

Position of the German Chemical Industry Association (VCI) on the “Roadmap to a Resource Efficient Europe”

27 October 2011

On 20 September 2011 the European Commission presented its “Roadmap to a Resource Efficient Europe”¹. Based on a vision for the year 2050, the Commission lays down milestones for 2020 in various policy fields, for implementation through numerous individual measures over the next years. The Roadmap concretises the flagship initiative “A resource-efficient Europe – Flagship initiative under the Europe 2020 Strategy”² that was presented in early 2011.

I. General Comments

The German chemical industry shares the vision of the European Commission for sustainable growth of the EU economy. The Commission rightly identifies a competitive economy, a high standard of living for citizens and much lower environmental impacts as central goals of equal standing under the “Roadmap to a Resource Efficient Europe”.

A sustainable economy includes sustainable resource management, ranging from raw materials to energy, water, air, land and soils. Therefore, VCI welcomes the strategic approach to this issue, which is now being taken by the EU Commission in its Communication “Roadmap to a Resource Efficient Europe”.

The German chemical industry is among the pioneers of resource protection. First, the link between production growth and resource consumption has been broken over recent decades. Second, innovative products from chemistry make considerable contributions to lower resource consumption in other industries and at private and public consumers. Many stakeholders have contributed to this successful development: responsibly acting entrepreneurs, an environmentally aware society, and intelligent environmental and industrial policies.

It is deplorable that the EU Commission is now departing from this path with its “Roadmap to a Resource Efficient Europe”. The German chemical industry is doubtful of the Commission’s Roadmap achieving the intended success. For this reason, the VCI asks to reconsider this strategy in essential points.

¹ COM(2011) 571: “Roadmap to a Resource Efficient Europe”

² COM(2011) 21: “A resource-efficient Europe, Flagship initiative under the Europe 2020 Strategy”

In contrast to the vision for a sustainable development, the Commission narrows down its considerations to the so-called “green economy”. Social aspects, the well-being and prosperity of humans are left out. However, practice shows that differences in income and wealth are further increasing due to many resource protection measures. For example, energy and CO₂ taxation has a regressive effect, i.e. in relative terms it brings heavier burdens for lower-income households³. Such measures stand in conflict with the political goal of social equity and are not sustainable.

Regarding the sustainable use of resources, there are major differences between the EU Member States. For example, water is scarce in some countries and sufficiently available in others. Individual measures need to take this fact into account. Europe-wide regulation is not always useful so that the idea of subsidiarity should apply here.

Furthermore, the Commission wants to transform the economy by way of industrial policy measures. Obviously, this is no longer just about creating general framework conditions or some form of guidance for the economy – this is about selective interventions to the benefit or detriment of individual sectors or technologies. But regulating the economy means restricting the innovative strength of the market and more steering by the public administration. In the past, such industrial policy interventions had long-term negative impacts. Examples are the deindustrialisation of France and the UK and the “green industrial policy” of the USA which did not create new jobs. The Commission rightly points out that industrial policy measures have winners and losers. But the claim that there are only winners in the end must be deemed refuted. Usually, industrial policy interventions are not sustainable. They require detailed justification in each individual case.

Instead, the chemical industry favours a resource strategy which largely relies on the market for creating the necessary innovations and for steering scarce resources towards their most efficient use. Additionally to setting general framework conditions, policy makers can support the economy on its way towards a sustainable use of resources

- with research incentives for research and development of innovative, resource-saving processes and products,
- by eliminating obstacles that impair the application of resource-saving processes and the dissemination of products, which help save resources in their use;
- by securing the competitiveness of industry in a long-term manner which enables reliable planning and, for internalising external effects, by rendering production factors or production itself more costly only to the extent that this is admissible in international competition.

³ See, for example, a study on experiences with energy taxation in Europe and lessons to be learned for Switzerland (in German language) at <http://proclimweb.scnat.ch/portal/ressources/33571.pdf>

From industry's perspective, resource efficiency means an efficient use of raw materials and other resources to manufacture products, which in turn allow for resource-friendly consumption. Even though the roadmap lacks a clear definition of resource efficiency, there are many indications that absolute reduction targets are favoured. However, absolute reduction targets say nothing about the efficient use of resources. On absolute reduction targets, data are easier to collect, to transmit and to verify. But they have one decisive disadvantage: where, irrespective of all efforts, resource input cannot be brought down to the politically aspired level – e.g. where efficiency increases with rising industrial production result in lower resource input per product unit, but not in any absolute reduction – the reduction target slows down economic growth and adversely affects the standard of living of citizens. Therefore, absolute reduction targets are not sustainable and it should be made clear that such targets are not aspired.

Resource policy must not deny the realities of economics and science and technology. It is not enough to assume that a resource protection policy strengthens, at the same time, the competitiveness of European industry. We are living in a globalised world and companies need to hold their own in global competition. This narrows down the options for political action. Resource policy should render production in Europe more costly only to the extent that individual companies and sectors remain competitive internationally. Otherwise, there is the danger of relocation abroad – with the consequence of no resource protection being achieved at the bottom line. The success of the “Roadmap to a Resource Efficient Europe” also depends on the measures taken by other countries outside the EU. Experience in climate protection shows that the EU with one-sided goals finds very few followers, so that Europe's present pioneering role cannot be maintained in the long run.

In view of the major impacts of the resource strategy on the competitiveness of Europe, it is difficult to understand why the Commission did not carry out competitiveness proofing. In its Communication of October 2010 “An Integrated Industrial Policy for the Globalisation Era – Putting Competitiveness and Sustainability at Centre Stage” (COM 2010(614)), the European Commission announced that “... *it is important to ensure that all policy proposals with a significant effect on industry undergo a thorough analysis for their impacts on competitiveness.*” Against this backdrop, it is surprising that the Commission did not subject the Roadmap to a detailed impact assessment. After all, the “Roadmap to a Resource Efficient Europe” is intended to fundamentally transform our economy within one generation – with considerable effects on European industry and society. In its “Conclusions on a competitive European economy: Industrial competitiveness in the light of resource efficiency” of 29 September 2011, the Competitiveness Council, too, warned not to lose sight of the international competitiveness of European industry in resource protection measures.

As the “Roadmap to a Resource Efficient Europe” is also a compilation of numerous individual measures which only partly comes up to the holistic approach, competitiveness proofing needs to give particular focus, inter alia, on the cumulative effects of the individual measures and the interdependencies between them. Measures may counteract each other in their effect, or, if they are not consistent with existing

requirements, merely cause unnecessary costs and administrative work. In other words: the resource strategy itself needs to become efficient. The Roadmap is still quite a way away from this.

II. Comments on specific issues:

3. Transforming the economy

3.1. Sustainable production and consumption

We are supportive of the following:

- The chemical industry supports the life cycle approach promoted in the roadmap.
- Voluntary agreements are always favoured by industry. Sometimes they can become mandatory in order to ensure an effective level playing field.
- Information to consumers should consider the three pillars of sustainability, as shown in the picture on page 5 of the Communication. Environmental footprint only reflects one of the three pillars. Information to consumers should always go along with other information such as proper use and safety requirements.

We are concerned about the following:

- Green Public Procurement: The criteria should be clearly defined, remain science-based **and** based on sustainability, not on environmental aspects only, as well as take into account the market situation and availability of green products. Fostering a life cycle approach is necessary to avoid discrimination. To be sustainable, products have to fit consumer needs. The focus should be not only the “green” status of a product, but its efficiency and effectiveness in responding to consumer needs.
- Environmental footprint: There is a need for a clear definition of the concept of environmental footprint, for example by means of an international ISO standard. Industry’s expertise and practice needs to be taken into account in the application of any methodology developed at EU level. Product sustainability assessments also need to consider social and economic aspects in addition to environmental criteria.
- Eco-design: The current focus of the eco-design directive is on energy. Any further extension of the directive to cover non-energy-related products should be carefully assessed to strictly avoid redundancy with other schemes, such as the Eco label and Green Public Procurement criteria.
- Take back and recovery schemes: Re-use and recovery should be promoted . The recovery path (recycling or energy recovery) needs to be chosen and prioritized by life-cycle-thinking, depending on the waste stream. This allows for determining the most resource efficient measures while taking into account economic constraints and technical feasibility.
- Substitution of chemicals by more effective or less dangerous ones is a process that is already common in the chemical industry. While the REACH regulation also includes a tool for identifying substances of very high concern for safety, it is not aimed at identifying efficient chemicals. Regarding resource efficiency, a careful consideration is necessary, which takes into account efficiency and safe use of substances over their life-cycle.
- The roadmap sees avoiding dangerous chemicals as a way to enhance resource efficiency, but there are also innovative ways in which chemistry can help boost production both in

resource-intensive industries such as the chemical industry and in other industries along the value chain. The proposed Research & Innovation public-private partnership on 'Sustainable Process Industry through Resource and Energy Efficiency' aims to develop enabling technologies and solutions needed to contribute to long-term sustainable production throughout the value chain.

3.2. Turning waste into a resource

- We support the life cycle approach to waste prevention and management. The chemical industry succeeded in decoupling the amount of waste for disposal from production growth.
- It is important to ensure consistency with existing regulation, such as the Waste Framework Directive (WFD). For instance, the definition/determination whether a waste stream is to be recycled or energetically recovered should be based on the basic principles as given in the WFD (Art 4), i.e. "the general environmental protection principles of precaution and sustainability, technical feasibility and economic viability, protection of resources as well as the overall environmental, human health, economic and social impacts".
- The roadmap focuses heavily on the use of waste as a resource for material use. Energy recovery, which often makes more economic and ecologic sense than recycling, is proposed to be limited to non recyclable materials, and landfilling to be virtually eliminated. Both material recovery (=recycling) and energy recovery are saving material and energy resources, respectively, by a proper waste management with quality recycling and with efficient energy-from-waste technologies. Studies from Governments of Member States or independent institutes such as Prognos have calculated the resource savings potential incl. its contributions to greenhouse gas savings. Therefore, both recovery options must be recognised as a valuable resource saving through waste management.
- It is important to ensure that waste policies intended to reduce waste in Europe (e.g. end-of-waste criteria) do not open the door to more exports of valuable materials outside Europe.

3.3. Supporting research and innovation

- Innovative methods for production processes or products, recovery and substitution to improve overall efficiency will contribute to EU resource efficiency objectives in a cost-effective way. Such innovation can also give European industry a competitive advantage vis-à-vis our main trading partners on a market expected to grow over the next decades.
- The roadmap focuses on the need for increased private investment in resource-efficient research and innovation. It has to be taken into account that for quite some time the private sector already invests considerably into R&D in technologies relevant for energy efficiency, the efficient use of raw materials and sustainable industrial processes throughout the value chain. Public efforts to boost private investment in this area should be technology-driven rather than trying to foster a market-pull.
- On "research and innovation", the roadmap's main focus seems to be on "research". For example, the roadmap highlights the role of the European research area and pooling national research efforts, but does not mention how to bridge the gap between research and bringing the research results to the market. Regarding political targets, it has to be taken into account that research and innovation cannot be scheduled in line with political targets: the potential of research and innovation cannot be politically evaluated in advance.

- The boost to resource efficiency innovation that could be achieved by working along value chains – from material provider to the end-user industry – is missing. When discussing the various sectors such as buildings, the roadmap is only referring to the value chain between the end-user industries while neglecting the effect of material innovations at the beginning of the value chain..
- The role of public-private partnerships in the innovation area needs to be strengthened. They have a proven track record as effective instruments of innovation policy and should be in the focus of support for R&I.
- We welcome and support all innovations and developments which enable chemical materials to meet the functional performance requirements of the respective applications. From an environmental performance, decisions in favour of any material or product must be based on sound scientific criteria and a life cycle approach. Biodegradable plastics represent a very specific niche product of innovative chemical materials, and they are only one example of the many innovative solutions of chemical industry. The roadmap should support innovation without restriction to individual products.

3.4. Environmentally harmful subsidies and getting the prices right

- While recognizing the need to eliminate environmentally harmful subsidies, it is important to note that subsidies which serve the purpose to compensate for global competitiveness disadvantages resulting from environmental protection or climate change mitigation measures should not be regarded as environmentally harmful subsidies. On the contrary, phasing out this special kind of subsidies could result in carbon leakage or other forms of resource leakage.
- Companies should not bear an increase of their overall tax burden as a result of any tax on the use of natural resources. There is a risk that environmental taxation will be an add-on in taxes and primarily lead to an increase in costs for European industry, thus impairing its competitiveness especially compared with non-European companies which are not affected by measures regarding the costing of water, air, ecosystems, etc. If environmental taxation is to be increased – which we do not agree with -, this must at least be compensated by a reduction of other direct taxes, in order to be conducive to growth and job creation. Moreover, while measures may be tax neutral overall, they can still bear heavily on capital-intensive industries.
- A positive measure to contribute to resource efficiency while safeguarding the competitiveness of EU industry could be R&D tax credits.

4. Natural capital and ecosystem services

4.1./4.2. Biodiversity and ecosystem services

- The chemical industry recognizes the importance of biodiversity and ecosystem services. Industry is willing to contribute to a significant reduction of the rate at which biological diversity is being lost in terrestrial and aquatic systems.
- For instance, biodiversity is the key foundation for all industries creating value by means of biotechnological processes or products. The chemical industry is one of the major drivers for advancements in biotechnology. Industrial biotechnology has already proven its significant contribution to resource efficiency and as a key enabling technology for the advancement of a bio-based economy – the sustainable use, production and conversion of

biomass for food and feedstuffs, fibre, pharmaceuticals, energy and chemicals. Its success is closely connected to a highly innovative chemical industry in Europe.

- New measures and instruments (especially on innovative financing mechanisms, pricing of natural resources/payment for ecosystem services), as mentioned in the EU biodiversity strategy, need to be further discussed in order to ensure the effective and coherent implementation of the strategy (see Council resolution June 2011). There has to be an assessment on the competitiveness impacts for the chemical industry (competitiveness check).
- The current focus of the EU on biodiversity issues is exclusively on conservation and not on the sustainable use of biodiversity. Measures to support investment and innovation related to the sustainable use of biodiversity (e.g. genetic resources) merit further attention.
- Data basis and target-setting should be robust and accompanied by an impact assessment (for example, defining what is meant by “restoration of 15% of ecosystems”).

4.4. Water

- River basin management acknowledges a variety of situations across economic sectors and geographic areas. Management instruments need to be as diverse as river basins
- Water efficiency targets, improved water efficiency measures, guidelines for water re-use: The chemical industry is continuously in search of improving on water efficiency. Most industry sites already have state-of-the-art waste water treatment. The chemical industry is looking forward to policy measures stimulating this continuous improvement. The chemical industry opposes mandatory measures. Sustainable use of water does not mean to conserve water at any cost – in Germany, for example, there is no structural water shortage.

4.6. Land and soils

- The roadmap proposes that Member States should by 2015 implement the actions needed for the preservation of fertile soils and the identification of contaminated sites, by setting up an inventory of contaminated sites. VCI is deeply concerned by the eventual consequences of such an inventory, in particular by the possible requirement to have an ambitious remedial plan as a next step. We recommend not to reopen the debate on the Soil Framework Directive.
- Arable land, and especially fertile arable land, is next to water one of the world's most limited resources. Using it as sustainably and efficiently as possible will be a major challenge for the future of agriculture. The responsible use of agrochemicals (fertilizers and crop protection products) helps farmers to use their land with high resource efficiency. Increased agricultural productivity per hectare helps avoiding negative land use changes, which otherwise may entail accelerated climate change or further loss of biodiversity.

4.7. Marine resources

- Biodiversity is the key foundation for all industries creating value by means of biotechnological processes or products. The current focus of the EU on biodiversity issues is exclusively on conservation and not on sustainable use of biodiversity. Measures to support investment and innovation for the creation of benefits from the sustainable use of biodiversity (e.g. genetic resources from terrestrial and aquatic sources) are not addressed. (see also 4.2 Supporting resource efficiency internationally – CBD).

- The marine litter effect has been realised by society, including politics and industry. But as a principle, marine debris cannot be associated to plastics material or plastics waste as such: Wastes from end-of-life products consist usually of a mix of different materials. Furthermore, littering is owed to an irresponsible behaviour of people. Furthermore, consequently, the focus should be on consumer information and education, supported by appropriate national and regional programmes.

5. Key sectors

5.1. Addressing food

- The roadmap states that resource-efficient food production should be achieved by a combined effort of the food production chain and the consumers. While we as an industry support this goal in general, we think the food issue is not addressed adequately. With the focus on negative effects like greenhouse gas emissions, food waste and water and material use during food production and consumption, the contribution of integrated crop production as the primary source of food and feed supply is not sufficiently taken into account.
- The abundance of high quality food we are used to must not be taken for granted. Given the growing global population and limited area of cultivable land (see also 4.6 above), there is a need for further development of highly efficient farming practices, including modern seed, innovative plant protection products and mineral fertilizers in order to enhance agricultural productivity in a sustainable way. The concept of integrated agriculture is an important instrument to ensure increased yields while keeping negative impacts to humans and the environment at a minimum.
- All steps of the food production chain have to be considered. The post-harvest minimization of crop losses, particularly during transport and storage, is a further goal to be achieved on the way to maximum resource efficiency.

5.2. Improving buildings

- Most construction material producers (not only construction chemicals) disagree with the application of 3.1 ("Sustainable production and consumption) to construction products. We believe that specifiers (architects and engineers, but also public procurement) need to focus on the holistic performance (including energy) of the whole building works during its whole life cycle, and not to the specific construction products (materials) used. As an example, there is an Eco design implementing measure for washing machines, but not for each component of the washing machine. In the same way, we aim to have Eco designed buildings (irrespective of the construction materials used). As a consequence, we are against the extension of the Ecodesign Directive 2009/125/EC to the construction products as we believe it would lead to increased costs for industry and consumers with no or little environmental benefits.

5.3. Ensuring efficient mobility

- VCI supports initiatives which contribute to a resource efficient mobility system. The Transport White Paper has presented ambitious targets for a competitive and resource efficient transport system. The realization of these sustainability targets depends however to a large extent on concrete political measures that still need to be developed, and upon the speed of future technological developments.

- The roadmap projects a reduction of freight intensity of the economy by 20% in 2020. This is not realistic and not consistent with the estimated increase of freight transport activity by 40% in 2030.
- In respect of internalization of external costs, the Commission places far too much hope in this to reduce emissions through a modal shift of freight transport. Increasing the costs of road transport will not result in any significant modal shifts when no viable alternatives for road transport are available and no policy actions are taken to make these alternative modes economically and operationally more efficient.

6. Governance and monitoring

6.1. New pathways to action on resource efficiency

- The proposed “EU Resource Efficiency Transition Platform” should ensure stakeholder involvement and a coordinated approach.
- The working methodology proposed in the roadmap is to work via target-setting by 2013. Before setting ambitious goals, it is necessary to carefully evaluate whether such targets are achievable and how the related measures affect European industry’s global competitiveness (“competitiveness check”). We regret that target-setting seems to have been chosen upfront as the tool. The chemical industry has been committed in the past, and will be in the future, to continuously decrease the environmental impact of its production and the use of its products.
- The proposed provisional lead indicator for resource productivity, measured by the ratio of GDP to Domestic Material Consumption discriminates against industrial production in Europe. Domestic Material Consumption does not take into account the indirect resource input in imported goods (so-called “resource backpacks”). Therefore, the indicator will improve when industrial production shifts abroad and deteriorate when imports are replaced by domestic production. Establishing a lead indicator should be postponed until the data needed to calculate a more complete and non-discriminatory indicator is available.

6.2. Supporting resource efficiency internationally

- Dialogue and cooperation at the international level is essential. In the area of chemicals management, the Strategic Approach to International Chemicals Management (SAICM) developed at UNEP level was put in place in 2006 to support the goal of the 2nd World Summit on Sustainable Development that by 2020 chemicals are produced and used in ways that minimize significant impacts on environment and human health. The chemical industry believes this is the right process to strengthen international agreements on chemicals.
- All industries creating value by means of biotechnological processes or products are already or will potentially be affected by the implementing provisions of the Convention on Biological Diversity (CBD). The EU needs to ensure that implementation of the newly adopted international agreement on access and benefit-sharing supports the investment and innovation necessary to create benefits from genetic resources. If implemented appropriately, it can provide a solid framework for CBD parties and businesses to act as partners to create a system that contributes to conservation and sustainable use of biodiversity. The EU needs to build a practical, workable and transparent system and infrastructure that will support and benefits from genetic resources, and avoid measures that will hinder innovation and trade. This in turn will help provide incentives for biodiversity conservation, one of the underlying aims of the Nagoya Protocol.

- We encourage the Commission to strengthen efforts to promote resource efficiency internationally, involving in particular the BRIC countries, the United States and Japan, in particular in the context of Rio+20. There is a need for the EU to pursue an appropriate strategy and uses its influence to work with international institutions towards the harmonization of global standards.

6.3. Smart regulation

- A wide range of EU policy instruments exist (waste legislation, eco-design directive, eco-labelling, green public procurement, end-of-life vehicles directive, WEEE directive, etc.), to promote resource efficiency. The efforts should concentrate on fully implementing the acquis and then on modernising, checking for its sustainability, and simplifying it, before proposing new legislation. “Fitness checks” that the Commission has announced in its communication in Smart regulation, should be used to evaluate whether there is a need for changing existing legislation.
- Setting realistic goals can indicate a common direction. However, it is important to find the right mix of implementation tools. VCI believes that the broad concept of resource efficiency can hardly be restricted to simple numerical targets. Such targets may well have unintended negative impacts (e.g. innovation, competitiveness), drive unexpected behaviours, and could have limited relevance given the wide range of economic circumstances across the EU.
- The implementation of the roadmap should be a cross-cutting activity involving all stakeholders. There should be a balance between all three pillars of sustainability: environmental, economic and social.