SWITZERLAND

Highlight of developments since the 3rd meeting of the WPMN

- Approval of the Swiss Action Plan on synthetic Nanomaterials by the Federal Council
- Launch of the National Research Programme "Opportunities and Risks of Nanomaterials"

Work completed, underway or planned

Swiss Action Plan on Synthetic Nanomaterials

The action plan on synthetic nanomaterials was approved by the Federal Council on 9 April 2008. The package of measures pursues four objectives:

The action plan will create regulatory framework conditions for the responsible handling of synthetic nanoparticles. The development of a methodology allowing risk characterisation of nanomaterials based on existing knowledge will be a first goal. This methodology can be used by the industry to assess their products and for the decision on risk management measures. Only when the methodological foundations and well-grounded risk assessments of synthetic nanomaterials are available, can additional statutory framework conditions for the safe handling of synthetic nanomaterials be developed.

Possible risks for humans and the environment arising in the course of the manufacture, use and disposal of these nanomaterials cannot yet be conclusively evaluated, as the scientific and methodological basis is currently lacking. The action plan aims to foster research to narrow the knowledge gaps. The National Research Programme "Opportunities and Risks of Nanomaterials" that has been launched by the Federal Council on 28 November 2007 will contribute substantially to this aim.

Communication and public dialogue are key prerequisites for the rational engagement with nanotechnology, and should therefore be encouraged. Including the public, industry and science in the debate about the opportunities and risks of nanotechnology must be an integral part of its development.

The potential of nanotechnology for efficient use of resources and health protection is of major social and economic relevance. The collaboration of research and industry to invest is such applications of nanotechnology should be promoted. Existing Federal funding schemes can be used for funding.

Developments related to voluntary or stewardship schemes

No governmental activity so far.

Information on any developments related to good practice documents

An important goal of the Swiss action plan is the development of a method based on existing knowledge to estimate health and environmental risks form production use and disposal of nanomaterials or its applications. The development of this so called "safety matrix" is ongoing.

Trade and industry are obliged to assess their products and applications as part of the existing provisions on self-supervision, if necessary to take measures to reduce risk, and to inform their customers of such measures. As employers they must take all the required measures to protect their employees. Corresponding instructions are being drawn up on the basis of the safety matrix.
Research programmes or strategies designed to address human health and/or environmental safety aspects of nanomaterials

The new National Research Programme “Opportunities and Risks of Nanomaterials” was launched by the Federal Council on 28 November 2007: The call for research projects is planned for spring 2009.

Some Federal agencies and universities have given safety research on nanomaterials a high priority.

Selected ongoing projects:

Title: Nanoinventory
Project leader: Michael Riediker, Institute for Occupational Health Sciences (IST) Lausanne (Michael.Riediker@hospvd.ch)
Duration: 2006-2009

Title: Cytotoxicity of Nanoparticles
Project leader: Wendelin Stark, Institute for Chemical and Bioengineering, ETH Zürich (wendelin.stark@chem.ethz.ch)
Duration: 2005-2008

Title: Analysis of the human exposure to nanomaterials in Switzerland
Project leader: Konrad Hungerbühler, Institute for Chemical and Bioengineering, ETH Zürich (hungerb@chem.ethz.ch)
Duration: 2006-2009

Title: Ecotoxicology of Nanoparticles: Biota-Nanoparticle-Pollutant Interactions in aqueous systems - Comparison of Black Carbon and Carbon Nanotubes
Project leader: Bernd Nowack, EMPA Material Science and Technologies (nowack@empa.ch)
Duration: 2008-2011

Title: Interplay of lung cells and their cellular responses upon exposure to combustion-generated ultrafine particles and manufactured nanoparticles
Project leader: Barbara Rothen-Rutishauser, Institute for Anatomy, University of Bern (rothen@ana.unibe.ch)
Duration: 2007-2010

Information on any public/stakeholder consultation

Communication and promotion public dialogue is a goal of the Swiss action plan. It is planned to improve communication with the different stakeholders on possible risks and opportunities of nanotechnologies. Communication should allow opinion-forming which may influence technology development. On the other approaches to the safe handling of synthetic nanomaterials must be debated and discussed among the different stakeholders to be accepted and to be successful.