Influencing global policy on mercury

University of Oxford earth scientists with diverse expertise have combined their knowledge to inform national and international policy on mercury, one of the most dangerous environmental pollutants.

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Mercury is extremely toxic and causes a range of serious health impacts including brain and neurological damage, especially among young people and unborn children. Mercury poses a particular ecological and human health risk due to its chemical properties. It vaporises easily, thus becoming highly mobile, and many mercury compounds are water-soluble or form readily in the soil, allowing mercury to enter the food chain and accumulate in dangerous quantities.

With an atmospheric lifetime of around a year, the impact of mercury sources can be felt at considerable distance, making mercury pollution a global as well as local issue. In order to manage this problem it is important to know the sources and fluxes of man-made mercury emissions as accurately as possible, and to set these in the context of the natural mercury cycle.

With this in mind, the 'Integrating Knowledge to Inform Mercury Policy' (IKIMP) initiative was formed in 2008 by a group of researchers in the Department of Earth Sciences. The group had a wide range of specialisms: understanding of natural mercury emissions and cycling, expertise in environmental remediation, and skill in the use of science to inform environmental policy. IKIMP's aim was to ensure that scientific evidence was used to inform public policy relating to mercury.

Between 2008 and 2012, IKIMP used its extensive research base and international contacts to bring together global experts to address all aspects of mercury pollution (both man-made and natural), mercury management and safe storage. IKIMP's resulting reports and policy briefings were highly influential: they were used by Defra to support UK and EU decisions on

mercury management, and the United Nations Environment Programme adopted IKIMP's decision-making framework to help countries deal with their redundant mercury. IKIMP also played a significant role in shaping the Minimata Convention, the UN's legally-binding international treaty to limit mercury use, which was agreed by national governments in January 2013 and represents a significant advance in global management of mercury.

'IKIMP has been very successful in transferring [mercury] knowledge and technical expertise to policy developers at national, European and UN levels. It has proved an invaluable asset in a wide range of negotiations and has certainly helped expedite the development of the Minimata Convention [the UN treaty on mercury].'

Dr Mike Roberts, Senior Scientific Officer for Chemicals and Emerging Technologies, Defra

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Funded by the Natural Environmental Research Council