

**Consultation on the
Strategic Nanotechnology Action Plan
(SNAP) 2010 – 2015**

**Contribution
of the German Advisory Council
on the Environment**

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Nanomaterials have a high potential for innovative technologies and diverse areas of application. From the perspective of the protection of environment and human health, particular attention has to be given to free nanoparticles, nanotubes and nanofibres. The small size of structures may change patterns of absorption and distribution in the organism and promote disperse distribution in the environment. The risks and opportunities of nanomaterials vary considerably between different materials and areas of application and have to be analysed in a differentiated way. Although considerable efforts are undertaken to assess safe use, the risks have not yet been fully understood. Given remaining uncertainty and the possibility that knowledge about hazards may emerge in the future, it is essential to have an overview of applications of nanomaterials. For this reason, the European Union's approach for dealing with nanomaterials should be based on the precautionary principle.

The German Advisory Council on the Environment sees a particular need to act in relation to nanomaterials which are being diffusely distributed and which can be assumed to be biologically active given their physico-chemical properties. Here, the precautionary principle – as understood in the Commission Communication (COM(2000) 1 final) – implies that the European Commission (in cooperation with Member States) should ensure the basis of an adequate and comprehensive knowledge about the risks of nanomaterials. Further precautionary measures are necessary to regulate the use of those nanomaterials for which the preliminary risk assessment provides an abstract concern that possible hazards for human health and the environment are unacceptable or not in line with the high level of protection of the European Union. A range of measures can be considered to ensure a responsible use of nanomaterials. The measures selected should be proportionate with the chosen level of protection and coherent with similar measures already taken.

As a first measure a register of products containing nanomaterials should be introduced. Furthermore, the main instrument of the European chemicals law for the procurement of information on substances – the registration obligation of the REACH Regulation – should be further developed to ensure that nanomaterials are registered as separate substances and that required information is systematically requested.

Moreover, the relevant areas of product law should be reviewed. The European Commission should evaluate in the light of the precautionary principle whether further authorisation requirements could be an appropriate measure for the regulation of especially critical nanomaterials, specifically in product areas characterised by weak regulation. A possible requirement of prior approval could either take the form of a general authorisation by including a nanomaterial in a “positive list” of authorised substances or through an individual authorisation for a nanomaterial or a product which contains the material. Generally, all authorisation procedures should ensure that it is

possible to require an authorisation on the basis of a science based abstract concern (rather than a confirmed hazard) and that the specific features of nanomaterials are appropriately considered. Furthermore, an authorisation procedure could be linked with a precautionary shift of the burden of proof.

The European Commission should also consider the instrument of mandatory labelling for selected products containing nanomaterials. This could be applied where nanomaterials are used in consumer goods and where there is a possibility that they are released during use in relevant amounts and human exposure is likely.

In addition to protecting human health, the European Commission should increase its efforts to ensure the protection of the environment. Here, measures should in particular be taken to address the issue of nanomaterials in waste and waste water.

The German Advisory Council on the Environment (SRU) is an independent scientific advisory body established by the German Federal Government. It will further develop its recommendations for a precautionary approach to the use of nanomaterials in a Special Report which is due to be published in early 2011.