

Project fact sheet 9

Developing capacity-building tools for ensuring worker safety with nanomaterials

- A series of 6 presentation modules were prepared on occupational health and safety in relation to nanomaterials. A modular approach supports more effective learning and facilitates regular updating of the materials.
- Pilot testing the presentations with occupational health and safety practitioners helped to identify further tools for support. Two infographics and an applet were produced on risk assessment and the worker exposure “hotspots” along a typical nanomaterial lifecycle.
- An on-line survey tool will help to centralise all trade union training uses of the presentations, while also providing information on the impact of the training and on further information needs.

The European Trade Union Institute (ETUI) developed a series of capacity-building tools for better governance of the use of nanomaterials at the workplace.

Three separate types of tools have been prepared: a series of thematic presentations; infographics and an applet; and an online training evaluation survey. Each tool supports the other to provide clearer information, to help workers contribute to risk evaluation, to evaluate the impact of the tools and identify further information needs.

A series of six presentations were prepared, breaking down various worker health and safety issues into distinct modules. The benefit of module-based presentations was also to facilitate future updates more easily as some of the issues are still evolving considerably (particularly in which products and sectors nanomaterials are used, and scientific knowledge of human health and environmental impacts).

The six presentations were pilot tested with occupational health and safety practitioners: worker safety representatives, trade unionists, occupational health and safety experts, and trade union trainers.

Feedback on the presentations was provided and suggestions for further support tools were discussed as they were considered useful in supplementing the presentations, and in communicating with workers more easily and clearly on nanomaterials in the workplace.

Visual tools that could be more easily used in the workplace were needed, and infographics and an applet were proposed by the practitioners. The infographics take workers through a simplified risk assessment process, from their perspective; and show worker exposure “hotspots” along the lifecycle of a typical nanomaterial.

The simplified risk assessment infographic poses questions to workers to help provide employers with information to undertake a risk assessment on the introduction of nanomaterials at the workplace. Workers are encouraged to identify each nanomaterial used, in what way, and to identify all activities the workers perform which could result in their exposure to the nanomaterial. A related applet for worker safety representatives provides them with a complete package of elements of a risk evaluation and information tables to be completed by the workers.

The infographic of a simplified risk evaluation process poses questions to help deliver a risk evaluation of the introduction of nanomaterials to the workplace.

An on-line survey has also been prepared to be shared by any trade union using the presentations in a training or other information-sharing setting. The survey asks a small number of questions to training participants evaluating the presentations, the impact of the training in terms of changes in the workplace, and identifying further information needs. In using the on-line survey tool, a translated version of the survey can be sent by the training organiser to participants and all responses will be collected into one central survey. In this way, future modifications and additions to the six presentations can more easily be identified, as can any other support tools.

Given the relative lack of knowledge of the existence of nanomaterials in workplaces, the importance of questions on the impact of the training and identification of further information needs is obvious. An initial survey after first use of the tools pointed out that 7 out of 10 participants had initiated a dialogue with their employers after having seen the information. This suggests that the capacity-building tools are indeed raising awareness among workers of the need to ensure that employers are informing workers about the use of nanomaterials in their workplace and that they introduce appropriate worker protection from exposure to nanomaterials. ETUI will regularly review survey responses to help guide future development of tools.

Working with nano?
What you need to know and who to talk to
In every workplace using nanomaterials, it's important to ensure appropriate risk evaluation for each nanomaterial used.

Help your safety representative answer these questions...

- 1 Are manufactured nanomaterials used in your workplace?**
Your employer is legally required to provide information on the specific substance used, like titanium dioxide, nanoparticle, carbon nanotubes.
- 2 What shape is the nanomaterial? What chemical is it made of?**
1 dimension, 2 dimensions, 3 dimensions.
- 3 Has your employer done a risk assessment on using the nanomaterial at your workplace?**
Ask your employer for the Safety Data Sheet of the nanomaterial.
Is the risk assessment complete?
What do you think is missing in the risk assessment?
Is the risk assessment useful to provide guidance on measures to prevent worker exposure?
- 4 Could nanomaterials be released when you are working?**
As a powder
As part of a solution or mixture
As part of a non-released product (eg. coating, laminating, cutting, grinding or using a product containing nanomaterials)
- 5 What activities do you perform?**
How long are you exposed to the nanomaterial?
How are the nanomaterials stored?
How do you dispose of the nanomaterials?
- 6 What protective measures have been put in place?**
Enclosed systems
Local exhaust ventilation
Personal protective equipment
Emergency equipment
- 7 Has your employer introduced a medical surveillance system?**
A worker exposure registry?
Regular medical check-ups or analysing medical visits to identify health trends?

Further union action

- Share your information with the Trade Union Nano Information Network (nanofetui.org)
- Get more information from national and European union structures and the European Trade Union Institute (<http://www.etui.org/Topics/Health-Safety/Nanotechnologies>)
- Continue dialogue with your employer to ensure the highest level of worker health and safety protection, and the appropriate use of new technologies (document this dialogue)

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etui.

MORE INFORMATION

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NanoDiode is a project for outreach and dialogue on nanotechnologies, funded by the European Commission. From July 2013 to June 2016, NanoDiode has organised a range of engagement activities across Europe, involving stakeholders in a dialogue on the funding, performance and outcomes of nanotechnologies research.

The NanoDiode fact sheets present the different activities carried out as part of the project and discuss the main findings and recommendations. This is nr 9 of a series of 14 fact sheets, see: www.nanodiode.eu/factsheets.



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