
Nanogovernance 2008

Code of Conduct for Responsible Nanoscience and Nanotechnology Research – Significance for NanoGovernance

Kshitij Aditeya Singh

12th February 2008

Washington D.C.



- Membership organisation
- Leading source for Information Dissemination
- Coordination and Support Action – European Commission Projects
- Organise Technology Transfer events
- Established for over 10 years
- Weblink – www.nano.org.uk



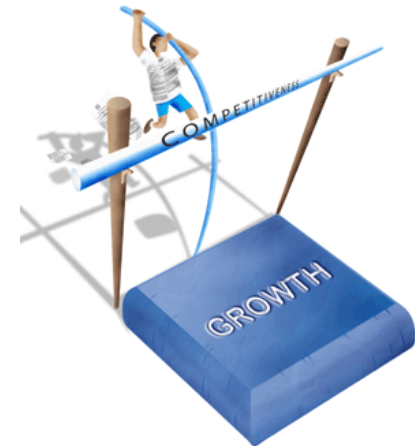
Nanotechnology Governance in Europe

- Directives and Legislation
- Policy – Article 152 and 153
- Driver for Nanoregulation – Lisbon Agenda
- Early stages of development
- Incremental approach
- Regulation issues - ELS



Regulatory Developments

- Standardisation - Clear and consistent Terminology
- Generation and acquisition of Risk data
 - Hazard identification
- Review of existing legislation
- Development of interim guidelines
 - Safety and handling
- Voluntary Reporting Scheme
- Coordination, Cooperation and Dialogue
 - Departments, Projects, European level



REACH Regulation



- Registration, Evaluation, Authorisation and Restriction of Chemicals
 - Effective from 1st June 2007
 - Supersedes the Dangerous substances Directive
 - Industry responsible in assessing and managing risk
 - Trigger – 1 tonne per annum per company, manufacturer or importer
 - Member states – Nanomaterials in REACH
-

Significance of the Code of Conduct

- Uncertainties in nanotechnology development
 - Insufficient data on toxicity and ecotoxicity
 - Carbon Nanotubes
 - Good Governance of Research
 - Encourages
 - Transparency and Accountability
-

Code of Conduct - Purpose

- Interest of Science and Commerce justified
 - Compatible with human rights and human dignity
 - Protection of fundamental human rights
 - Safe, integrated and responsible development
 - Nanotechnology Action plan 2005
 - Voluntary instrument
 - Recognition of organisation at the European level
-

Code of Conduct - Process

- Principles starting point
 - Charter of fundamental rights
 - Convention on Human rights (1950)
 - Convention on Human rights and Biomedicine (1997)
 - Aarhus convention for Environment (1998)
 - Precautionary principles
 - Other codes of conducts adopted by industries and Universities

 - Public consultation launched July 2007

 - Launched in February 2008
-

Code of Conduct – Scope

- Focused on research activities
 - Member states, Industry, Universities, Research organisations and other interested parties
 - Embracing and following the principles
-

Code of Conduct - Principles

- **Meaning**
 - Comprehension for citizen
 - In the interest of society - Design, implementation, dissemination and use

 - **Sustainability**
 - Safe and Ethical contributing to the sustainable development
 - No harm or threat to people, animals, plants or environment

 - **Precaution**
 - Anticipate potential environment, health and safety impact
 - Protection in proportion to precaution while encouraging progress
-

Code of Conduct - Principles

- Inclusiveness

- Openness to all stakeholders
- Transparency and right of access to information
- Participation in decision making

- Excellence

- Meeting best scientific standards
 - Good Laboratory practice
-

Code of Conduct - Principle

- Innovation

- Encourage maximum creativity, flexibility, and planning for growth

- Accountability

- Researchers and research organisation hold accountability for social, environment and health
-

Code of Conduct – Other aspects

- Integrity in research
 - Hendrick Schoen at Bell Laboratory – Organic Transistors
 - Addressing academic theft
 - Misuse of information
 - Dissemination and constant monitoring of developments
 - NanoObservatory
 - Building credibility and trust
-

Benefits

- Freedom to adapt
 - SME's conducting R&D
 - IP produced is used responsibly by licensee
 - Protection of workers
 - Implementation of safety standards
 - Responsible marketing
-

Benefits

- Accurate reporting of research results, product risks and hazards
 - Financial pressures can dictate otherwise

Other code of conduct

- Responsible Code

- Developed in the UK
- Targeted towards Boards
- Investigating 'Comply or Explain Approach'
- Launch in March 2008

- Other Notable codes

- BASF
-

NanoGovernance Challenges to address

- Where does ultimate responsibility lie in a global distribution of research, development and implementation?
 - Can an optimum balance in policy be attained in encouraging fruitful nanotechnology research while regulating applications likely to cause harm?
 - Can generation of risk data keep up with research on applications?
-

Concluding Remark

- Integrity in action will form the basis of good Nanogovernance
 - Global sharing of Nano-knowledge
 - Best practice in research conduct
 - Risk management methodology
 - Standards
 - Regulatory and Governance framework
-

Thank you

Email – kshitij.singh@nano.org.uk