

Overview of Current Development in Manufactured Nanomaterials
(Germany)

Date	Major Development	Participants of WPMN meeting
July 2010	(N/A)	
Oct 2009	<ul style="list-style-type: none"> • Feasibility study Nano Products' Register • Launching of diverse research projects • Continuation of German NanoKommission's work 	Dr. Klaus-G STEINHAEU SER etc. (total 11)
March 2009	<p>The NanoDialogue was initiated by the Federal Government and a so called "NanoKommission" was established where stakeholders from authorities, industry, trade unions and NGOs tried to get a common understanding on opportunities and risks of nanotechnology. The NanoKommission had the mandate to develop a report within 2 years by the end of 2008. Three working groups discussed important aspects of the development of nanotechnology:</p> <p>The first Working Group "Opportunities for Health and Environment" concentrated on the question: How can the use of nanomaterials contribute to sustainable economic and social development in Germany, in particular to environmental/health and consumer protection? The Working Group wanted to identify and describe selected nanoproducts or applications which deliver a special benefit for the environment or for consumers. These opportunities were checked concerning their sustainability throughout their life cycle, at least qualitatively.</p> <p>A second Working Group was called "Risks and Safety Research" and consequently dealt with the possible risks posed by nanomaterials, especially the gaps in our knowledge, which we need to fill as soon as possible. The aim was to develop a programme for future safety research plus suggestions for concrete projects. Since many products containing nanomaterials are already on the market and we expect a further increase in the future, this working group had to assess the risks for some selected nanomaterials based on present knowledge.</p> <p>In order to provide preventive protection to employees, consumers and the environment, a third Working Group developed "Guidelines on the Responsible Use of Nanomaterials". The group started the work on a Guideline for worker protection and worked on basic principles on which all Guidelines should be based and on indicators to monitor their implementation. The aim of Working Group 3 was that industry and user companies adopt these Guidelines as a "Code of Good Practice".</p> <p>The results of the "NanoDialog" were presented at a final conference in November 2008 giving advice to politicians and information to the public. The "NanoDialog" will continue for additional two years.</p>	Dr. Klaus-G STEINHAEU SER etc. (total 4)

	<p>The English translation of the report 2008 will be available soon. The German version is available www.bmu.de.</p> <p>The NanoDialog Project is part of this action plan.</p> <p>Since 2007, the "Nano Initiative - Action Plan 2010" gives a framework across all government departments. The leading Ministry "Education and Research" (BMBF) has started this initiative, together with six others (Environment (BMU), Labour and Social Affairs (BMAS), Food, Agriculture and Consumer Protection (BMELV), Defense (BMVg), Health (BMG) and Commerce and Technology (BMWi)).</p>	
June 2008	<p>The NanoCommission (NanoDialog) continues its work with the help of three working groups:</p> <ol style="list-style-type: none"> 1. The first Working Group "Opportunities for Health and Environment" concentrates on the question: How can the use of nanomaterials contribute to sustainable economic and social development in Germany, in particular to environmental/health and consumer protection? The Working Group wants to identify and describe selected nanoproducts or applications which deliver a special benefit for the environment or for consumers. These opportunities will be checked concerning their sustainability throughout their life cycle, at least qualitatively. 2. A second Working Group is called "Risks and Safety Research" and consequently deals with the possible risks posed by nanomaterials, especially the gaps in our knowledge, which we need to fill as soon as possible. The aim is to develop a programme for future safety research plus suggestions for concrete projects. Since many products containing nanomaterials are already on the market and we expect a further increase in the future, this working group will assess the risks for some selected nanomaterials based on present knowledge. 3. In order to provide preventive protection to employees, consumers and the environment, a third Working Group develops "Guidelines on the Responsible Use of Nanomaterials". The group started the work on a Guideline for worker protection and is now working on basic principles on which all Guidelines should be based and on indicators to monitor their implementation. The aim of Working Group 3 is, that industry and user companies adopt these Guidelines as a "Code of Good Practice." <p>The output of the working groups will be summarized in the report of the NanoCommission in summer 2008. This will include recommendations for research priorities, a commitment to the responsible use of nanomaterials based on respective guidelines and a report on nanomaterial based opportunities for sustainable development. In November 2008 a closing event will take place in Berlin.</p> <p>Since 2007, the "Nano Initiative - Action Plan 2010" gives a framework across all government departments. The leading Ministry "Education and Research" (BMBF) has started this initiative, together with six others (Environment (BMU), Labour and Social Affairs (BMAS), Food, Agriculture and Consumer Protection (BMELV), Defence (BMVg), Health (BMG) and Commerce and Technology (BMWi)). The</p>	Dr. Klaus-G STEINHAEU SER etc. (total 5)

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April 2007	<ul style="list-style-type: none"> • As we had reported last time, possible elements of a structured public dialogue about chances and possible risks of nanomaterials and nanoparticles had been discussed last September at a starting conversation between the Federal Minister of Environment and high-level experts of all involved stakeholders. Based on this the "Nanocommission" was established at 24th November 2006. This Commission is thought as a strategic board, which will lead in behalf of the German government the NanoDialogue to chances and risks of synthetic nanoparticles for human health and the environment. Therefore it plans also the development of a special communication strategy. • Furthermore, the commission will accompany and steer the work of three working groups, which have very recently (at 26th of March) founded under the roof of the Nanocommission. 	<p>Dr. Klaus-G STEINHAEU SER etc. (total 4)</p>

	<ul style="list-style-type: none"> • The main tasks of these groups are thought to be: <ul style="list-style-type: none"> – WG 1: Chances for the environment and human health, – WG 2: Risks and safety research, and – WG 3: guide for a responsible handling of nanomaterials • A close cooperation with the appropriate OECD SG's is aspired. 	
Oct 2006	<p>1. Any national regulatory developments on human health and environmental safety including recommendations or discussions related to adapting existing regulatory systems or the drafting of laws/ regulations/ guidance materials;</p> <p>A study on regulatory gaps and options is currently undertaken by the Federal Environment Agency (UBA). This study examines European and German chemical and environmental legislation. However, currently no legislation activities are under development due to lack of scientific methods to measure exposure and effects of nanomaterials appropriately</p> <p>2. Developments related to voluntary or stewardship schemes;</p> <p>At present very little information is available about the occupational exposure to nanoparticles, the risk management, and safety measures applied in industry. A questionnaire about the identity of nanoparticles produced, the production method and use pattern, the production volume, the number of exposed workers, and the already applied safety measures should be developed. This questionnaire should be answered by industry. Next to information on occupational exposures, nanoparticles of major concern can be identified. When more precise data on possible health effects become available the completed questionnaire can be used to improve guidance for a safe handling and use of nanoparticles. [In cooperation with the association of the German chemical industry (VCI) the Federal Institute for Occupational Safety and Health (BAuA) is finalising such a survey for the German industry. The results might form the basis for an European action and should be extended to OECD countries.]</p> <p>In addition a voluntary reporting scheme by industry to authorities is considered an interesting approach to be informed regularly about produced and commercialized nanoparticles.</p> <p>3. Information on any risk assessment decisions;</p> <p>-</p> <p>4. Information on any developments related to good practice documents;</p> <p>A "Code of Good Practice" is considered an important tool to inform about what can be seen as good technical standard. Since some technical information is available at the industrial companies BAuA cooperates with the VCI (German chemical industry association) in this field.</p> <p>5. Research programmes or strategies designed to address human health and/ or environmental safety aspects of nanomaterials;</p> <p>At present there is uncertainty about the risks of nanomaterials. Especially</p>	<p>Dr. Klaus-G STEINHAEU SER</p> <p>Dr. Reiner ARNDT</p> <p>Mr. Wolfgang DUBBERT</p>

nanoparticles are in the focus of discussion. Research is generally considered to be necessary to finally produce recommendations for production and use of nanomaterials which is safe for human health and the environment, to set exposure limits and to make risk assessments, that take into account the current practice of assessing particles and chemical substances in general. Thus it is of high importance to structure the diversity of research ideas, to set priorities and to make sure that the research is not limited to fundamental research, but especially is appropriate to enable authorities to set exposure limits, to perform comprehensive risk assessments, to protect the environment, etc. Thus the BAuA (Federal Institute of Occupational Safety and Health) works together with BfR (Federal Institute for Risk Assessment) and UBA (Federal Environment Agency) on the development of a German research strategy, that considers health issues of workers and consumers and the environment issues.

The Federal Ministry of Education and Research (BMBF) started in March 2006 the project “NanoCare”. In this project the ministry, together with Industry, supports research to assess risks in handling new nanomaterials in their life cycle. Another project called INOS, supported by BMBF, is investigating the effects of nanoparticles at the research and development stage on people’s health and the environment. The aim is to create a scientifically-based data set where anyone can find information about the potential risks of nanoparticles. In the joint project TRACER the potential of Carbonanotubes concerning applications and toxicological risks will be investigated to tap the full potential of this material.

6. Information on any public/ stakeholder consultation.

The Federal Ministry for Environment (BMU) together with the Federal Environmental Agency (UBA) and the Federal Institute of Occupational Safety and Health (BAuA) initiated a dialogue to assess synthetic nanoparticles in the work place and in the environment with a workshop in October 2005. This dialogue is continued by the BMU in September 2006 with a conversation with high-ranking experts on chances and risks on nanotechnology. In this conversation succeeding activities will be considered.

Expert-Meeting “Nanotechnology - Applications, Trends and Risks” (BfR), 28.03.2006

Expert-Meetings “Nano sealing sprays” (BfR), 07.04.2006, 23.05.2006, 05.07.2006

Delphi survey about risks of nano-technological applications in the areas of food, cosmetics and commodities (BfR), 03/2006 – 12/2006

Consumer conference on perception of nanotechnology (BfR), 04/2006 – 01/2007