Welcome to the 1st newsletter of the NanoSustain project

Developing innovative solutions for the sustainable design, use, recycling and final treatment of nanotechnology based products

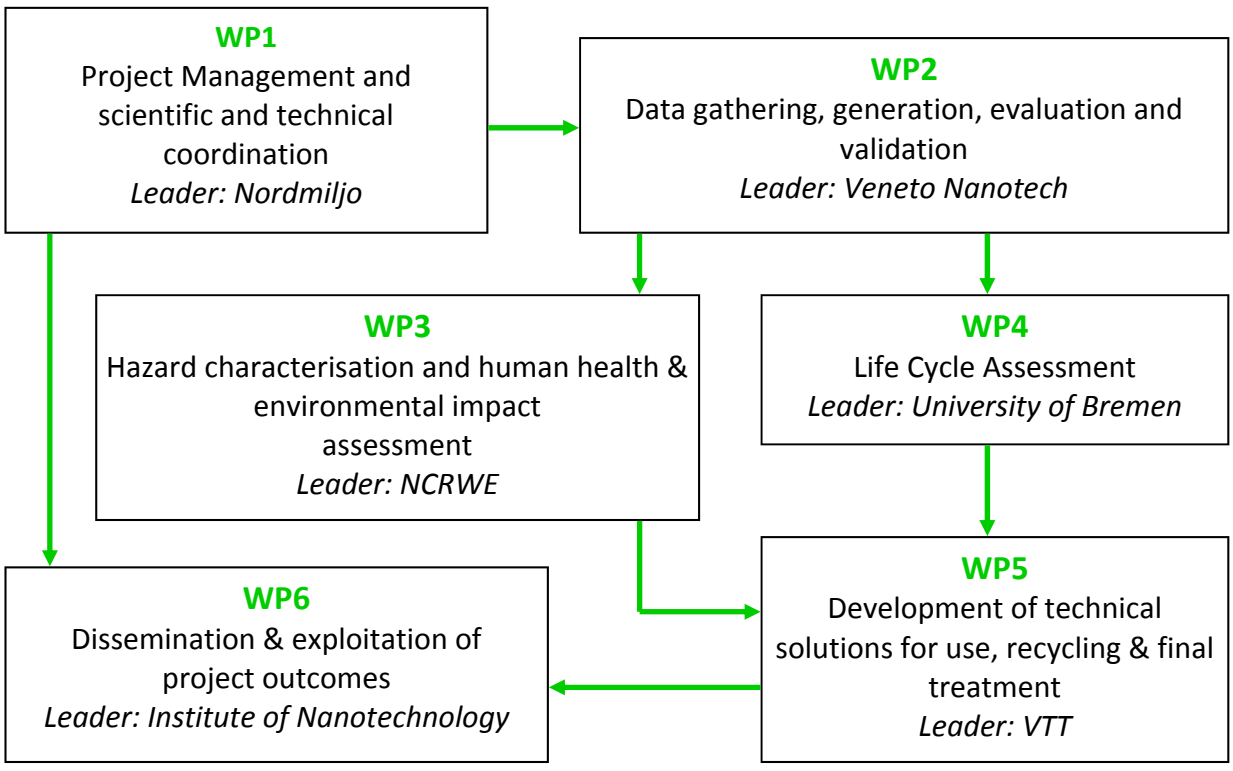
The production of nanomaterials is increasing rapidly; however, our knowledge concerning the possible health & environmental effects associated with these materials remains poor.

The objective of the EU FP7 funded NanoSustain project (247989) is to develop innovative solutions for the sustainable design, use, recycling and final treatment of nanotechnology-based products by addressing the following two questions:

- How, and to what degree, will society and the environment will be exposed to nanomaterials and associated products; and
- Where do these particles end up?

Expected results will improve our present knowledge on the impact and fate of these particles after entering economic and natural cycles.

The NanoSustain Workplan



Newsletter Contents

Project Progress Update

News from NanoSustain's first six months

WP1: Project management and scientific and technical coordination

A kick-off meeting was successfully organized on 25th-27th May 2010 in Sunne, Sweden, to launch the project. All partners agreed to a roadmap and management templates prepared by the coordinator for progress control and a smooth practical implementation of the project, in particular concerning the timely generation of deliverables and milestones.

WP2: Data gathering, generation, evaluation, and validation

WP2 activities have been devoted to the preparation and the implementation of a dedicated tool to keep project participants up to date with the scientific literature produced in the field of nanotechnology health, safety and environmental issues, and to harmonise results categorisation with other Projects participating in the EU NanoSafety Cluster. An internal project literature database, has also been implemented online within the project website. This is continuously fed with new papers; selected according the completeness of the information regarding the chemical and physical characterisation performed before all the successive risk and life cycle assessment phases.

Finally, the Project has established Internal Project Committees for the scientific evaluation and successive validation of project results: these committees will be responsible for the project results to be in line with the highest scientific standards, and will decide necessary validation measures, including inter-laboratory cross checking of the results, when appropriate.

WP3: Hazard characterisation and human health & environmental impact assessment

The main focus of the first 6 months for WP3 partners has been;

- to obtain and distribute the nanomaterials to the partners involved in the physical-chemical characterization; and
- to specify the life-cycle scenarios to be studied.

WP4: Life cycle assessment

During the last months WP4 have conducted research into life cycle analysis (LCA) studies of nanomaterials and nanotechnology based applications, and also their possible applications; over 35 publications were analyzed. Publications sourced have focused on CNT, metallic oxides etc; however, at this point no suitable publications, in regard to LCA aspects, on nanocellulose have been found. Several manufacturing processes of nanomaterials were also analysed. On this basis we are working towards;

- developing of specific process models for the application and use phase, including all relevant material flows of selected nanoproducts, and
- developing of specific models for the end-of-life and recycling phases (re-use, recycling and/or final treatment and disposal) of nanoproducts.

WP5: Development of technical solutions for use, recycling & final treatment

At this point in the project WP5 has achieved the production and characterisation of nanocellulose. Also planning of the experiments and reconstruction of the facilities for the experiments has been completed.

WP6: Dissemination and exploitation of project results

During the first six months of the project the major achievement of WP6 was the creation of a user-friendly and attractive project website incorporating a partner intranet and database. In addition a promotional project flyer was designed for dissemination by all project partners.

Next project meeting: 16th-18th November

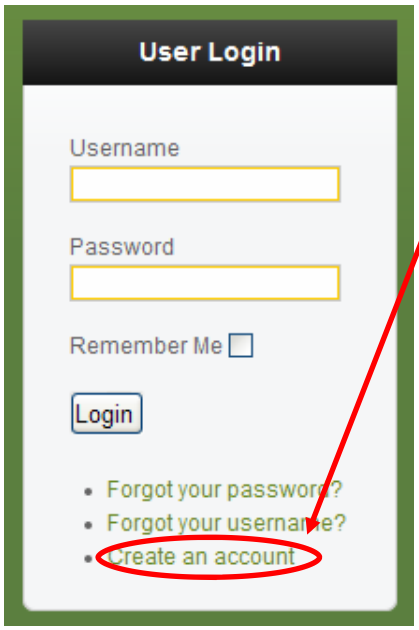
Our second regular project meeting will take place 16th-18th November hosted by project partner JRC in Ispra, Italy. NanoSustain's EC project officer Dr Georges Deschamps and External Advisory Board member Dr Kai Savolainen (FIOH) will join project partners. The meeting programme includes a steering committee meeting, updates on work package progress and deliverables, and administrative issues in addition to work package specific working sessions.

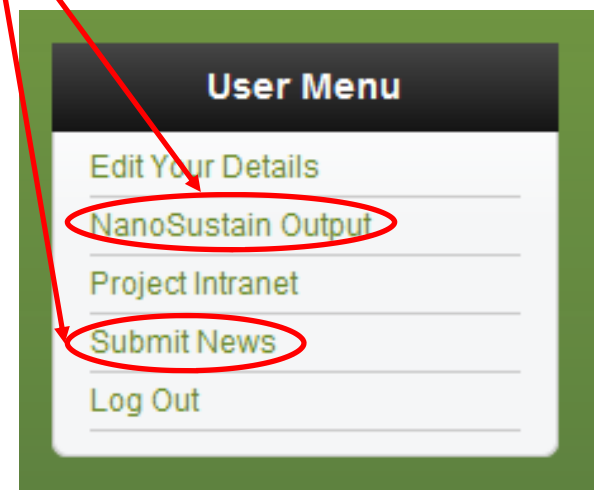
The NanoSustain Website

How to get the most from the NanoSustain website

On our homepage you can find general information about the project, the work programme, consortium, latest news, and contact details.

Additionally you can 'Create an account' under 'User Login' and access the user only area where further information can be found and users can submit news to the website.





Colloborations

The NanoSafety Cluster

The EU NanoSafety Cluster is a DG RTD NMP initiative to maximise the synergies between the existing FP6 and FP7 projects addressing all aspects of nanosafety including toxicology, ecotoxicology, exposure assessment, mechanisms of interaction, risk assessment and standardisation. Further information on the Cluster and the projects involved can be found at www.nanosafetycluster.eu. NanoSustain partners are involved in all working groups of the Nanosafety Cluster *(see table).*

Cluster Working Group	Nanosustain partner	Partner organisation
WG1: Materials	Roberto Hanoi Monica Simion	Nanologica AB (SE) IMT (RO)
WG2: Hazard	Hakan Wallin	NRCWE (DK)
WG3: Exposure	Michael Steinfeldt	UniHB (DE)
WG4: Database	Stefano Pozzi Mucelli	Veneto Nanotech (IT)
WG5: Risk	Ulrika Backman	VTT (FI)
WG6: Modelling	David Rickerby	JRC (IT)
WG7: Dissemination	Eleanor O'Rourke	Institute of Nanotechnology (UK)

Collaboration with NanoHouse

NanoHouse

WP3 (Hazard Characterization and Impact Assessment) leaders, NCRWE, have established a collaboration with the NanoHouse project which aims to promote a responsible and sustainable development of nanomaterials in the building industry through a Life Cycle Thinking approach. The two projects have agreed to collaborate on weathering and abrasion tests.

Partner collaborations with other projects

NanoImpactNet

Consortium partner JRC is a partner in the NanoImpactNet www.nanoimpactnet.eu European network on the health and environmental impact of nanomaterials.

MINAM Micro- and NanoManufacturing

David Rickerby (JRC) is also a member of MINAM – European Technology Platform on Micro- and Nano Manufacturing www.micronanomanufacturing.eu *and NANOfutures* – European Initiative for Sustainable Development by Nanotechnologies http://www.nanofutures.eu

NANOfutures

ObservatoryNANO

Project partners, the IoN, are co-ordinators of the FP7 ObservatoryNANO project www.observatory-nano.eu which provides scientific, economic, societal, regulatory, and EHS analysis on nanotechnology developments to European decision and policy makers

Events of Interest

2nd Nanosafe International Conference

16th-18th November, MINATEC, Grenoble

'Safe production and use of nanomaterials'

The objectives of the conference are to highlight the major progress and future trends in the domain of the safe production and use of nanomaterials.

More information about the conference including practical information and special room booking rates is available here.

NanoSafety Cluster Meeting

1st December, Prague

The main aim of this meeting of the NanoSafety Cluster is the harmonization and the preparation of common results sheets to ease the inclusion of relevant results in project specific databases, in order to have project specific databases that can easily be implemented at a later stage in a common EHS database.

Please contact Dr Lang Tran (IOM) lang.tran@iom-world.org for further details of the meeting logistics and programme.

'Standards and standardization as a tool for the dissemination and implementation of research results'

A seminar on 'Standards and standardization as a tool for the dissemination and implementation of research results' will be held on the 14th December 2010 in Room SDR1+2, Rue du Champ de Mars 21, Brussels with the aim of bringing the standardisation process closer to your FP7 project.

For further information contact: Sandra Peeters (sandra.peeters@ec.europa.eu).

3rd NanoImpactNet Conference

14th-17th February 2011, Lausanne

Building a bridge from NanoImpactNet to nanomedical research

Registration is now open for the 3rd NanoImpactNet conference taking place in Lausanne. The conference will be divided in 4 sessions plus an opening session and a stakeholder session. In addition to these plenary sessions, participants can propose symposia, discussion groups and networking/brokerage events on any issue related to NanoImpactNet. Further information on the conference may be found at;
http://www.nanoimpactnet.eu/index.php?page=3rd-nanoimpactnet-conference

NordMiljö AB (NOMI) is the project coordinator and mainly responsible for the operational management, administration and S/T coordination of the planned work, including progress control and reporting to the Commission.

The **Institute of Nanotechnology (IoN)** will be responsible as WP6 leader for the dissemination and exploitation of the project results through a regular newsletter, training workshops, and dissemination events. In addition, the IoN will also be providing coordination support.

Veneto Nanotech (VN) will lead WP2, build up the necessary project-specific database and ensure validation and access of already existing relevant data, and of newly generated data, to all project partners.

The **National Research Centre for the Working Environment (NCRWE)** is responsible as WP3 leader for the production of after-production materials for further testing, for producing human exposure data and for the toxicological testing of the materials in animals

Universität Bremen (UniHB) is the leader of WP4 and responsible for the Life Cycle Assessment on selected nanomaterials and nanoproducts and the development and operationalization of criteria and guiding principles for precautionary design of engineered nanomaterials.

The Technical Research Centre of Finland (VTT) will develop as WP5 leader innovative solutions for recycling, final treatment and disposal of selected nanotechnology-based materials and products, and carry out appropriate ecotoxicology studies

The **Joint Research Centre (JRC)** will help to fill knowledge gaps related to the behaviour of the selected manufactured nanomaterials in ecosystems. This will contribute to the development and implementation of testing methods and assessment of the distribution, transport, transformation and fate of selected nanomaterials, and their effects on human health and the environment.

Kaunas University of Technology (KTU) will participate in the physico-chemical characterization and analysis of the selected test nanomaterials and products, and will develop and test an analytical method appropriate to detect and quantify engineered nanoparticles in various environmental matrices.

National Institute for Research & Development in Microtechnologies (IMT) will participate in the physico-chemical characterization and analysis of the selected test materials and products, and in the development and design of new material & product properties and applications, or in new material synthesis for novel applications.

Nanologica AB (NLAB) will provide the CNT-composite materials and associated materials data, contribute to their physical-chemical characterization, and support the exploration of treatment and disposal technologies.

Nanogate (NGAG) will provide a ready-to-use nano-ZnO based test material and associated product data and contribute to the technical exploration and design of new solutions for sustainable use, recycling and final treatment of the provided test material.

UPM-Kymmene (UPM) will supply nano-fibres (nanocellulose) and associated product data, and contribute to the design and exploration of technical solutions for their recycling and final treatment.