

Children's Environmental Health International Initiatives

This is an international mailing list provided by [WHO](#) and [UNEP](#) dedicated to promoting healthy environments for children

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PROGRESS ON DRINKING WATER, SANITATION AND HYGIENE

Some 3 in 10 people worldwide, or 2.1 billion, lack access to safe, readily available water at home, and 6 in 10, or 4.5 billion, lack safely managed sanitation, according to a new report by WHO and UNICEF. The Joint Monitoring Programme (JMP) report presents the first global assessment of "safely managed" drinking water and sanitation services. The overriding conclusion is that too many people still lack access, particularly in rural areas.

Billions of people have gained access to basic drinking water and sanitation services since 2000, but these services do not necessarily provide safe water and sanitation. Many homes, healthcare facilities and schools also still lack soap and water for handwashing. As a result, every year, 361 000 children under 5 years of age die due to diarrhoea. Poor sanitation and contaminated water are also linked to transmission of diseases such as cholera, dysentery, hepatitis A, and typhoid.

The JMP 2017 update report presents indicators and baseline estimates for the drinking water, sanitation and hygiene targets within the Sustainable Development Goals (SDGs). The report introduces the indicators of safely managed drinking water and sanitation services, which go beyond use of improved facilities, to include consideration of the quality of services provided. For the first time, hygiene estimates are reported for 70 countries.

[Full report](#)

[Annexes](#)

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CHILDREN'S ENVIRONMENTAL HEALTH NEWS

Press Releases

[A town, a disease, a convention: a fitting tribute for the victims of Minamata](#)

The Minamata convention is held as tribute to the citizens affected by the mercury poisoning epidemic that took place in southern Japan over 60 years ago, one of the worst-ever industrial disasters that caused wide-spread central nervous system disorders. In August, the convention will officially take effect, and the first Conference of the Parties – aimed at "Making Mercury History" – will follow on 28 and 29 September in Switzerland. In developing countries across the globe, mercury is still being used in gold mining, coal-fired power plants, dentistry and cosmetics. There's no safe level of exposure, and children, newborn and unborn babies are most vulnerable. The convention shows that big and small countries can all play a role – as can the man and woman in the street, just by changing what they buy and use. UNEP (3/7/2017)

[5.6 million children at risk of waterborne diseases as rainy season hits communities affected by Lake Chad crisis](#)

Conflict-affected areas are at increased risk of waterborne diseases such as cholera and diarrheal infections. Flooding and muddy roads are expected to severely limit humanitarian access to remote areas for several weeks, just as the needs of children and families are sharply on the rise because of heightened insecurity across the region. The Water, Sanitation and Hygiene response in the Lake Chad Basin has received less than 20% of the US\$80 million required to meet urgent needs in 2017. UNICEF (23/6/2017)

[Crisis 'far from over' as malnutrition, thirst and disease threaten lives of millions of children in](#)

JOURNAL ARTICLES

Chemicals

[Maternal and Cord Blood Manganese Concentrations and Early Childhood Neurodevelopment among Residents near a Mining-Impacted Superfund Site](#)

This study examines associations between prenatal manganese concentrations and placental transfer of manganese with neurodevelopment in 224 2-y-old children residing near the Tar Creek Superfund Site. Maternal and cord blood were collected at delivery and measured for manganese using inductively coupled plasma mass spectrometry. An IQR increase in maternal manganese was associated with -3.0 (95% CI: -5.3, -0.7) points on mental development indices (MDI) and -2.3 (95% CI: -4.1, -0.4) points on psychomotor development indices (PDI).

[Prenatal Residential Proximity to Agricultural Pesticide Use and IQ in 7-Year-Old Children](#)

Authors evaluated the relationship between prenatal residential proximity to agricultural use of potentially neurotoxic pesticides and neurodevelopment in 7-year-old children. They estimated agricultural pesticide use within 1 km of maternal residences during pregnancy using a geographic information system, residential location, and California's comprehensive agricultural Pesticide Use Report data. A decrease of 2.2 points [95% confidence interval (CI): -3.9, -0.5] in Full-Scale IQ and 2.9 points (95% CI: -4.4, -1.3) in Verbal Comprehension for each standard deviation increase in toxicity-weighted use of organophosphate pesticides was observed. In separate models, authors observed similar decrements in Full-Scale IQ with each standard deviation increase of use for two organophosphates and three neurotoxic pesticide groups. This study identified potential relationships between maternal residential proximity to agricultural use of neurotoxic pesticides and poorer neurodevelopment in children.

Environmental Health Perspectives

[Levels and Determinants of DDT and DDE Exposure in the VHEMBE Cohort](#)

Although indoor residual spraying (IRS) is an effective tool for malaria control, its use contributes to high insecticide exposure in sprayed communities and raises concerns about possible unintended health effects. This study aims to characterize prenatal exposure to IRS insecticides

[north-east Nigeria, Somalia, South Sudan and Yemen](#)

Severe food insecurity puts the lives of millions of children at risk in north-east Nigeria, Somalia, South Sudan and Yemen, UNICEF warned today. Around 5.2 million people in north-east Nigeria remain severely food insecure, with 450,000 children expected to suffer from severe acute malnutrition this year. The start of the rainy season will further complicate the humanitarian response. In Yemen, where almost 400,000 children are estimated to be severely malnourished, an unprecedented cholera outbreak, with over 175,000 suspected cases and more than 1,000 deaths to date, has complicated the ongoing humanitarian response. UNICEF (23/6/2017)

[South Sudan famine ebbs, but situation still desperate as hunger spreads](#)

The number of people struggling to find enough food each day has grown to six million – up from 4.9 million in February – and is the highest level of food insecurity ever experienced in South Sudan. 45,000 people in former Unity and Jonglei states are still experiencing catastrophic conditions and face the prospect of starvation if humanitarian assistance is not sustained. FAO's Director of Emergencies, Dominique Burgeon stated that "The only way to stop this desperate situation is to stop the conflict..." The situation is expected to deteriorate even further as the lean season peaks in July when household food supplies typically run out before the next harvest. UNICEF (21/6/2017)

[The Kingdom of Bhutan HiT \(2017\)](#)

The predominantly public financed and managed health system in Bhutan has grown significantly since the first allopathic doctor started working there in 1954. Health services are available through a three-tier structure, from primary to tertiary while village health workers play a crucial role in bridging health services and the community. Despite the difficult geographical terrain and dispersed settlements, access to health services has improved remarkably. Bhutan is among the top global performers in "gains in life expectancy" in the past 40 years. The MDG 4 and 5 targets have been achieved and since 2010, immunization levels are over 95%. However, the country faces a triple burden of health challenges; while communicable diseases remain a substantial burden, noncommunicable diseases (NCDs) are increasing as are other emerging, challenging issues such as substance dependence and mental health problems. Follow link for the full report. WHO Asia

and exposures' impacts on child health and development in rural South Africa. DDT and DDE serum concentrations were measured in mothers when they presented for delivery. Mothers reporting to have lived in a home sprayed with DDT for malaria control had ~5–7 times higher p,p'-DDT and p,p'-DDE serum concentrations than those who never lived in a home sprayed with DDT. Increasing access to water significantly reduced p,p'-DDT exposure and increasing the frequency of household wet mopping significantly reduced p,p'-DDT and p,p'-DDE exposure.

Environmental Health Perspectives

[Parental Occupational Exposure to Organic Solvents and Testicular Germ Cell Tumors in their Offspring: NORD-TEST Study](#)

Testicular germ cell tumors (TGCT) were suggested to have a prenatal environmentally related origin. Authors aimed to assess the association between maternal and paternal occupational exposures to organic solvents during the prenatal period and TGCT risk in their offspring. This registry-based case control study included TGCT cases aged 14–49 y (n=8,112) diagnosed from 1978 to 2012 in Finland, Norway, and Sweden. Overall, no association was found between prenatal maternal exposure to solvents and TGCT risk. There was an association with maternal exposure to aromatic hydrocarbon solvents. No association was seen for any paternal occupational exposure to solvents with the exception of exposure to perchloroethylene in Finland.

Environmental Health Perspectives

[Maternal Urinary Triclosan Concentration in Relation to Maternal and Neonatal Thyroid Hormone Levels: A Prospective Study](#)

Triclosan (TCS) is a synthetic antibacterial chemical widely used in personal care products. Authors evaluated the association between maternal TCS exposure and thyroid hormone levels of mothers and newborns. TCS was measured in urine samples collected during gestational weeks 38.8±1.1. Maternal serum levels of free thyroxine (FT4), thyroid-stimulating hormone (TSH), and thyroid peroxidase antibody (TPOAb) were obtained from medical records. Cord blood levels of free triiodothyronine (FT3), FT4, TSH, and TPOAb were measured. The results suggest significant inverse associations between maternal urinary TCS and cord blood FT3 as well as maternal blood FT4 concentrations at third trimester.

Pacific Observatory on Health Systems and Policies (2017).

[Call for experts: WHO Guideline Development Group - Management of overweight and obesity in children and adolescents 2017-2019](#)

The Evidence and Programme Guidance Unit develops and updates evidence-informed guidance and tools for effective nutrition actions, highlighting good practices for delivering interventions. The Guideline Development Group will be expected to meet at least once a year for deliberations, usually for a half-week each time. It is estimated that the selected members will serve on the group for a period of 3 years. The Guideline Development Group is envisioned to be a multidisciplinary group encompassing a range of technical knowledge, skills and experience, diverse perspectives, geographic representation and gender balance. WHO (2017)

[Sixth Ministerial Conference on Environment and Health](#)

Almost one and a half million deaths per year in the WHO European Region are caused by environmental risks that could be avoided and/or eliminated. The complex relationships between environmental, biological, demographic, economic, social and other factors call for improving the resilience of communities to the physical, natural and social pressures of the 21st century. By focusing on the creation of supportive environments and resilient communities, the Sixth Ministerial Conference aims to position the European Environment and Health Process as a platform for implementing selected and relevant environment and health goals and targets of the 2030 Sustainable Development Agenda in the European Region. WHO Europe (2017)

WHO Fact sheets

[Fact sheets on environment and health priorities](#)
Updated June 2017

[Climate change and health](#) Updated July 2017

[Pesticide residues in food](#) Updated July 2017

[Trachoma](#) Updated July 2017

[Sanitation](#) Updated July 2017

In the Media

Environmental Health Perspectives

[Perfluoroalkyl Substances during Pregnancy and Offspring Weight and Adiposity at Birth: Examining Mediation by Maternal Fasting Glucose in the Healthy Start Study](#)

Prenatal Perfluoroalkyl substances (PFAS) exposure has been associated with lower birth weight. Here authors aimed to estimate associations between maternal PFAS concentrations and offspring weight and adiposity at birth, and secondarily to estimate associations between PFAS concentrations and maternal glucose and lipids, and to evaluate the potential for these nutrients to mediate associations between PFAS and neonatal outcomes. Maternal perfluorooctanoate (PFOA) and perfluorononanoate (PFNA) concentrations were inversely associated with birth weight. Adiposity at birth was approximately 10% lower in the highest categories of PFOA, PFNA, and perfluorohexane sulfonate (PFHxS) compared to the lowest categories. PFOA, PFNA, perfluorodecanoate (PFDeA), and PFHxS were inversely associated with maternal glucose.

Environmental Health Perspectives

[The Joint Effect of Prenatal Exposure to Metal Mixtures on Neurodevelopmental Outcomes at 20–40 Months of Age: Evidence from Rural Bangladesh](#)

Authors aimed to assess the joint effect of in utero exposure to arsenic, manganese, and lead on children's neurodevelopment. A statistically significant negative effect of the mixture of arsenic, lead, and manganese on cognitive score was found when cord blood metal concentrations were all above the 60th percentile ($As \geq 0.7 \mu\text{g/dl}$, $Mn \geq 6.6 \mu\text{g/dl}$, $Pb \geq 4.2 \mu\text{g/dl}$) compared to the median ($As = 0.5 \mu\text{g/dl}$, $Mn = 5.8 \mu\text{g/dl}$, $Pb = 3.1 \mu\text{g/dl}$). Employing a novel statistical method for the study of the health effects of chemical mixtures, authors found evidence of neurotoxicity of the mixture, as well as potential synergism between arsenic and manganese.

Environmental Health Perspectives

[Glycol Ethers and Neurodevelopment: Investigating the Impact of Prenatal Exposures](#)

Authors investigated the relation between urinary concentrations of GE metabolites in pregnant women and neurocognitive abilities in their 6-year-old children in the PELAGIE mother–child cohort. Five GE metabolites were measured in first morning void urine samples of 204 French

[EAC to harmonize policies on e-waste management](#)

The East African countries are working towards harmonizing policies, laws and regulations on e-waste management. The chairperson, East Africa Communications Organisation (EACO) working group on environment and e-waste, Juma Ooro, noted that electronic waste is increasingly becoming a big threat to the environment and people's health because of poor disposal. Ooro was speaking during the 2nd EACO regional workshop on sustainable e-waste management in the East African region at the Uganda Communications Commission (UCC) in Bugolobi. There are only two e-waste recycling equipment in Kenya and Rwanda handling a few electronic components. Uganda, Tanzania, Burundi and South Sudan have none. New Vision (21/7/2017)

[Polluted air 'poisoning thousands' across north of England, warns report](#)

Dangerous levels of air pollution in towns and cities across the north of England are threatening the health of hundreds of thousands of people and stifling economic growth, according to a new report. Campaigners want Michael Gove, the UK environment secretary, to introduce a range of measures including charging clean air zones in the worst hit areas and a diesel scrappage scheme to compensate drivers who bought diesel cars after being told they were better for the environment. The scale of the air pollution crisis was revealed in a joint Guardian-Greenpeace investigation earlier this year, showing hundreds of thousands of children were being educated within 150 metres of a road where levels of NO₂ from diesel traffic breached legal limits. The study is the latest from IPPR North's Northern Energy Taskforce, which has identified the energy sector as one of four key priority areas for the economy in northern England, along with manufacturing, health and digital. The Guardian (18/7/2017)

[In Brazil's poor northeast - where Zika hit hardest - less than 25 percent of the population was connected to waste water systems in 2015](#)

Brazil has not addressed the root causes of the Zika outbreak including poor sanitation and a lack of clean water access for slum residents despite declaring the public health emergency over in May, human rights campaigners and U.N. officials said. A lack of government investment in sanitation services for the poor, insecure water access and other conditions which exacerbated the crisis are

pregnant women in early pregnancy (< 19 weeks of gestation). Psychologists assessed the neurocognitive abilities of their 6-year-old children with the Wechsler Intelligence Scale for Children IV (WISC) and the Developmental Neuropsychological Assessment (NEPSY). Prenatal urine concentrations of two GE metabolites were associated with lower WISC Verbal Comprehension Index scores and NEPSY Design Copying subscale scores, respectively, at age 6 years.

Environmental Health Perspectives

E-waste

[Blood concentrations of lead, cadmium, mercury and their association with biomarkers of DNA oxidative damage in preschool children living in an e-waste recycling area.](#)

Authors investigated the influence of co-exposure of lead (Pb), cadmium (Cd), and mercury (Hg) on 8-hydroxydeoxyguanosine (8-OHdG) and human repair enzyme 8-oxoguanine DNA glycosylase (hOGG1) mRNA levels in exposed children to evaluate the imbalance of DNA damage and repair. Children from a primitive e-waste recycling town were chosen as participants. 8-OHdG in the children's urine was assessed for heavy metal-induced oxidative effects, and the hOGG1 mRNA level in their blood represented the DNA repair ability of the children. Among the children surveyed, 88.14% had a blood Pb level >5 µg/dL, 22.03% had a blood Cd level >1 µg/dL, and 62.11% had a blood Hg level >10 µg/dL. Children with high Pb exposure had significantly higher 8-OHdG levels.

Environmental Geochemistry and Health

New Publications

[New Pediatric Environmental Health Web Toolkit for Providers](#)

Parents say they are concerned about environmental health threats, yet most pediatric care providers do not offer prevention strategies during office visits. Why? Many providers report they feel ill equipped to educate families about common exposures. In an effort to fill the need for environmental health information, Pediatric Environmental Health Specialty Units (PEHSU) and PSR have launched the Pediatric Environmental Health Toolkit (PEHT). The PEHT, endorsed by the AAP, is based on material in the AAP "Green Book". This free and up-to-date resource offers trusted information at your

still present in Brazil, raising the potential of future outbreaks. Left uncovered, water containers used due to a lack of continuous water supply, can become breeding grounds for mosquitoes and the diseases they carry. These historically disadvantaged groups are more likely to live in poor regions or informal settlements which do not have good healthcare and sanitation infrastructure compared to other parts of Brazil. Reuters (13/7/2017)

[India ratifies core conventions to clamp down on child labour](#)

India on Tuesday ratified two core Conventions of International Labour Organisation (ILO) on child labour – a global commitment to end the worst form of child labour and to ensure minimum basic education for children. The Central government had enacted a new law - Child Labour (Prohibition and Prevention) Amendment Act, 2016 – banning employment of children below 14 years of age in all occupations and processes. It further prohibits employment of adolescents (14-18 years of age) in hazardous occupations. With ratification of the two core ILO conventions, India has ratified six out of eight core ILO conventions. Four other conventions were related to abolition of forced labour, equal remuneration and no discrimination between men and women in employment and occupation. The Hindu (13/6/2017)

[Taking the lead on lead](#)

Nepali children are exposed to alarmingly high levels of lead, which is slowing their intellectual development. Two recent studies of children in Kathmandu and Birganj showed most of them had a Blood Lead Level (BLL) several times the threshold deemed safe by the US Centres for Disease Control and Prevention. Scientists have found a strong correlation between elevated BLL and decreased IQ. Experts stressed public awareness about lead in the environment alone will not do the job when the overall environment is full of lead paint and paint dust. Existing regulations on lead content in paint, disposal of batteries must be monitored for compliance. Nepali Times (13/7/2017)

[Protect Children's Health, Eliminate Lead Paint](#)

The moment of education, consciousness and action to eliminate lead paint is occurring all over the world, catalyzed through key activities by IPEN's Global Lead Paint Elimination Campaign. Studies in the US show that exposure to even very low levels of lead during fetal development and

fingertips. Bookmark the toolkit web app and discover simple ways to educate and guide parents about environmental health during well child visits. *Pediatric Environmental Health Specialty Units*

UPCOMING EVENTS

[67th session of the WHO Regional Committee for Europe](#)

11–14 September 2017, Budapest, Hungary

[European Academy of Pediatrics 2017 Congress](#)

12–15 October 2017, Ljubljana, Slovenia

[International Conference of the Public Health Foundation of India and the Pacific Basin Consortium](#)

14–16 November 2017, New Delhi, India

[Twenty-third session of the UNECE Committee on Environmental Policy](#)

14–17 November 2017, Geneva, Switzerland

EDUCATION AND TRAINING

[Teaching interventions crossing borders](#)

21 August–1 September 2017, Munich, Germany

[Pediatric Environmental Health Toolkit Training Module](#)

This online training was developed for pediatric health-care providers, health educators, and other health professionals interested in environmental health anticipatory guidance for pediatric patients and their parents or guardians. It is offered for free continuing education credits through the Agency for Toxic Substances and Disease Registry (ATSDR).

early childhood leads to irreversible lifelong effects such as lower IQ scores and poorer school performance and indirect effects such as attention problems, impulsivity, hyperactivity and increased aggressive behaviour. The lifelong effects also will impact the child's potential for future lifetime earnings, leading to a negative impact on the economic growth of the whole country. Hosted by WHO and UN Environment and currently chaired by the US EPA, the Global Alliance to Eliminate Lead Paint engages policy makers, industry stakeholders and civil society to work together to eliminate lead paint in their countries. MAHB (11/7/2017)

[Government taken back to court for third time over air pollution plan](#)

ClientEarth, a group of campaigning environmental lawyers, has twice successfully won court orders requiring Ministers to come up with a strategy that complies with European Union law. A draft third attempt was published for public consultation shortly before the general election. ClientEarth is due to argue that this latest version is still not good enough. Public Health England and the National Institute for Health and Care Excellence have issued a report calling for clean air zones that include "restrictions or charges on certain classes of vehicles" to be considered. The Government plans to publish its final air quality plan by 31 July. Independent (3/7/2017)

[Indigenous girls missing school during their periods: the state of hygiene in remote Australia](#)

Basic sanitary products can be unaffordable, unavailable or too shameful to buy for girls and women in Australia's remote Indigenous communities. Girls don't always receive traditional or conventional education about their bodily changes and functions, and how to manage menstruation hygienically. It was found that local health services had a limited capacity to respond to these challenges due to the focus on higher-priority diseases, such as rheumatic heart disease and diabetes. In Australia, programs are already under way that address these issues. The Conversation (3/7/2017)

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Have news for us?

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