In November, an agreement in concept was reached by a World Health Organization-convened international expert group meeting, supporting the phase-out of dental mercury use worldwide. Dental Tribune Group Editor Daniel Zimmermann spoke with Prof. Lars Hylander, Associate Professor at the University of Uppsala in Sweden who attended the meeting, about the agreement and strategies for future biomaterials use in dentistry.

Daniel Zimmermann: Prof. Hylander, you recently attended a joint meeting of the World Health Organization (WHO) and the United Nations Environment Programme (UNEP) that aimed to assess the latest clinical evidence on dental restorative materials. Could you tell us about the outcome of the meeting?

Prof. Lars Hylander: Most participants agreed that amalgam should be phased out or at least phased down. Dr Poul Erik Petersen, Responsible Officer for Oral Health at the WHO, however, raised several good questions, such as what to tell people in poor countries who cannot even afford dental amalgam fillings. At this point, the room grew rather silent.

A similar consultation was held more than ten years ago. What has changed since then concerning the manner in which dental restorative materials are perceived?

What has been decided regarding dental amalgam?

The WHO has not been as quick as Norway, who instituted a ban on dental amalgam in less than six months after the proposal of a ban was presented in the country. Thus far, nothing has been decided, but the WHO can hardly ignore the decision made by the world’s governments within the UNEP to negotiate a mercury treaty, which will begin in Stockholm next June. There was some consensus that mercury use in dentistry should be phased down. A suitable way to do this is to begin teaching alternative restoration techniques, other than dental amalgam, in dental schools.

There was a focus on the oral cavity, which thus ignored the environmental aspects such as mercury emissions from crematoria and leakage of mercury into wastewater from dental clinics and the wearing of amalgam surfaces due to everyday chewing. The American Dental Association demonstrated this most clearly in the presentation by Dr Daniel Meyer, in which it was stated that of the 35 tons of amalgam used annually in the US, only a few hundred kilograms are emitted into the environment.

Which restorative materials were considered to have the most potential for use in developed and developing countries?

Composites and other white filling materials have replaced amalgam in several developed nations. Even in countries with an amalgam ban, such as in Japan, less than 4 per cent of the fillings are now fabricated with amalgam, for aesthetic reasons. In addition, many patients do not find it sensible to have as toxic an element as mercury just a few centimetres from their brains.

Composites and glass ionomers are also widely used in many developing countries. The question of why such developments progress so slowly in the big nations of the rich world was raised. Atraumatic restorative treatment with glass ionomers and using only hand tools is a promising alternative, not only for developing countries. In countries in which glass ionomers or composites are produced locally, the cost of these fillings is lower than that of amalgam.

Thank you very much for the interview.