NETHERLANDS

Activities on risks of nanotechnology in the Netherlands

Cabinet view on nanotechnologies

In November 2006 the Dutch government issued a cabinet view on nanotechnologies. The aim of this cabinet view is to indicate whether the frameworks necessary for responsible developments are adequate or in need of adjustment or revision. This assessment will be made on the basis of the main areas of Opportunities, Dealing with Risks, Ethical and Legal Issues, Research Agenda, Coordination and Support base and Communication. The view can be briefly summarised as follows: nanotechnologies are new technologies that are already the subject of a great deal of research worldwide and that are being increasingly applied. It is important that the Netherlands participates in this, not only by keeping up with the development of knowledge in the field but also by securing a position in the vanguard. Furthermore, we must be alert to the possible risks that nanotechnologies entail. The Netherlands will only be able to take optimum advantage of the opportunities by dealing cautiously and carefully with the associated risks.

Based on this cabinet view a.o. the following actions have been taken:

- An **interdepartmental working group** on possible risks of nanotechnology has been established, which will produce an action plan for both applications and risks of nanotechnology (June 2008) and a document for the Government on the risk strategy by the end of 2008.

- A **national observatory**, called the Risks of Nanotechnology Knowledge and Information centre (KIR nano) was established in 2007 at the National Institute of Public Health and the Environment (RIVM). KIR nano is a result of the Dutch action plan which includes proposals on research, innovation, legal aspects, risk management, and communication to the public at large. KIR nano aims at observing and monitoring the potential risks of nanotechnology, gathering relevant scientific literature, generating overviews of relevant legislation, and advising and informing governmental bodies and professionals. These activities are always performed from a risk assessment viewpoint. Its signaling function is put into practice by participating in national and international networks (e.g. OECD WPMN, REACH CASG Nano, ISO, SCENIHR, EFSA, SETAC, WHO/FAO) and bringing experts together into national expert panels on different topics (environment, food, consumer products, medical applications, and workers). In this way, KIR nano acts as an information exchange platform without performing research itself. Until now, the focus was on engineered, free, insoluble and non biodegradable nanomaterials and their possible toxicological and ecotoxicological risks. As a first achievement, a report giving an overview of risks for man and the environment and knowledge gaps in the entire field of nanotechnology was published. An English translation will be available on www.rivm.nl in the near future.

KIR nano is involved in the following EU FP-7 projects:

- EU Observatory Nano (work package on health, safety and environment and work package on legislation)
- NanoImpactNet (work package on risk assessment and work package on environmental exposure)
- FramingNano

The Netherlands Nanotechnology Initiative (NNI), arising from the NanoNed consortium which is active in the area of possible applications of nanotechnology, made a Strategic national Research Agenda (SRA). See below for more information.

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

The Netherlands participate in the REACH CA Subgroup on nanomaterials.

The current opinion in the Netherlands is that the present regulatory framework in principle gives a good coverage; different aspects of production and products are at the same time subject to various Community provisions. Therefore, although there is no legislation specifically relating to nanotechnologies, the generic legislation applies to engineered nanosized materials and in the case of REACH places the responsibility on industry to ensure safe use of nanomaterials.The legislation in principle also enables authorities to take prompt action if products pose a risk to health, safety or the environment. But since many knowledge gaps have been identified, and no data on which to determine the possible risks are available, it is not possible to assess the full extent to which the implementation of current regulations addresses any potential risks. In short the legislation is adequate but the implementation of it is inadequate due to lack of specific measures, parameters or control devices. The Netherlands is working on a case study with nanosilver. In this study a Chemical Safety Report is made for nanosilver and it is discussed if data gaps can be filled with data for silver salts (not nano). The questions that arise will be used to develop a screening model to assess the risks of nanoparticles.

Developments related to voluntary or stewardship schemes

As a result of ongoing dialogue with the Dutch authorities, VNO/NCW (Business organization of the Netherlands) has taken the initiative together with the VNCI (United Dutch Chemical Industry) to enter into a voluntary agreement with the Dutch government on communication and risk assessment issues of nanomaterials. They are currently working on a Letter of Intent. Initiatives for a structural dialogue with multiple stakeholders has started in 2008.

Information on any developments related to good practice documents

The SER (Dutch Socio Economic Council which consists of representatives from business labour union. and academia) has written an advice on good practice on workplace exposure of nanomaterials. Publication is foreseen in the near future.

The Netherlands subscribes the Code of Conduct for responsible Nanosciences and Nanotechnologies Research, adopted by the EC (press release IP/08/193, Brussels, 8 Feb 2008).

Research programmes or strategies designed to address human health and/ or environmental safety aspects of nanomaterials

A survey (requested by the Ministries of Labour and Environment) has been performed to give insight into the places where people work with nanomaterials in The Netherlands. In addition, the measures that are being taken and the communication of "best practices" has been studied. The final report was published in July 2008 (Borm et al.)

In 2008, a working group of the Ministries of Agriculture (food), Health (consumer goods, medicine), Labour (working conditions), Economic Affairs, Environment (substances) and Transport, Public Works and Water Management prepared a paper which addresses the risk management strategy on nanotechnologies (focusing first on nanoparticles). This paper is discussed with stakeholders (Business, NGO's United Trade Unions) amended and sent to the Dutch parliament.

A strategic national research agenda (SRA) including a "risks section" has been drafted by the Netherlands Nanotechnology Initiative (NNI) and has been published in September 2008. Beginning 2009 a large research proposal was designed reflecting the priorities set in the SRA. The National Observatory (KIRnano at RIVM) coordinated the design of the theme risk analysis. A decision whether this proposal will actually be co-funded by the Dutch government is expected before autumn 2009.

The Netherlands will participate in the Sponsorship Programme developed by the OECD WPMN and be a co-sponsor of the performance of toxicological testing for the development of a risk assessment dossier for cerium oxide and for the performance of a study focussing on dosimetry.

Information on any public/stakeholder consultation

The Dutch cabinet view on nanotechnology includes the foreseen installation of a so called "broad commission" with stakeholders from both science and the public. Individual actions to start a public debate have already been undertaken e.g. between employers' organizations, NGOs and the government.

The SER (Dutch Socio Economic Council which consists of representatives from businesslabour union. and academia) has been asked to comment on a study regarding the exposure to nanoparticles in the workplace. The advisory report of SER has been published at March 31, 2009.