related sectors. It has been estimated that a reduction of the total material requirements of the European economy by 17% is feasible and this could boost GDP by up to 3.3% and create between 1.4 and 2.8 million jobs.

This should be an incentive to rethink the system with its related business models and move towards a circular economy by changing our production and consumption patterns. The basket of policy measures ranges from targets and indicators to awareness-raising campaigns, yet discussions on the right way forward are still at an early stage at the European level. Often, innovative ideas or instruments are difficult to implement or lose effectiveness. The idea of a 'product passport' which lists which materials a product contains; where they come from and how they could be re-used or recycled after the end of life of the product; and its environmental impact on water, carbon and land. This range of information could facilitate consumer choices and provide the necessary information for a potential label on how resource efficient the product is. However, if a product consists of hundreds of small pieces it is questionable if all the information could be collected and properly evaluated.

The European Parliament called for a legal framework on resource efficiency which includes targets, indicators, and benchmarks for standards and market-based instruments to create long-term investment perspectives for the private sector. A well-chosen mix of 'push' and 'pull' measures, including support for research and development, is needed to approach this challenge. Especially since recent OECD findings confirm that voluntary action brings us only half-way: "environmental effectiveness of voluntary approaches is often questionable, and their economic efficiency is generally low".¹⁴

As the study of the Commission shows, it is a win-win situation: business can save money, additional jobs are created in the society and the impact on the environment is reduced.

Until a legislative proposal will be adopted, other measures can be taken already:

- Products should be designed in a way that they can be entirely or partly recycled and re-used; the use of recyclable materials can then be promoted accordingly. In addition, increasing the life span of products and services is a measure which is not so often mentioned, but which could be very effective in reducing waste – this could be achieved through a longer minimal period of warranty.

- Technology and innovation are key elements in the decoupling of resource use and environmental impacts from production, consumption and economic growth. It is up to business to thrive for innovation and become market leaders and international frontrunners in resource efficient products and services.
- Like in all areas where a change of consumer behaviour is required, the necessary information must be provided. Creating a waste avoiding, re-using and recycling society can only be successful with the support of our citizens. Awareness raising campaigns can help consumers to take better informed decisions and increase the demand for sustainable products.

In order to achieve the goal of mitigating climate change and energy-self-sufficiency, Member States need to significantly expand renewable energies, increase energy efficiency and invest in the grid and storage capacities. In the range of policy options, development and deployment of renewable energies will be the most sustainable.

The benefits of an increased use of renewable energy are already known: they foster sustainable development and access to energy for all; contribute to social and economic development, a more secure energy supply and the reduction of greenhouse gas emissions; offer side-benefits in terms of less air pollution and health concerns and; reduce the costs of energy imports; provide economic possibilities for companies due to exports, market leadership and innovation and last but not least creates jobs.

In the 2020 package, three targets were adopted to provide energy companies and other stakeholders with clear market signals and necessary predictability for their investments. This path must continue with an ambitious framework and three legally binding targets as strategy for sustainable growth beyond 2020. The combination of energy efficiency, renewable energy and climate protection is crucial to achieve a sustainable energy mix and become energy-self-sufficient.

In contrast, last year we were able to witness many regressive measures taken by some Member States due to the economic crisis. This short-sighted economic interest shall not prevail over a clear long-term vision for renewable energy and a low carbon roadmap in Europe.

Creating momentum for a sustainability agenda after the European elections 2014

The transition towards a sustainable, resource efficient and low carbon economy includes profound changes in thinking, behaviour and consuming as well as economic and social structures. A redefinition of the European economy is needed. The figures and data on employment, emission reductions, and business opportunities – to name just a few – are proof that sustainable development will be beneficial for the environment and society alike.

Especially in this time of multiple crises, we are in a situation where we need to reduce costs spent on energy and resources, we need to increase our competitiveness and we need to

become less dependent on imports from other countries. Therefore, Europe can't afford to delay action. Doing more with less, will become our competitive advantage in the 21st Century.

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Endnotes

- 1 <http://www.stockholmresilience.org/21/research/research-programmes/planetary-boundaries.html>
- 2 <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1400597601478&uri=CELEX:32013D1386>
- 3 http://ec.europa.eu/environment/enveco/studies_modelling/pdf/exec_sum_macroeconomic.pdf
- 4 http://www.oecd-ilibrary.org/environment/voluntary-approaches-for-environmental-policy_9789264101784-en