Supplementary Submission to:
Senate References Committee on
Exposure to toxic dust, including nano-particles

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Introduction

All technologies and their products have environmental, health, social, ethical, economic and a range of other negative impacts, hazards and costs. Many of these negatives may be remote in time and place. Impacts are usually denied or down-played by the technology researchers, developers and owners, making it hard to trace and prove their origins, for compensation and redress.

Fearless, impartial, independent, precautionary and scientific assessment, regulation and licensing of all new technologies, with the public interest paramount, is therefore essential. Regulators should be grounded in the assumption that new technology not be commercialised unless the proponents supply substantial evidence of minimal harm and strict liability. Regulators must not be empowered to favour applicants and license pollution!

Strong mechanisms for the prompt and timely disclosure of all evidence of the negative impacts of technology are essential and there should be strong disincentives for non-disclosure. (Asbestos and cigarettes, and the disinformation campaigns to deny their impacts are relevant here)

Technological products may also have potential benefits but these are often short term, inequitably distributed in society and rarely redress the long term impacts, hazards and costs.

Background

Our primary focus is on Reference g – "The potential of emerging technologies, including nano-particles, to result in workplace related harm," though silicosis from exposure to micro-particles of sand during sand blasting shows strict precaution is essential to prevent harmful exposure to technologies and their products.

We define 'workplace' to include homes, workshops, kitchens, bathrooms and any open environment in which humans work, where they may be exposed to and adversely affected by nano-technologies or their particulate products. This definition is justified by the recent European conference on nano-technology in the food supply, and their use in cosmetics, which alert us to how widely nano-particles are envisaged to be used.

In the worst case scenario, nano-particles may be as ubiquitous and toxic in the environment as persistent organic pollutants (POPs) which have polluted and harmed every living system on the planet, even the remotest places such as Antarctica, as a result of their use in agriculture, electrical equipment, etc. see: http://biotech.icmb.utexas.edu/pages/wildlife.html or http://www.pan-uk.org/pestnews/pn45/pn45p15b.htm

We strongly support and endorse the Friends of the Earth Australia submission.

Recommendations

We ask the Senate Committee to recommend:

- an immediate national moratorium on all research, development, commercial production and sale of synthetic nano-technologies, nano-particles, other nano-materials and products that contain them. The nano-technology moratorium should remain in force, at a minimum, until new laws and a regulatory system are developed and implemented;
- that if, and when, nano-technology R&D resumes, all R&D budgets - both private and public – be required to allocate at least 25% of their funds to experiments on worker, public and environmental health and safety. Australian governments have already spent hundreds of millions of dollars on nano-technology R&D but little or nothing on health and safety research. The regulatory system should mandate the scope, scale and duration of this research under regulations set in advance;
- Australian governments and the nano-technology industry spend substantial resources on creating vanguard systems, policies and standards for the protection of worker, public and environmental health

and safety. A unique array of precautionary safety services that aim to prevent the negative impacts of nano-particles could then be niche marketed world-wide to the many nations (already in excess of 40) and corporations now also heavily investing in nano-technology.

An Innovative Regulatory Framework

GeneEthics asks the Senate Committee to also recommend that:

- a proactive, comprehensive, integrated (one-stop-shop) national regulatory system on all new technologies be established;
- it be known as the Office of New Technology Assessment and Regulation (ONTAR);
- an iterative process be used to develop new laws and ONTAR - including public hearings around Australia and sequential draft proposals, issued for critical comment to all interested parties;
- ONTAR be established under a COAG agreement and be responsible to a New Technology Ministerial Council (NTMC), composed of Health Ministers from each Australian state, territory and the Commonwealth jurisdiction, and that it also report to both houses of federal parliament;
- ONTAR be an integrated one-stop-shop, to register, assess, licence and independently monitor all aspects of all dealings with new technologies;
- ONTAR's assessment function be modelled on the former US Office of Technology Assessment (OTA); see: http://www4.law.cornell.edu/uscode/html/uscode02/usc_sec_02_00000472----000-.html or http://www.wws.princeton.edu/ota/
- ONTAR be responsible for the registration, assessment, licensing and monitoring of all new technologies and their products. NB: the OGTR, FSANZ, APVMA and other Australian regulatory systems are poor models for ONTAR;
- ONTAR's initial brief be to accept applications for the registration, assessment and, where appropriate, the licensing of all existing and proposed nano-technologies, nano-particles, other nano-materials and nano-products.

GeneEthics further asks the Senate Committee to recommend that, once established, ONTAR should:

- equitably assess all the benefits as well as all the risks of dealings with novel technologies and their products, so that the safety, social, environmental, ethical and economic aspects of nano-particles are all objectively assessed before the issuing of a licence would be justified;
- use scientific rather than 'science-based' assessment methodologies, with clear benchmarks, standards and QA systems set in advance by regulation, so that the objectivity, replicability and relevance of evidence supporting applications can be objectively assessed. Acceptable evidence would be independent, peer reviewed, replicated, strictly experimental in design (including double blind, random sampling, experimental and control groups, and statistical analyses), conducted for scientific not commercial purposes, and of sufficient scope, scale and duration that the data and results are conclusive;
- make all data submitted with each application to ONTAR fully accessible to the interested public;
- embed broad, independent, multi-disciplinary expertise and advice in risk assessment requirements, processes, and assessment methodologies, especially on ecological and epidemiological issues;
- apply strict liability to all dealings with nano-technologies, their products and other novel technologies that may be in future regulated by ONTAR - a much needed incentive for them to adopt precautionary strategies and undertake more rigorous research as part of their triple bottom line responsibilities; exercise its discretionary powers in the public interest;
- place the onus of evidence-based proof of safety exclusively on licence applicants and the technology owners, and require them to show beyond reasonable doubt why a proposed dealing should be licensed;
- implement a fully developed and enforceable precautionary principle to prevent adverse impacts so that nano and other technologies do not in the long term destabilise and undermine our national and global life support systems, human and animal health, the natural and built environments and biological diversity;
- provide community appeal rights, including merit reviews and open standing on all its contentious decisions;
- include sustainability goals and the participatory principle.