

## **Risk and Benefit Assessment**

CoR's Scope and Objectives



• Scope

Sharing of knowledge and expertise to harmonize and synthesize research on methods and practices for analyzing potential risks and benefits for

human health and the environment associated with exposure during the development, production, use, and disposal of engineered nanomaterials and nano-enable products along the value chain and over the course of the product life cycle.



## Objectives

- 1. Coordinate with the Ontologies and Databases CoR on terminology and resources that enable inputs from the Ecotoxicology Testing & Predictive Models CoR, the Predictive Modeling for Human Health CoR, and the Exposure through the Life Cycle CoR to be meaningfully analyzed by methods from the Risk and Benefit Assessment CoR in a manner that supports informed decision-making by the Risk Management & Control CoR,
- 2. Inventory methods and tools available for assessing and comparing potential risks and benefits (including applications such as medical diagnostics and treatment),
- 3. Match tools with end-user mission and decision needs, including the use of appropriate risk definitions, life cycle, and risk and benefit assessment and management tools of appropriate computational complexity,



4. **Identify gaps** among tools, data, stakeholder missions, and management need,

5. Review data to assess underlying physicochemical parameters and environmental conditions that can be used as predictors of nanoparticle risks and benefits,

6. Compare risks associated with engineered nanoparticles with those presented by incidental and naturally occurring nanomaterials and evaluate associated uncertainty,

7. Recommend a framework for including considerations of health and environmental impacts in planning and decision-making for the production, use, and disposal/recycling of nanomaterials and nano-enabled products,

8. Recommend methods for calculating risks and benefits that allow for the ability to assess associated uncertainty as well as adapt and update risk estimates as new information becomes available or as stakeholder mission and decision needs change, and

9. Identify steps forward required to produce comparable risk and benefit calculations within a defined context or mission.



Work plan

## Initiate focus groups to address

- either cross-cutting issues,
- specific objectives,
- or themes, e.g. human health risk or human health benefit assessment, environmental risk or benefit assessment, or epidemiology.

•The output of the focus groups and their associated time lines might be different, e.g.

- collect & harmonize methods and tools,
- white papers, position papers,
- recommendations for research, data collection etc.



Actions so far:

- Extension of #participants (especially US- side)
- 2 Teleconferences (September/ October 2012)
- Launching of taskgroup on Definitions

Achievements

- Final draft Scope & Objectives
- EU-US collaborations (Examples which could be fit into/ linked to CoR)
  - Roadmap Human Health Effect Studies (JOEM paper)
  - Nano Risk Banding tools workshop (Amsterdam 01/10/2013)

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