Antimony: the facts – or maybe not

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Antimony first attracted public attention in the mid-1990s amid claims that it was involved in Sudden Infant Death Syndrome. A substantial number of papers have now been published on the element and its behaviour in the natural environment. However, many key aspects of the environmental chemistry of antimony remain poorly understood. These include critical areas such as its ecotoxicology, its global cycling through different environmental compartments, and what chemical form it takes in different environments. Moreover, the comprehensive analysis of what has been published on antimony shows that some generally accepted facts (e.g., the relative toxicity of Sb(V) versus Sb(III)) are based on very few evidences or that studies in some areas have a limited reliability just because simple solubility-related considerations have been ignored (e.g., ecotoxicity) or speciation in culture media not taken into account (e.g., biomethylation). All these aspects will be discussed in this communication.