



Working Group on Science, Research and Development

Summary of Discussions and Outcomes

The Science, Research and Development Working Group reported on three areas of work that had been completed since the last Forum meeting in November 2001:

- The establishment of a web-based Science Research Network on the Forum's web site at www.nfmsd.org
- A report and set of recommendations relating to Life Cycle Assessment of non-ferrous metals
- A report and set of recommendations relating to science and policy considerations of undertaking Risk Assessments of non-ferrous metals.

1. The Science Research Network

Co-Chair Gilles Tremblay (Natural Resources Canada) summarised the need that the Working Group had identified for a Network and the decision that had been taken by the Group that it should be structured so as to be capable of growing organically. He went on to summarise how the Network can be accessed and used via the Forum's web site and reported that the number of users had risen substantially following the World Summit on Sustainable Development in September 2002.

A preliminary investigation had been made into the type of research projects that had joined the Network since its inception. There were a number of common areas of interest including Life Cycle Assessment, materials flow analysis, mine closure and environmental pollution prevention.

Outcomes: The Forum recognised that the Network was an important output and that it represented a useful tool in understanding the link between science and the sustainable development of non-ferrous metals. It endorsed the work done and recommended that:

- Further work be done to analyse key users of the Network to guide future work on Science issues
- Steps should be taken to establish formal links with the web sites of the non-ferrous metals industry associations; this would help the Network's visibility to be improved further
- Links should be established to the web sites of research institutes that appear on the Network
- Links should also be made to government members' research sites
- The Network should be maintained regularly and that screening of new members should continue.

2. Life Cycle Assessment

Christian Bauer (Aachen University of Technology), LCA Sub-Group, leader presented the Sub-Group's report and recommendations relating to Policy Making, Non-Ferrous Metals and Life Cycle Studies.



The Forum welcomed the paper that was presented and agreed that it had contributed to improving understanding of both the use of LCA as a tool and its potential limitations. During discussions Forum members highlighted that LCA was focused on environmental impacts of using non-ferrous metals. Work undertaken in building a Product Stewardship framework had shown that materials choice should reflect a range of inputs including elements such as price impacts, durability and recyclability, as well as wider economic and social issues. Some countries were moving in this general direction – one example was The Netherlands' Eco-Indicator Scheme.

Outcomes: The Forum endorsed the valuable work undertaken to date and agreed a broader “life cycle thinking” that included elements of materials choice and the efficient use of resources should be developed. It recommended that:

- That detailed consideration be given to how the LCA work undertaken could be used as a tool within a product stewardship scheme and risk analysis
- That consideration should be given to fostering an understanding of a Life Cycle Management approach to non-ferrous metals
- That an approach to LCA that recognised the different priorities of the developed and developing worlds should be elaborated
- The shortcomings regarding LCA that had been identified should be communicated to regulatory agencies.

3 Risk Assessment

Co-chairs David Cambers (Center for Science in Public Participation) and Craig Boreiko (International Lead and Zinc Research Organisation, on behalf of Murray Cook of IZA) presented the Working Group's results on Scientific and Policy Considerations of Risk Assessment for Non-Ferrous Metals. The Forum welcomed the balanced approach of the Working Group's papers and the progress that had been made since the last Forum meeting in November 2001. Forum members reiterated that the Science Group's work on risk assessment issues had considerable on-going value. The Forum acknowledged that there were other initiatives that were looking into the question of risk assessment for metals and stressed that the value added by the Forum lay in integrating work being done by experts involved in these initiatives into a wider regulatory and political network. The Forum re-emphasised that its role did not lie in aiming to improve the science of risk assessment.

Outcomes: The Forum proposed that future work undertaken on risk assessment should be widened to include elements of risk management – following a broader approach that could be termed risk analysis. It recommended that:

- Work should be done to show how risk analysis as a tool could contribute to product stewardship
- Linkages between the tools used in risk analysis and approaches to life cycle management should be explored
- Workshops or working groups on specific issues such as the current state of knowledge in the science of bio-availability of metals or risk assessment methodologies should be convened, provided these were framed within the context of regulation/policy
- Future presentation of work on risk analysis should be targeted carefully at audiences to ensure that recommendations were taken up.