



# Nanotechnology and Nanomaterials

## Work of the OECD

Jim Willis, Chair

OECD Working Party on Manufactured Nanomaterials

# Background

OECD has 2 Committees addressing Nano:

- Committee on Scientific and Technological Policy (CSTP)
  - *Working Party on Nanotechnology (WPN)*
- Chemicals Committee
  - *Working Party on Manufactured Nanomaterials (WPMN)*

# OECD Work on Nanotechnologies

## CSTP

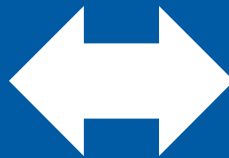
### Working Party on Nanotechnology (WPN)

#### Focus of work

Socio-economic analysis of nanotechnology and the facilitation of international collaboration in R&D and S&T policies in the field

#### OECD contacts

Dirk Pilat, Christopher Palmberg,  
Stephanie Lacour



## Chemicals Committee

### Working Party on Manufactured Nanomaterials (WPMN)

#### Focus of work

Human health and environmental safety implications of manufactured nanomaterials (mainly the chemicals sector)

#### OECD contacts

Peter Kearns, Mar Gonzalez,  
Noriko Oki, Diana Morales

# WPN

- Established by CSTP in March, 2007
- Two meetings to date:
  - 8-9 May, 2007
  - 15-16 November, 2007
- Chaired by USA
- Objective: *To advise on emerging policy-relevant issues in science, technology, and innovation related to the responsible development of nanotechnology. The WPN seeks to promote international co-operation that facilitates research, development, and the responsible commercialization and utilisation of nanotechnology”*

# WPN Projects (I)

- **Project A - Statistics and Measurement**
  - Objectives: provide reliable, validated and comparable indicators and statistics
  - Present activities: ‘Nanotechnology at a glance’, framework for nanotechnology statistics, pilot surveys
- **Project B - Impacts and the Business Environment**
  - Objectives: analyse impacts on company activities (what’s special about nano?), requirements on business environments
  - Present activities: case studies in selected application areas, synthesis from policy viewpoint

# WPN Projects (II)

- Project C - International R&D collaboration
  - Objectives: map emerging (new?) patterns of scientific developments and R&D collaboration, portal of S&T agreements
  - Present activities: elaboration of work program
- Project D - Communication and public engagement
  - Objectives: identify and promote good communication and public engagement practices
  - Present activities: elaboration of work program

# WPN Projects (III)

- Project E -Policy Dialogue
  - Objectives: information gathering and synthesis on S&T policies in nano across countries, facilitation of policy dialogue
  - Present activities: first synthesis work, work program elaboration
- Project F - Global Challenges: Nano and Water
  - Objectives: analyze opportunities for the use of nano for the purification of water as a global challenge
  - Present activities: work program elaboration...pending on funding

# WPMN

- Established by Joint Meeting in September, 2006
- Three meetings to date:
  - October 26-27, 2006
  - April 26-28, 2007
  - November 28-30, 2007
  - Next meeting: 11-13 June 2008
  - 5th meeting: 4-6 March 2009
- Chaired by USA
- Objective: *To promote international co-operation in health and environmental safety related aspects of manufactured nanomaterials, in order to assist in their safe development*
- Works through the implementation of (8) projects

# Who attends the WPMN?

## Countries:

- Australia, Austria, Belgium, Canada, Denmark, European Commission, Finland, France, Germany, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Poland, Slovakia, Spain, Sweden, Switzerland, United Kingdom, United States

## • Observers:

- Argentina, China, Israel, Thailand, Brazil, India, Russia
- ISO, WHO, UNEP
- BIAC, eNGOs (ED and FOE), TUAC, WWIC (past)
- ICAPO request

## • US Workgroup members:

- EPA (OPPT, OPP, ORD), CEQ, OSTP, State, NIH, FDA, NIOSH, OSHA, USDA, NIEHS, USPTO, DOC, CIA, NIST, CPSC



# Project 1: OECD Database on Safety Research

- Objective: *to develop a global resource, which identifies research projects that address environmental, human health and safety (EHS) issues associated with manufactured nanomaterials. This will include research projects which are planned, underway or completed.*
- Chair: Australia
- Status:
  - Prototype database available January, 2008
  - Data entry -10 weeks ~ March-May
  - Rollout before WPMN-4



## Project 2: Research Strategies on Manufactured Nanomaterials

- Objective: *to exchange information and identify common research needs to address human health and environmental safety issues associated with manufactured nanomaterials, and to undertake to meet those research needs.*
- Chair: Germany
- Status:
  - Initial research matrix complete
  - Next steps to focus on strategies



## Project 3: Safety Testing of a Representative Set of Manufactured Nanomaterials

- Objective: *to agree and test a representative set of manufactured nanomaterials (MN) using appropriate test methods.*
- Co-Chairs: USA and European Commission
- Status:
  - Testing program agreed encompassing 14 nanomaterials and a range of endpoints.
  - Sponsorship program agreed to.

# Project 4 : Manufactured Nanomaterials and Test Guidelines

- Objectives:
  - *To review existing OECD Test Guidelines for adequacy in addressing manufactured nanomaterials.*
  - *To identify the need for development of new or revision of existing test guidelines.*
- Co-chairs: USA and European Commission
- Status:
  - Reviewing existing guidelines for potential applicability
  - Working in 4 subgroups
    - Physical-Chemical Properties
    - Biotic Effects
    - Bioaccumulation and Degradation
    - Health Effects

# Project 5: Co-operation on Voluntary Schemes and Regulatory Programmes

- Objectives:
  - *To identify common elements of the various information gathering initiatives, in place or planned.*
  - *To identify applicable current and proposed regulatory regimes and how they address information requirements, hazard identification, risk assessment and exposure mitigation/ risk management of manufactured nanomaterials.*
  - *To share information on existing or proposed guidance documents on practices to reduce occupational or environmental exposure to or releases of manufactured nanomaterials .*
- Chair: Canada
- Status:
  - Initial comparisons conducted
  - Developing a model “template”
  - Developing a clearinghouse for “International Sharing and Comparison of Data on Manufactured Nanomaterials”

## Project 6: Co-operation on Risk Assessment

- Objective: *to evaluate risk assessment approaches for manufactured nanomaterials through information exchange and identify opportunities to strengthen and enhance risk assessment capacity.*
- Chair: UK
- Status: Reviewing results of survey.

## Project 7: Alternative Methods in Nano Toxicology

- New project to evaluate and, where applicable, validate in vitro and other methodologies
- Chair: UK
- Status:
  - Invitation to participate will go out in February
  - Needs to integrate with SG3 and 4
  - Testing needs to be considered during sponsorship.
  - Report on available methods expected by WPMN-4

## Project 8: Exposure measurements and Exposure Mitigation

- New project to develop guidance on exposure measurements and exposure mitigation, with an initial focus on occupational settings.
- Chair: USA
- Status:
  - Invitation to participate will go out in February

# Cross-cutting

- A number of advances have been made by joint efforts amongst groups, e.g.,
  - Joint survey from SG2, SG5 and SG6
  - Joint meeting of SG2, SG3 and SG4 (Dortmund, March 2007)
  - Joint meeting of SG3 and SG4 (Ispra, October 2007)
  - Creation of a task group under SG3 and SG4 to develop a “guidance manual” for sponsors. USA and BIAC co-chairs.
  - Planned: Joint meeting of SG3, SG4, SG7 and sponsors (Tokyo, April 2008)

[More information](#)

**Safety of  
Manufactured Nanomaterials**

**<http://www.oecd.org>**