

Steve Suppan, Institute for Agriculture and Trade Policy

The Institute for Agriculture and Trade Policy (IATP), a 501 c3 organization, is pleased to submit this comment. IATP participated in the NNI stakeholder workshop in June, including two breakout sessions on EHS impacts.

The NNI should commit to implementing the OECD “Recommendation of the Council on the Safety Testing and Assessment of Manufactured Nanomaterials”. That commitment could be made in paragraph 4.2.3 (page 37). Because the United States helped negotiate the Recommendation, it implicitly supports such provisions as “Recommends that [OECD] Members make safety data related to nanomaterials available to the public”. However, the Strategic Plan should make this commitment explicit for all NNI funded or co-funded research, not just because U.S. taxpayers have paid for that research, but because no world-class EHS impact research program can be developed without a commitment to making EHS available to the public for review and criticism. Because the NNI supports the development of nano-specific metrology, including the development of metrics for nano-toxicology, one might assume that such metrology would be in the service of making EHS data on nanomaterials comprehensible to the public. But an explicit commitment to support the OECD nanosafety Recommendation would remove any doubt about making such an assumption. NNI funded public engagement will be more robust and credible if safety data is readily accessible to the public.

The National Research Council assessment of the 2011 Strategic Plan urged NNI funded agencies to research the effects of ENMs on the gastro-intestinal system. From what we know of publicly reported FDA and NIFA research, few NNI investments are directed to gastro-intestinal studies. The Strategic Plan should exemplify the “significant progress” claimed (lines 22-23, p. 35) to allay the NRC’s concerns. Given the number of commercialized food-related products claiming to incorporate ENMs (more than 300, according to a 2013 Center for Food Safety inventory), an NNI Signature Initiative or at least a FDA prioritization on gastro-intestinal research is urgently needed.

Although both NIST and NIFA have funded laboratory research on the effects of ENMs on elements of the soil feeding chain, funding of field research should be an NNI EHS priority. There is growing scientific consensus that a large fraction of ENMs are entering natural environments, either via landfills or through the application of treated sewage (biosolids) to at least 70 million acres of U.S. agricultural land. In view of this fertilization practice, field condition studies of the effects of ENMs on soil health should be a NNI EHS priority. Under the “Product End of Life Cycle” portion of the Product Life Cycle Considerations illustration (p. 36), there should be a box for “Agricultural fields”.

We appreciate the frankness of the NNI to acknowledge the “few existing evaluation activities” (line 33, p. 37) for diverse stakeholder participation in the review and design of NNI funded EHS research and outreach. Goal 4 cannot be realized without a budgetary and programmatic expansion of such evaluation activities. IATP recommends that interagency events concerning biosolids and soil health, and concerning gastro-intestinal impacts of ENMs be proposed in an addendum to the Strategic Plan of possible Goal 4 evaluation activities. Regarding realization of Goal 4 ELSI objectives, ELSI budget lines are concentrated largely in the NSF. Since the research of NNI participating agencies has ELSI consequences, the Strategic Plan should recommend that each agency develop a plan to realize Goal 4.3 objectives and budget accordingly for it. Finally, the Strategic Plan lacks an interagency mechanism for deciding when agency research programs should collaborate and how they may conflict, particularly with regard to Goal 4. The NNAP should be requested to develop such a mechanism at the beginning of “Coordination and Assessment” (p. 54).