IMPROVING NUTRITION OUTCOMES WITH BETTER WATER, SANITATION AND HYGIENE:

Practical solutions for policy and programmes

Authors:
World Health Organization, United Nations Children’s Fund, United States Agency for International Development.

A growing body of evidence indicates that access to safe drinking-water, sanitation, and hygiene (WASH) services has an important positive impact on nutrition. Achieving the six Global Nutrition Targets 2025, as well as global goals for WASH and health, will require greater investments in nutrition and WASH. It will also require maximizing impact through smart and sustainable integrated actions. This document,

Press Releases

Statement attributable to Peter Salama, UNICEF Regional Director for the Middle East and North Africa on Universal Children’s Day

“Twenty-six years ago today, the world made a solemn promise to the children of the world, to protect and promote their rights to survive and thrive, to learn and grow, to make their voices heard and to reach their full potential. But for children caught up in the different conflicts now gripping the Middle East and North Africa, that pledge – formalized in the Convention on the Rights of the Child -- is being broken, day in and day out. UNICEF (20/11/15)

Biodegradable Plastics Are Not the Answer to Reducing Marine Litter

Widespread adoption of products labelled ’biodegradable’ will not significantly decrease the volume of plastic entering the ocean or the physical and chemical risks that plastics pose to marine environment, concluded a UN report. The report, "Biodegradable Plastics and Marine Litter. Misconceptions, Concerns and Impacts on Marine Environments", finds that complete biodegradation of plastics occurs in conditions that are rarely, if ever, met in marine environments, with some polymers requiring industrial composters and prolonged temperatures of above 50°C to disintegrate. UNEP (17/11/15)

WHO calls on countries to protect health from climate change

Climate change is the defining issue for the 21st century. According to WHO estimates, climate
jointly prepared by WHO, UNICEF and USAID, summarizes the current evidence on the benefits of WASH for improving nutrition outcomes and describes how WASH interventions can be integrated into national nutrition policies and programmes to add value.

**Link to WHO for additional information**

Below is a list of the five key finding:

1. Undernutrition and lack of safe water and sanitation are major global challenges.
2. Achieving global health goals requires better nutrition and water, sanitation and hygiene (WASH).
3. Proven nutrition and wash interventions exist and have been successfully implemented.
4. Successful integration requires thinking differently, considering trade-offs and learning from the field.
5. WASH and nutrition commitments and platforms provide a foundation for scaling-up initial successes.

**Link to a full explanation of the 5 key facts**

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**JOURNAL ARTICLES**

**Air Pollution**

*Ambient Air Pollution and Newborn Size and Adiposity at Birth: Differences by Maternal Ethnicity (the Born in Bradford Study Cohort)*

Exposure to ambient air pollution has been associated with reduced size of newborns; however, the modifying effect of maternal ethnicity remains little explored among South Asians. The authors investigated ethnic differences in the association between ambient air pollution and newborn’s size. Their results suggest that associations of ambient PM exposures with newborn size and adiposity change is already causing tens of thousands of deaths every year - from shifting patterns of disease, from extreme weather events, such as heat-waves and floods, and from the degradation of air quality, food and water supplies, and sanitation. WHO (17/11/15)

**WHO multi-country survey reveals widespread public misunderstanding about antibiotic resistance**

As WHO ramps up its fight against antibiotic resistance, a new multi-country survey shows people are confused about this major threat to public health and do not understand how to prevent it from growing. WHO (16/11/15)

**Maternal deaths fell 44% since 1990 – UN**

Maternal mortality has fallen by 44% since 1990, United Nations agencies and the World Bank Group reported. WHO (12/11/15)

**Raising the Bar on Corporate Sustainability Reporting to Meet Ecological Challenges Globally**

A new UNEP Report urges companies to align their sustainability performance and reporting to match expectations of the 2030 Agenda for Sustainable Development. UNEP (12/11/15)

**Innovators determined to advance results for children**

Over 500 leading thinkers from the technological, academic, corporate, development and humanitarian world are convening in Helsinki to unlock the way new technologies can drive change for the world’s most vulnerable children. UNICEF (9/11/15)

**Immediate Push on Climate-Smart Development Can Keep More than 100 Million People Out of Poverty**

Climate change is already preventing people from escaping poverty, and without rapid, inclusive and climate-smart development, together with emissions-reductions efforts that protect the poor, there could be more than 100 million additional people in poverty by 2030, according to a new
differ between white British and Pakistani origin infants.  
*Environmental Health Perspectives*

### Chemicals

**Prepubertal Serum Concentrations of Organochlorine Pesticides and Age at Sexual Maturity in Russian Boys**

Few human studies have evaluated the impact of childhood exposure to organochlorine pesticides (OCP) on pubertal development. The authors evaluated associations of serum OCP concentrations [{hexachlorobenzene (HCB), β-hexachlorocyclohexane (βHCH), and \( p,p'-dichlorodiphenyldichloroethylene \) (\( p,p'-DDE \))} with age at attainment of sexual maturity among boys. Higher prepubertal serum HCB and βHCH concentrations were associated with a later age at attainment of sexual maturity. Only the highest quartile of serum \( p,p'-DDE \) was associated with later pubic hair maturation.  
*Environmental Health Perspectives*

### Reproductive Health

**Infant Infections and Respiratory Symptoms in Relation to in Utero Arsenic Exposure in a U.S. Cohort**

Arsenic has been linked to disrupted immune function and greater infection susceptibility in highly exposed populations. Well arsenic levels above the EPA limit occur in the researchers U.S. study area and are of particular concern for pregnant women and infants. The authors investigated whether *in utero* arsenic exposure affects the risk of infections and respiratory symptoms over the first year of life. The concluded that *in utero* arsenic exposure was associated with a higher risk of infection during the first year of life in their study population, particularly infections requiring medical treatment, and with diarrhea and respiratory symptoms.  
*Environmental Health Perspectives*

### In the Media

**Aflatoxins: Poisoning Health and Trade in Sub-Saharan Africa**

Aflatoxin contamination is a growing threat to trade, food and health security in sub-Saharan Africa, where smallholder farmers are challenged by food production and now climate change, researchers said. Inter Press Service (22/11/15)

**Fake pesticides endanger crops and human health in India**

Millions of unsuspecting Indian farmers are spraying fake pesticides onto their fields, contaminating soil, cutting crop yields and putting both food security and human health at risk in the country of 1.25 billion people. Reuters (20/11/15)

**Teflon Component Tied to Kids' Weight Gain**

One of the main chemicals used to make Teflon — perfluorooctanoic acid or PFOA — has been linked to increased body fat and faster weight gain in children whose mothers were exposed to high levels during pregnancy, according to new research from Brown University. Discovery
Water And Sanitation

Petroleum contaminated water and health symptoms: a cross-sectional pilot study in a rural Nigerian community
The oil-rich Niger Delta suffers from extensive petroleum contamination. A pilot study was conducted in the region of Ogoniland where one community, Ogale, has drinking water wells highly contaminated with a refined oil product. In a 2011 study, the United Nations Environment Programme (UNEP) sampled Ogale drinking water wells and detected numerous petroleum hydrocarbons, including benzene at concentrations as much as 1800 times higher than the USEPA drinking water standard. UNEP recommended immediate provision of clean drinking water, medical surveillance, and a prospective cohort study. Although the Nigerian government has provided emergency drinking water, other UNEP recommendations have not been implemented. The authors aimed to (i) follow up on UNEP recommendations by investigating health symptoms associated with exposure to contaminated water; and (ii) assess the adequacy and utilization of the government-supplied emergency drinking water. Environmental Health

Effect of a community-led sanitation intervention on child diarrhoea and child growth in rural Mali: a cluster-randomised controlled trial
Community-led total sanitation (CLTS) uses participatory approaches to mobilise communities to build their own toilets and stop open defecation. The authors’ aim was to undertake the first randomised trial of CLTS to assess its effect on child health in Koulikoro, Mali. In villages that received a behavioural sanitation intervention with no monetary subsidies, diarrhoeal prevalence remained similar to control villages. However, access to

Chanel (20/11/15)

Endocrine disruptors in 2015: Epigenetic transgenerational inheritance
Endocrine disruptors are critical environmental exposures that influence health and can promote epigenetic transgenerational inheritance of disease and abnormal physiology. Nature (18/11/15)

The Haunting Legacy of South Africa’s Gold Mines
Thousands of abandoned gold mines are scattered across South Africa, polluting the water with toxics and filling the air with noxious dust. For the millions of people who live around these derelict sites, the health impacts can be severe. E360 Digest (12/11/15)

Flint children tested for lead exposure
Researchers say blood lead levels in children have risen in Flint during the 18 months the city was getting its drinking water from the Flint River. Michigan Radio (12/11/15)

Two Billion People at Risk of Losing Water Supplies Due to Snowpack Loss
Roughly 2 billion people are at risk of declining water supplies in the northern hemisphere due to decreasing snowpack. E360 Digest (12/11/15)

The Long Shadow of Childhood Hunger
A new study links food insecurity to poor health and behavior problems. Civil Eats (12/11/15)

El Nino threatens ‘millions in east and southern Africa’
Some 11 million children are at risk from hunger, disease and water shortages in east and southern Africa because of the strengthening El Nino weather phenomenon, the UN children’s charity has said. BBC (10/11/15)
toilets substantially increased and child growth improved, particularly in children <2 years. The authors considered that CLTS might have prevented growth faltering through pathways other than reducing diarrhoea.

*The Lancet Global Health*

**New Publications and Recent or upcoming Events**

**Environmental pollution, health, and development: a Lancet–Global Alliance on Health and Pollution–Icahn School of Medicine at Mount Sinai Commission**

Environmental pollution is a large, costly, inequitably distributed, and preventable cause of disease and death in countries around the world. The links between pollution and health, while very strong, have been insufficiently appreciated in the global health agenda, and the international and domestic resources allocated to pollution control have not been commensurate with the great magnitude of the problem.

The Lancet, in partnership with the Global Alliance on Health and Pollution and the Icahn School of Medicine at Mount Sinai in New York, NY, USA, is launching a Commission on Pollution, Health, and Development. The Commissioners are drawn from academia, government, and international agencies in diverse countries and have a broad range of backgrounds, including medicine, economics, policy, and engineering. The work of the Commission is expected to last for about 18 months.

*The Lancet*

Note: The Lancet is not open access. Corresponding author for this article is Philip J. Landrigan – email: phil.landrigan@mssm.edu

**Trends in Maternal Mortality: 1990 to 2015**

The estimates for 1990 to 2015 examine global, regional and country progress in reducing maternal mortality. Maternal deaths around the

**Rural communities warned to chlorinate after waterborne brain-eating parasite kills three children**

Naegleria fowleri was first identified in South Australia in the 1960s and has since caused 300 known deaths worldwide, mostly youth and children. The amoeba thrives in water temperatures above 25 degrees Celsius and has been discovered in lakes, creeks, dams, bores and rain water tanks across the country. The danger arises when contaminated water enters the nose.

ABC News, Australia (9/11/15)

**Indonesian fires: Forget the orangutans, is the blaze a tipping point for carbon emissions?**

The fires in Indonesia are more than just a threat to endangered orangutans. They have shortened by up to two years the window to reduce carbon emissions and avoid runaway climate change, according to one of the CSIRO's leading climate scientists.

ABC News Australia (9/11/15)

**Thick Smog in Shenyang, China, Draws Even State Media’s Scorn**

When it comes to PM 2.5 pollution the Chinese government says 35 micrograms per cubic meter is a healthy maximum. But over the weekend, Shenyang, an industrial city in northeastern China, endured PM 2.5 readings that exceeded 1,000, even 1,400 micrograms, per cubic meter, at some measuring stations, according to Xinhua, the state news agency.

The New York Times (9/11/15)

**India’s huge need for electricity is a problem for the planet**

The world’s hunger for cheap electricity is complicating efforts to combat climate change. Of the world’s 1.3 billion people who live without access to power, a quarter — about 300 million — live in rural India in states such as Bihar.

The Washington Post (6/11/15)
world dropped from about 532,000 in 1990 to an estimated 303,000 in 2015, according to the report. The 2015 maternal mortality estimates present the tremendous progress achieved towards the Millennium Development Goal 5 on maternal mortality reduction.

Link to WHO and the publication

UPCOMING EVENTS

International Symposium on Impact of Chemical Exposures on Health and the Environment
16-18 December 2015. New Delhi, India

E-Waste Academy — Managers' Edition
22-26 February 2016. Nairobi, Kenya

Environmental Impact 2016
8 -10 June 2016. Valencia, Spain

The 12th World Conference on Injury Prevention and Safety Promotion - Safety 2016
18 - 21 September 2016. Tampere, Finland

21st WONCA World Conference of Family Doctors
2 – 6 November 2016. Rio de Janeiro, Brazil

PPTox V (Prenatal Programming and Toxicity V)
13 -16 November 2016. Kitakyushu, Japan

Engaging people in every step: patients and carers explain the benefits of people-centred health care
"Voices of Patients and Carers" consists of a collection of personal stories, a photo series and a film called "Journeys to Health", which share the real-life stories of people throughout the WHO European Region who played an integral role in their own care during their personal health challenges. WHO Europe (5/11/15)

Delhi's air pollution is causing a health crisis. So, what can be done?
Delhi is the most polluted city in the world, according to the World Health Organisation (WHO), and doctors and scientists say the locals there are facing a public health crisis. The city’s toxic air has been linked to allergies, respiratory conditions, birth malformations and increasing incidence of cancers. But as a recent car-free experiment showed, action to cut pollution can be effective. The Guardian (3/11/15)

Is Feeding Your Child Organic Food Enough to Reduce the Pesticides in Her Body?
A new study could shed light on whether an organic diet helps to decrease pesticide exposure among young children. Civil Eats (3/11/15)

Australian doctors call for Health Minister to attend Paris climate talks
The "increasingly unmanageable" threat of climate change on children's health has prompted an open letter from doctors around Australia to the government. Sydney Morning Herald (2/11/15)

To Prevent Malaria in Humans, Scientists Try Protecting Pigs
For years, scientists have known of a sneaky way to kill mosquitoes: Give humans a deworming pill. The active ingredient, ivermectin, kills not only worms infesting people but also mosquitoes who

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