2nd European Resources Forum, Berlin

Minutes from the European Resources Forum 2014

Minutes by:
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DAY 1 – 10. November 2014

Plenary session: Targets for a sustainable resource use

- Professor Dr. Ernst Ulrich von Weizsäcker; Co-Chair, UNEP International Resource Panel and Co-President, Club of Rome, Germany
- Professor Dr. Marina Fischer-Kowalski ;Head of the Institute of Social Ecology, Alpen Adria University; member of UNEP International Resource Panel, Austria
- Professor Dr. Arjen Hoekstra; Professor in Water Management at University of Twente and creator of the water footprint concept, The Netherlands
- Moderator: Dr. Harry Lehmann; General Director of the Division Environmental Planning and Sustainability Strategies at Federal Environment Agency, Germany

In relation to the existing European target to increase resource productivity by over 30% by 2030, as formulated by the European Resource Efficiency Platform EREP in its manifesto & recommendations from March 2014, **Professor von Weizsäcker** pointed out that scientifically an 4- to 10-fold increase in resource productivity is needed and that a 30% increase translates to only a tenth of the increase necessary to achieve a factor 4 increase. He considered achieving a factor 4 to factor 10 increase absolutely possible from a physical and engineering perspective. The notion of remanufacturing will be one key element in these endeavours. While repairing items and replacing worn-out part assuming that the product has a longer life than its components often carries with it the connotation that repair is the second-best option only and thus leads to a negative image of second-best quality, remanufacturing actually means that the life-time of the product is shorter than that of the components, which is the reality for most products anyway. For instance, many of the components of an end of life vehicle are fully intact, but the entire product, the car, is not any more – here, remanufacturing means to re-produce new products using the existing completely intact components. The metal group of the International Resource Panel found out that the recycling rates of important metals are below 1%, mainly because valuable and fully intact components ready for remanufacturing are in many cases discarded as waste and hence lost.

Against this background, Professor von Weizsäcker advocates a ping-pong of increasing resource productivity and increasing resource prices, inter alia, in order to encourage remanufacturing. Cheap

resource prices in the past have lead to much waste generation. We need to copy the ping-pong between labour productivity and labour prices (i.e. wages) that occurred in the course of the industrial revolution for resources – that could then become a 20-fold increase in resource productivity, because it becomes more and more profitable to be resource efficient. This should be accompanied by a life-line tariff for the poor and certain rules for vulnerable industries so as to prevent leakage.

In her speech, **Professor Fischer-Kowalski** highlighted that there are two metabolic transitions going on simultaneously: We still have agrarian societies shifting to the industrial metabolism and some industrial economies trying to shift to a sustainable economy. Since around the 1970ies many industrial countries saw a spontaneous development to depart from steep increase in resource use, e.g. the resource use curves of the US, Austria and Japan for energy and material use became much flatter in the 1970ies. The three main drivers of these developments were: 1) some kind of shock around and the study on limits to growths and hippy movements in the late 1960ies/early 1970ies; 2) the 1970ies oil crisis, leading industries to think that it price developments may aggravate so they took swift action to reduce energy demand; 3) governments were frightened about how to heat their inhabitants' homes due to price increased during the oil crisis and took corrective action, such as regulating how many miles could be driven. That resulted in significant reductions in energy and material use in industry, construction and home energy use.

In contrast, however, resource use in Asian countries is rocketing, mainly in China and in India (while in Korea it is stabilizing) – as these two countries host a large share of the global population, reducing resource consumption there will be a tremendous challenge. Increasing international competition for resources will be one central element of this challenge, fuelled by an unprecedented rise in resource prices, which is projected to last and already now lasts longer than the energy price increases in the 1970ies oil crises. This could trigger further resource productivity efforts in industry as material costs make up a large share of firms' costs – but it will also require much effort by policy to supporting industry towards improving resource productivity. This needs indicators suitable to measure progress and also rewarding governments for policies that lead in the right direction. In this regard, the resource productivity is challenging as improvements in resource productivity can happen because of declining resource use or fast rising GDP growth – so countries with high GDP growth can easily achieve improved resource productivity, while those with small GDP growth have more difficulties achieving such an increase. The skyrocketing resource consumption in Asia proves that we need to increase the circularity of the economy, acknowledging that our economies can never ever be really circular without some system losses.

Professor Hoekstra criticized the European resource efficiency agenda for having a very narrow focus, not really fostering sustainability (i.e. also including security and equity issues), because while resource efficiency will and should continue to increase, at the same time human footprints have increased all the time. As production and consumption volumes have increased much faster and more than resource efficiency, water, land, ecological and carbon footprints have risen. Therefore, he called for caps on the footprints, for institutionalising them and considering how the footprints are they shared among populations. As Europe is shifting its footprint largely outside Europe, decreasing footprints within Europe outsources much of Europe's burden to the rest of the world, which is globally unsustainable. For instance, 69% of Germany's water footprint is outside its own borders, mostly Europe, but also South and North America, South and South East Asia and Russia; Germany is 4th largest net virtual water importer globally.

Professor Hoekstra argued that in order to reduce footprints, all actors need to act – from consumers demanding more sustainable products to business making more sustainable and to states fostering

sustainable production and consumption. This, however, needs a revolution in organising responsibility for sustainable footprints globally and along the value chain, e.g. rethinking consumption of strawberries from Spain, flowers from Kenia, soybeans from South America, because they are all depleting resources, leading to water pollution and deforestation in the production countries. 40% of European water footprint is outside the EU's territory, mostly coming from US, Brazil, Argentina, India, Australia, China – Europe is the most water-dependent country in the world and this poses risks to Europe's water and food security as China and India are not going to continue food exports as they currently do. Hence, Europe should prepare for a rapid increase of food production within Europe with challenging implications for land use, climate change, etc.

During the **plenary discussion** with the audience, the issue of planned obsolescence was highlighted as in need of regulation as this phenomenon stems from the post-war strategy to foster economic growth and since then has not seen any policy framework. Furthermore, the question was raised how much of our resource flows could actually be circular flows. This depends on the dematerialization of the energy supply – if this will be dematerialised to a large extent then we can actually move towards a circular economy; now we could only go to 50-60% circularity. However, when thinking about biofuels, it must be considered that biomass cannot be kept circular forever and that the current production and consumption levels cannot be turned into a circular economy if you replace fossil fuels with biofuels – there is simply not enough land available globally to produce biofuels at such a scale. As regards the role of commercials and advertising in resource consumption, there is a reservation towards measuring materials consumption in materials footprints, because this puts the responsibility on the consumers to consume more sustainably. In addition, there is a huge incentive on the producer's side to spark and maintain high sales figures, so we need to ask in whose interest high resource consumption is. For example, today it is China's interest to become the number one economy by flooding European markets with cheap goods. Similarly, some companies are actively blocking progress in using water footprints by embracing the concept and then misusing it to kill and discredit. Here, governments have to set the standards for communication and for commercials to achieve greater product transparency.
