

**CHILDREN'S ENVIRONMENTAL HEALTH (CEH)
Report 2022
WHO and WHO collaborating centre network on CEH**

1 Capacity building

WHO worked in 2022 on the update and major revisions of about 20 modules of the [WHO Training Package on Children's Environmental Health for the Health Sector](#) (with support from Sida, Sweden). Priority focus was given to the 12 training modules on Why children, Pediatric environmental history, Water, Sanitation and hygiene, E-waste, Chemicals, Mercury, Lead, POPs, Pesticides, Ambient air, Household air, Climate change. The aim of this update is to provide possibilities for CEH training through a two-pronged approach: provide updated WHO training materials aimed at primary healthcare workers and clinicians that can be easily used to train others. And in addition, to develop a joint UNICEF/WHO 30 to 40 hour e-learning course that can be accessed by primary health workers and clinicians for their self-training in main CEH areas in a holistic way, with the possibility to have a certificate of completion by both agencies. During 2022, intensive work was given to the 12 modules mentioned above that are the ones to be used in the UNICEF/WHO joint e-learning, expected to be launched in the first half of 2023. In the meantime, WHO has been working with UNICEF into the e-learning course based on the WHO modules. The e-learning course was piloted in 2022 with participants selected in collaboration with WHO and UNICEF regional offices. Both sets of materials are under finalization and clearance for their release during 2023.

The updated WHO training modules are planned to be translated into several languages by WHO collaborating centers, NGOs and experts. Languages include Spanish, Italian, Japanese, Turkish, and possibly Dutch, German and Polish.

The current materials are being used in a number of training courses and sent to online requests to WHO. One of these training courses is planned for February 2023, as a CEH training workshop for pediatricians in the context of the International Pediatrics Association Global Congress in India.

Finally, as part of WHO's work on protecting children from environmental exposures in early life, WHO published short CEH information materials for clinicians, community workers and medical school faculties.

- [Information sheet on CEH for clinicians: what every clinicians should know](#) and accompanying [training presentation](#)
- [Information sheet on CEH for community health workers: what every community health worker should know](#) and accompanying [training presentation](#)
- [Information sheet on CEH for med-school faculty: what every medical school faculty should know](#) and accompanying [training presentation](#)

The CEH capacity-building activities benefit from the important support of all WHO CEH collaborating centres not only in development and update but also in translations.

2 E-waste and child health

During 2022, WHO has continued the implementation of the [WHO E-waste and child health initiative](#) particularly in the areas of communications, capacity building, country pilots, in close collaboration with Regional and country offices.

PAHO in collaboration with WHO and the crucial support of WHO CEH Collaborating Centre in San Luis Potosi, Mexico launched through a [webinar](#) in October 2022, the first comprehensive e-learning course for health workers on e-waste and child health: “Los niños y las niñas y los basureros digitales: Exposición de los residuos electrónicos y salud infantil – 2022” ([PAHO campus course](#)). This course was also the result of the PAHO-led first regional experiences of the Latin American e-waste and child health country pilots (Bolivia, Panama) and inter-agency work carried in the Region in the context of a bigger GEF project led by UNIDO. Versions in English and French are under current development.

The first e-waste and child health pilot in the African region started in Nigeria in 2021 and its development continued in the second half of 2022. At local level, the WHO country office coordinated closely with the Ministry of Health, a range of national and sub-national level activities to address the health effects of exposure to e-waste and raising awareness amongst stakeholder and policy makers on health impacts of e-waste on children. Communication and advocacy materials were developed and widely disseminated among different audiences, reaching an estimated 4.2 million people. The intervention also focused on creating multisectoral teams, building local capacities, and developing a draft national Policy on e-waste (awaiting validation). WHO CCs in Albany and Mexico have been providing technical expertise to this pilot.

An additional intervention, building on previous regional and local WHO efforts on e-waste and children’s environmental health (CEH) in Bolivia was implemented. Actions and products included: i) the implementation of a CEH "green page" for the identification, diagnosis, treatment and referral of patients for mercury and lead poisoning with a focus on pregnant women and children; ii) a planning document for a toxicological information center for the country including equipment required for a laboratory for the evaluation of mercury and lead poisoning samples; iii) a guide for the diagnosis and treatment of patients with mercury and lead poisoning has been piloted and adjusted; iv) capacity building of health personnel on lead and mercury mainly in gold mining areas and mining centers and awareness-raising meetings with miners and local authorities; v) support to Ministry of Health in the final revision of the National Mercury and Health Plan and the articulation of a roadmap for its implementation towards the consolidation of a national multisectoral technical committee on chemicals and health; vi) support provided to the National Environmental Health Management Programme in the analysis and definition of indicators for the National Environmental Health Surveillance System (SINAVISA), which is currently under construction. Initial steps of this intervention had received technical support from Latin American CCs.

In addition, global communications, advocacy and outreach continued during 2022. For example, WHO published with UNICEF a short publication for action [Children and e-waste: key messages](#) and organized a [webinar](#) with the International Network on Children’s Health, Environment and Safety (INCHES) to discuss recent findings on e-waste exposures, health effects in children related to different forms of exposure and global and local ways forward to address this global health challenge.

Guidelines on prevention of lead exposures

During 2022, two reviews for the guidelines for the prevention of lead poisoning were

- [Lead in traditional and complementary medicine: a systematic review](#) (Reviews on Environmental Health, led WHO CC in Australia)

- [Narrative review of lead poisoning in humans caused by industrial activities and measures compatible with sustainable industrial activities in Republic of Zambia](#) (Science of the Total Environment led by WHO CC Japan)

An additional review on standards for lead in soil and dust in the world has been worked on during 2022 (under leadership of WHO CC Japan) and is under refinement before publication. Another review on industrial standards in 3 countries is about to be published.

8.3 Endocrine-disrupting chemicals (EDCs)

As EDCs are a challenge to health and to child development in particular. WHO has started in 2022 the initial planning work needed to start the development of a new State of the Science report on EDCs. The initial work is being carried out with Utrecht University, with expertise from a few WHO CEH collaborating centers. The report's development will start in 2023 in close collaboration with UNEP. NIEHS, Albany and Australia CCs have provided initial technical support and guidance.

8.4 Integrating environment into child and maternal health initiatives

WHO is also working internally with child development health and mental health colleagues integrating lead, mercury and other chemicals into upcoming WHO work, reports and publications on child development, adolescent health and mental health, as well as promoting the subject in child health global meetings. For instance, WHO is working to include environmental actions in the upcoming new version of the Global Accelerated Action for the Health of Adolescents guidance for country implementation [AAHA](#) (which is being translated into Spanish by Mexico CC)

5. Networks and communication

WHO continued coordinating the work of a very active [network](#) of about 10 WHO collaborating centres in Children's Environmental Health that provides support to WHO and WHO Regional activities, including those mentioned above. Their support has been crucial in advancing the development and implementation CEH and related areas in WHO.

WHO CC NIEHS organized regular calls to facilitate the interaction between CCs. In addition,

WHO sends on a regular basis the Children's Environmental Health newsletter, developed by WHO CC Canada to provide latest information, materials and events from WHO and others on children's environmental health. The newsletter is under re-development to adjust to new WHO corporate templates and be provided with wider reach out. The [CEH website](#) is under constant updating to feature on-going CEH challenges and WHO actions.

On 6th and 19th of January 2022 INCHEs organized two webinars on lead and children's health in cooperation with WHO.

WHO CCs in Korea, Japan, Mexico and Uruguay, as well as ISDE and INCHEs have been importantly supporting outreach and implementation of our materials through a number of translations into local languages and local adaptations.

Finally, WHO has been working in close collaboration with UNICEF on CEH and in chemicals as per a corporate collaboration agreement. Joint activities include CEH training

mentioned above, communication materials such key messages on e-waste and child health [Children and e-waste: key messages \(who.int\)](#) and air pollution and child health [Childhood Air Pollution Key Messages 2022.pdf \(unicef.org\)](#) Initial plans have started to develop WHO/UNICEF country CEH cards for countries in 2023.

