

Integrating societal considerations in nanotechnology risk governance

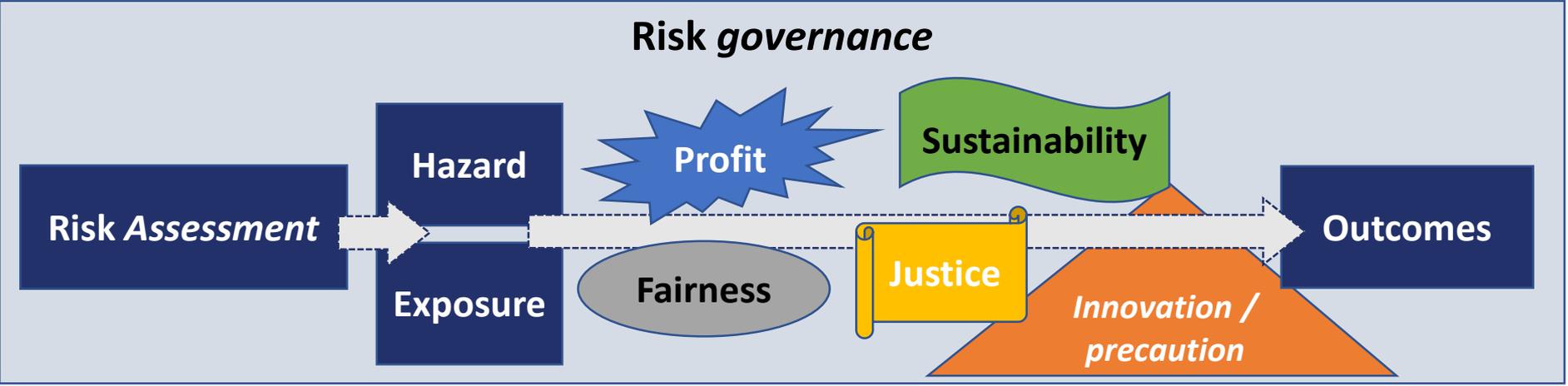
Daan Schuurbiers, DPF

Nanosafety Training School, 24 June 2021

Session: Risk Governance



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Titanium dioxide: E171 no longer considered safe when used as a food additive

Published: 6 May 2021



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EFSA has updated its safety assessment of the food additive titanium dioxide (E 171), following a request by the European

Titanium dioxide: E171 no longer considered safe when used as a food additive

- The updated evaluation revises the outcome of EFSA's previous assessment published in 2016
- The assessment took into consideration many thousands of studies that have become available since EFSA's previous assessment in 2016, including new scientific evidence and data on nanoparticles.
- Prof Matthew Wright, chair of EFSA's working group on E 171, said: "Although the evidence for general toxic effects was not conclusive, on the basis of the new data and strengthened methods we could not rule out a concern for genotoxicity and consequently we could not establish a safe level for daily *intake* of the food additive."

Food safety

This article is more than 1 month old

E171: EU watchdog says food colouring widely used in UK is unsafe

European Commission to propose ban after finding that carcinogenic effects cannot be ruled out

Daniel Boffey in Brussels

Thu 6 May 2021 18.08 BST





Latest from TDMA



The Titanium Dioxide industry is evaluating the European Food Safety Authority's (EFSA) opinion on E171

06 May 2021 – The European Food Safety Authority (EFSA) [published its opinion](#) on the safety of titanium dioxide (TiO₂) as a food additive (E171).

The Titanium Dioxide Manufacturers Association (TDMA) is currently carefully evaluating the EFSA's opinion to better understand the logic behind the outcome.

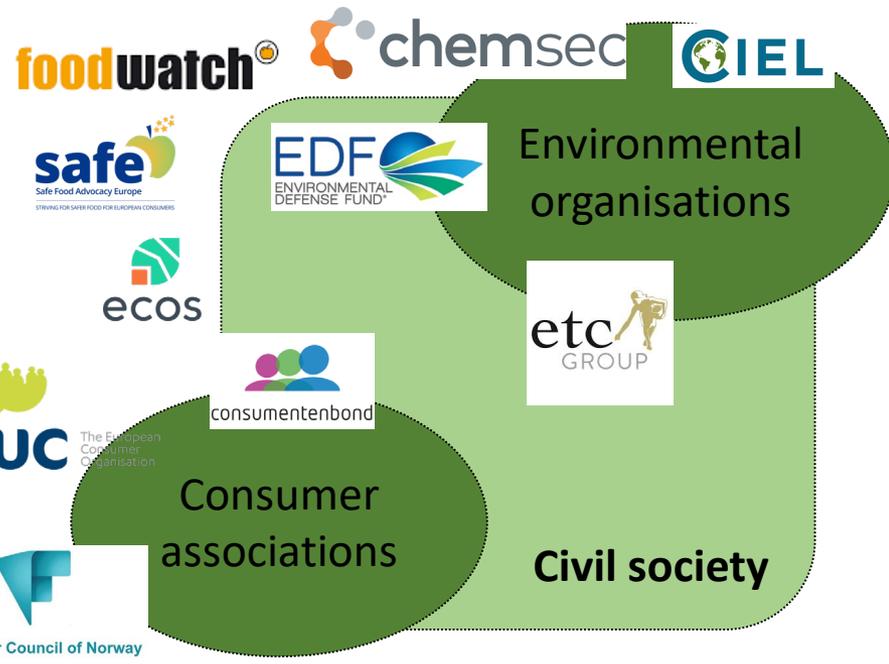
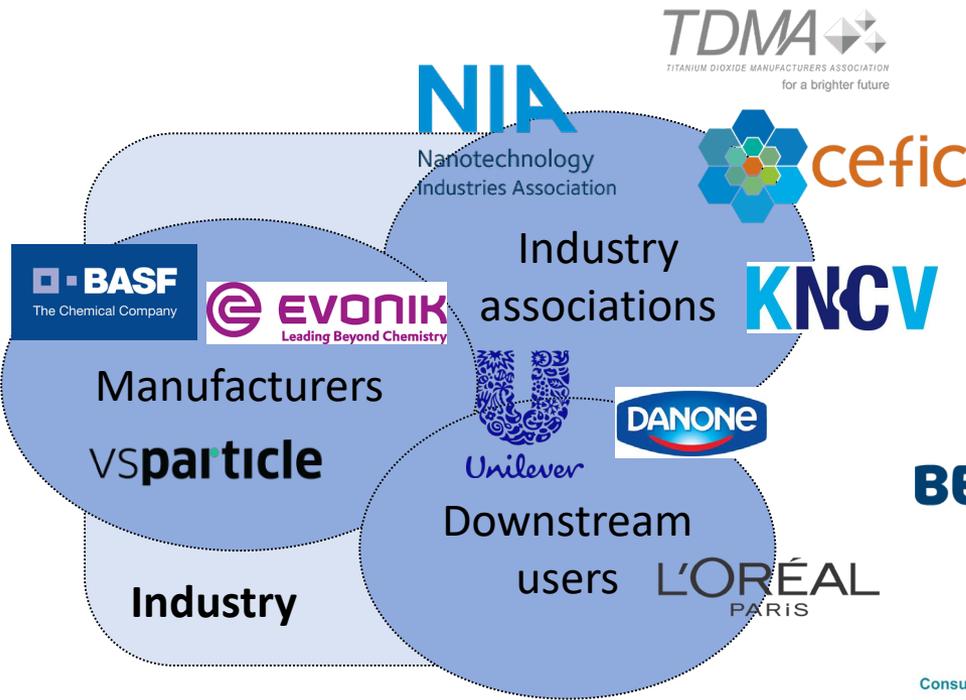
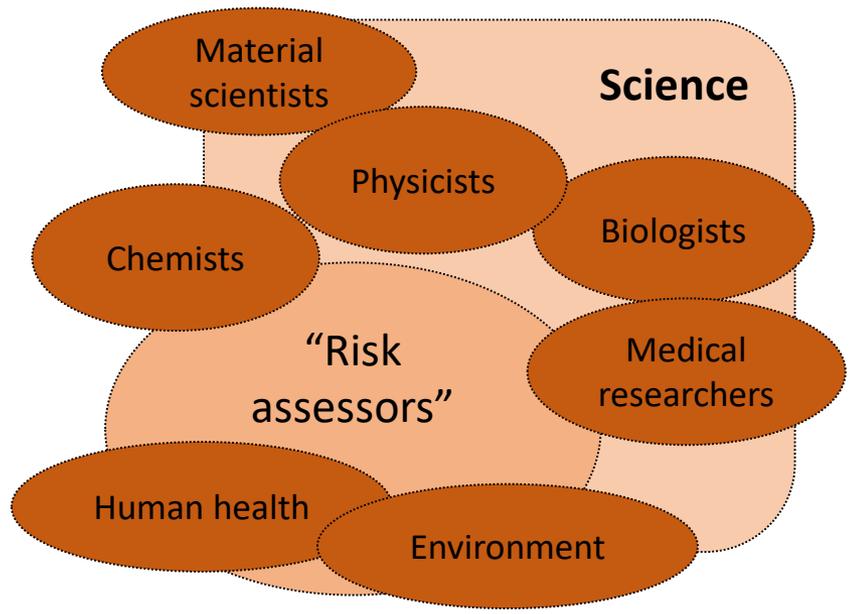
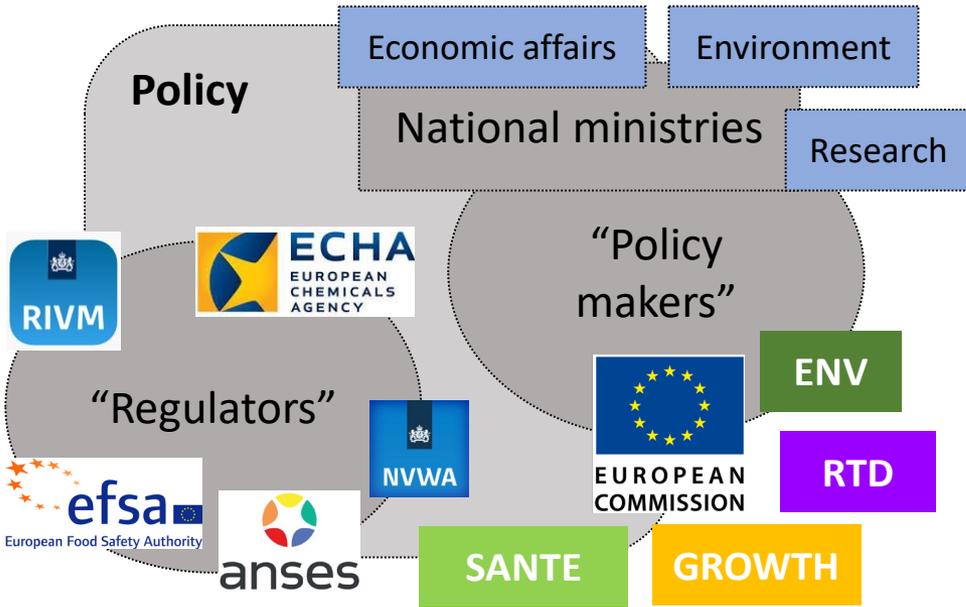
The TDMA has fulfilled all data requests from the EFSA, and has also contributed extensive new scientific evidence that confirms the safety of E171.

The TDMA welcomes the opportunity to engage with the EFSA and other European authorities to provide additional evidence and data to address potential safety concerns.

See more in [Latest from TDMA](#) or [view all news items](#)

Attachments





What the case of TiO₂ suggests

- Assessing the safety of nanomaterials is a complex task...
 - This is just one specific function of a single material!
 - The long term effects of nanomaterials on human and environmental health are uncertain
- Uncertainties do not only apply to TiO₂, but to the entire range of engineered, natural and incidental nanomaterials in many fields of application.
- If there are such uncertainties, we cannot simply assume that nanotech innovations will all be unqualified blessings
 - There are many examples of ‘miracle materials’ causing problems (asbestos, microplastics, lead, antifoulants, chrome-6, etc, etc)
 - The precautionary principle versus the ‘innovation paradigm’
- We have to become better at guiding innovation decisions in light of uncertain outcomes – that means weighing the expected risks and benefits of innovations in light of incomplete and uncertain data.
 - Risk-benefit assessment is a *deliberative* process that should include views from all stakeholders
 - *Risk assessment* is but one step in the overall governance process

