Lead poisoning from mining activities persists in Zamfara, says report

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A RECENT report from the World Health Organisation (WHO) and the United States Centres for Disease Control and Prevention (U.S. CDC) has alerted that the mass lead poisoning from mining activities in Zamfara State, which was discovered in March 2010, has continued to affect villagers in three local councils of Anka, Bukkuyum and Maru.

A statement by the WHO stated that while the full scale of the problem is still not fully determined, a survey carried out by the CDC at the request of the Federal Ministry of Health (FMOH), has revealed at least 43 villages in Zamfara State where there are confirmed cases of lead poisoning (blood lead concentration greater than 10 ?g/dL). In at least seven of these villages, there are children who need chelation therapy (blood lead concentration greater than 45 ?g/dL). This is in addition to the seven villages that have now been remediated.

With the combined effects of removal from lead exposure, chelation and other supportive therapy, the mortality rate among exposed children in seven remediated villages has dropped from 43 per cent in 2010 to one per cent in 2011.

WHO and multiple partners have been assisting state and federal authorities to manage the situation, which cannot be resolved without sustained changes to mining practices to prevent further environmental contamination with lead. These include relocation of ore processing activities and storage of ore materials away from villages, adoption of new processing methods that produce less dust, as well as hygiene measures such as removing contaminated clothes and washing before returning home.

According to the statement, the WHO has continued to crave attention to this problem and to gain the government's commitment to further sustained action to prevent the serious and life-long consequences of lead poisoning in a generation of children in Zamfara.

The response to the mass lead poisoning in Zamfara State has involved multiple agencies, including WHO, United Nations Children’s Fund (UNICEF), United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP) - Office for the Coordination of Humanitarian Affairs (OCHA) Joint Environment Unit, Médecins Sans Frontières (MSF), the US CDC, the Blacksmith Institute, TerraGraphics Environmental Engineering Inc, and the Artisanal Gold Council, working with authorities.
and leaders at community, state and federal levels.

With funding of $1.9 million provided by the UN Central Emergency Response Fund (CERF) to WHO and UNICEF, the following activities have been carried out:

- remediation of five villages (Abare, Tungar Guru, Tungar Daji, Sunke and Duza);
- social mobilisation and community awareness activities directed at informing local communities about the hazards of lead and how to prevent lead exposure, including safer mining and gold extraction processes;
- advocacy activities with state and federal authorities, and community leaders;
- establishment of a surveillance system for the early detection of lead poisoning in Zamfara State;
- provision of three hand-held x-ray fluorescence devices for the rapid measurement of lead concentrations in soil;
- provision of four point-of-care analysers and their kits for the rapid measurement of blood lead concentrations;
- provision of a graphite furnace atomic absorption spectrometer, ancillary equipment and reagents, as well as technical advice, for the establishment of a reference laboratory for the measurement of lead;
- training for doctors, nursing and laboratory staff at the planned lead treatment centre in Gusau on the diagnosis and management of lead poisoning;
- provision of antidotal agents for the treatment of lead poisoning; and
- co-ordination of partners involved in the response activities.

The remediation work has been organised by the Blacksmith Institute and TerraGraphics Environmental Engineering Inc in collaboration with the Zamfara State authorities and local contractors. Remediation has involved the identification of contaminated areas in the villages, removal of all contaminated soil, its disposal in secure landfill sites and its replacement with clean soil. In addition, walls and other surfaces in family compounds have been cleaned.

According to the WHO, a total of seven villages have now been remediated, two having been completed before the CERF funding was available. TerraGraphics has provided training in assessment and remediation procedures so that they can be continued by local agencies.

MSF has continued to provide chelation therapy for lead-poisoned children in the decontaminated villages and now has over 2,000 children under five years of age on its treatment programme.
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