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Media Briefing

Citizens' Survey

Lay thinking about nanotechnologies and what follows from it

Citizens are critically positive in their attitudes to nanotechnology. This is shown by a survey carried out by TA-SWISS, the Centre for Technology Assessment. The potential benefits for medicine, the environment and life's amenities are today held in high regard. But most people say they are unwilling to buy nanotech products unquestioningly. Information and declaration are important to them.

In Switzerland today, there are no signs of a hardening of attitudes towards nanotechnologies. These new technologies are arousing high hopes and economic expectations. Even the sceptics do not rule out the possibility that nanotech research could in the future provide solutions for major problems in medicine and in the field of ecology. Independent research organisations in particular enjoy substantial support among those included in the survey. Their work should be allowed to continue without hindrance.

Call for a "Nano Declaration"

Approval of nanotechnologies is not, however, given unreservedly. Very few people who took part in the publifocus are prepared to buy and consume products containing nanoparticles unquestioningly. People are

most likely to know nanotech products such as sun creams, textiles or sprays for sealing surfaces. Many of those who took part first became aware of the subject from the TA-SWISS leaflet “Know Your Nano!”. There is a considerable need for more information. Most people are worried that they might already have unwittingly bought goods containing synthetically manufactured nanoparticles. A large majority feel that a declaration should be made compulsory for this new type of product.

High hopes and serious doubts

All those who took part in the discussion rounds are able to make out the opportunities and positive potential of nanotechnology. In the medical field in particular – in the fight against cancer, for example – and in ecology – water purification and photovoltaics, for example – there are hopes of breakthroughs. But the risks cannot be explained away. People voice the greatest reservations about nanotechnologies in connection with food. They are afraid of side effects caused by nanoparticles. And above all they are worried about the notion of these tiny particles overcoming the blood-brain barrier and penetrating the brain. The environment was another subject that emerged as a cause for concern in all of the discussions.

Citizens call for transparency

Little is known as yet about the possible consequences of nanotechnology, and so citizens also refer to the many uncertainties and lack of practical knowledge that surround the new technology. Analogies are frequently made with the debates about radiation from mobile phones, asbestos and nuclear power. The crucial question is whether nanotechnology will improve their quality of life. To build up confidence in this new branch of technology, transparency is the key prerequisite. A declaration for nanotech products, as well as practical information about nanotech research projects, could certainly help in this respect. Switzerland could then maintain its leading position and make use of the lead it has on regulation. Opinions are, however,

divided about whether regulation should be by legislation or by self-regulation among the protagonists.

Subtle differences in laypersons' view

Social examination of new technologies at an early stage definitely pays off. Michael Emmenegger, Project Leader at TA-SWISS, is certain of that. He takes stock as follows: "Citizens are most definitely in a position to offer subtly different views of new branches of technology and formulate proposals on how they should be handled. Even when the experts feel that there are a number of uncertainties still to be cleared up."

The research sector, industry and politicians cannot remain indifferent to the way the general public perceives and assesses "nanotechnologies". Public opinion is crucial to the success of new products and to Switzerland as a research centre and business location. That was one of the reasons why TA-SWISS conducted the publifocus "Nanotechnologies and what they mean for health and the environment" (see box). The project was backed by the Federal Office of Public Health (FOPH), the Federal Office for the Environment (FOEN) and the Zurich University of Applied Sciences Winterthur (ZHAW).

Nanotechnology: What is it?

In the field of nanotechnology, research and experiments are conducted at the level of single atoms and molecules. "Nano" stands for an order of magnitude of one billionth of a metre. At this dimension the properties of materials undergo sometimes radical changes. It is precisely that which opens up new possibilities for the technology. But there are risks, too. What may be harmless as a microparticle (one millionth of a metre in size) may have serious effects on human beings and the environment as a nanoparticle. The FOPH and the FOEN are currently drawing up the Swiss Action Plan for the safe handling of synthetically produced nanomaterials.

The publifocus project “Nanotechnologies”

The publifocus “Nanotechnologies and what they mean for health and the environment” comprised five four-hour discussion evenings. Four of the discussion rounds covered different regions of Switzerland (northern and eastern Switzerland in Winterthur, central regions in Berne, French-speaking areas in Lausanne and Ticino in Lugano). On the basis of responses from citizens who had been approached at random, a group of about 15 people was formed for each region. The participants were of different ages and gender, with different educational and professional backgrounds. A discussion group was made up of representatives of various national organisations and associations which are confronted with nanotechnologies as part of their work. There were no differences in the statements made by this group from those made by other groups. Representatives of political, research, scientific, business, social, media and consumer protection bodies formed an advisory group to oversee the careful preparation and balanced conduct of the publifocus. Apart from TA-SWISS, the project is sponsored by the Federal Office of Public Health (FOPH), the Federal Office for the Environment (FOEN) and the Zurich University of Applied Sciences Winterthur (ZHW).

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Links:

publifocus Report “Nanotechnologies in Switzerland: challenges identified”

http://www.ta-swiss.ch/e/them_nano_pfna.html#downloads

Information leaflet “Know Your Nano!”

http://www.ta-swiss.ch/a/nano_pfna/2006_TAP8_IB_Nanotechnologien_e.pdf

Action plan “Risk assessment and risk management of synthetic nanoparticles”

<http://www.bafu.admin.ch/chemikalien/01389/01393/index.html?lang=en>

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