

Nano-software offers enhanced protection to both workers and industry

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While knowledge about the potential environmental and health risks of manufactured nanomaterials remains limited, partners involved in the EU-funded SUN project have nevertheless sought to develop a comprehensive guide based on the latest findings in order to ensure worker safety and help businesses avoid liability.

This is an important consideration. While European manufacturers cannot be left behind in the 'nanotech revolution', they must be careful. Nano-enabled products that show ecological or health effects after their market introduction can result in significant social costs lead to tougher regulations and significantly damage consumer confidence.

To address this challenge, the project has developed a user-friendly,

software-based Decision Support System (SUNDS) prototype for managing the environmental, economic and social impacts of nanotechnologies. The SUN project aims to take into account the scientific findings from over 30 European projects, national and international research programmes and transatlantic co-operations, and test the decision making tool in real life conditions.

Key successes of the project to date were outlined during SUN's second annual project meeting, held in Venice, Italy on 8 to 9 October 2015. An earlier stakeholders' workshop was held on 7 October, and aimed to demonstrate how the innovation could be of significant benefit to a range of end users. Unlike other projects that have similarly sought to advance our scientific understanding of the properties, impacts and risks of nanomaterials, a key objective of the SUN project has been to ensure that its results can be translated into an application that directly benefits industry and improves regulatory oversight.

The workshop also sought to collect feedback in order to improve the design of the tool. Participants included representatives from SMEs and large industry, policy makers, authorities, insurance companies, risk assessors and tool developers.

'The SUN Decision Support System represents a blend of the most advanced models for human health and [ecological risk assessment](#), and for the first time compares the risks from nanotechnologies to their economic and social benefits in order to effectively support risk management decision making by the European nanotechnology industry,' said Dr. Danail Hristozov, the Principal Investigator of SUN.

The system has already been tested on selected case studies involving engineered nanomaterials (such as copper oxide and organic pigments), which are used in a number of industrial applications such as textiles, ceramics and chemical processes, and the DSS will be further tested

against supply chains of other products. This validation will culminate in finalised guidelines for safe nanoscale product and process design. In addition, project partners will identify areas for future research and suggest priorities for current regulations.

The SUN project, which was launched in October 2013, brings together 35 partners from 12 EU countries. With a total budget of about € 14 million, SUN is among the highest funded projects of the EU FP7 research programme. It is due for completion in 2017.

More information: For further information please visit the SUN project website: www.sun-fp7.eu/

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