

## Heavy metal pollution in Ancient Nara, Japan, during the 8th century

Hodaka Kawahata<sup>1\*</sup>, Shusuke Yamashita<sup>1</sup>, Kyoko Yamaoka<sup>2</sup>, Takashi Okai<sup>2</sup>, Gen Shimoda<sup>2</sup>, Noboru Imai<sup>2</sup>

<sup>1</sup>Atmosphere and Ocean Research Institute, The University of Tokyo, <sup>2</sup>AIST

We quantitatively investigated 8th century heavy metal pollution in Heijo-kyo (Ancient Nara), the first large capital of Japan. In this city, mercury, copper, and lead levels in soil were increased by urban activity and by the construction of the Great Buddha statue, Nara Daibutsu. Mercury and copper pollution accompanied the construction of the statue, with a great influence on its immediate area but a much lesser influence on the wider city environment. Accordingly, we reject the hypothesis that severe mercury pollution brought about by the construction of the Nara Daibutsu made it necessary to abandon Ancient Nara. High lead pollution was detected at several sites. The isotopic composition of the lead indicated that it originated mainly from the Naganobori mine.

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