

## **NanoImpactNet – building a multi-stakeholder dialogue on the health and environmental impact of nanomaterials**

N. Boschung<sup>1</sup>, D. Hart<sup>1</sup> and M. Riediker<sup>1</sup>

<sup>1</sup>Institute for Work and Health, Université de Lausanne + Université de Genève, Bugnon 21, CH-1011, Lausanne, Switzerland

Keywords: Communication, Nanoparticles, Regulation, Stakeholder.

NanoImpactNet (NIN) is a multidisciplinary European Commission funded network on the environmental, health and safety (EHS) impact of nanomaterials. The 24 founding scientific institutes are leading European research groups active in the fields of nanosafety, nanorisk assessment and nanotoxicology. This 4-year project is the new focal point for information exchange within the research community. Contact with other stakeholders is vital and their needs are being surveyed.

NIN is communicating with 100s of stakeholders: businesses; internet platforms; industry associations; regulators; policy makers; national ministries; international agencies; standard-setting bodies and NGOs concerned by labour rights, EHS or animal welfare. To improve this communication, internet research, a questionnaire distributed via partners and targeted phone calls were used to identify stakeholders' interests and needs.

Knowledge gaps and the necessity for further data mentioned by representatives of all stakeholder groups in the targeted phone calls concerned:

- the potential toxic and safety hazards of nanomaterials throughout their lifecycles;
- the fate and persistence of nanoparticles in humans, animals and the environment;
- the associated risks of nanoparticle exposure;
- greater participation in: the preparation of nomenclature, standards, methodologies, protocols and benchmarks;
- the development of best practice guidelines;
- voluntary schemes on responsibility;
- databases of materials, research topics and themes, but also of expertise.

These findings suggested that stakeholders and NIN researchers share very similar knowledge needs, and that open communication and free movement of knowledge will benefit both researchers and industry.

Subsequently a workshop was organised by NIN focused on building a sustainable multi-stakeholder dialogue. Specific questions were asked to different stakeholder groups to encourage discussions and open communication.

### *1. What information do stakeholders need from researchers and why?*

The discussions about this question confirmed the needs identified in the targeted phone calls.

### *2. How to communicate information?*

While it was agreed that reporting should be enhanced, commercial confidentiality and economic competition were identified as major obstacles. It was recognised that expertise was needed in the areas of commercial law and economics for a well-informed treatment of this communication issue.

### *3. Can engineered nanomaterials be used safely?*

The idea that nanomaterials are probably safe because some of them have been produced 'for a long time', was questioned, since many materials in common use have been proved to be unsafe. The question of safety is also about whether the public has confidence. New legislation like REACH could help with this issue. Hazards do not materialise if exposure can be avoided or at least significantly reduced. Thus, there is a need for information on what can be regarded as acceptable levels of exposure. Finally, it was noted that there is no such thing as a perfectly safe material but only boundaries. At this moment we do not know where these boundaries lie.

The matter of labelling of products containing nanomaterials was raised, as in the public mind safety and labelling are connected. This may need to be addressed since the issue of nanomaterials in food, drink and food packaging may be the first safety issue to attract public and media attention, and this may have an impact on 'nanotechnology as a whole'.

### *4. Do we need more or other regulation?*

Any decision making process should accommodate the changing level of uncertainty. To address the uncertainties, adaptations of frameworks such as REACH may be indicated for nanomaterials.

Regulation is often needed even if voluntary measures are welcome because it mitigates the effects of competition between industries. Data cannot be collected on voluntary bases for example.

NIN will continue with an active stakeholder dialogue to further build on interdisciplinary relationships towards a healthy future with nanotechnology.

*NanoImpactNet is a Coordination Action funded by the European Commission's 7<sup>th</sup> Framework Programme.*