INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY: INTERNATIONAL LEAD POISONING PREVENTION WEEK OF ACTION

From 23 to 29 October 2016 the international lead poisoning prevention week of action took place, with a particular focus on eliminating lead paint. Lead poisoning is entirely preventable, yet the Institute for Health Metrics and Evaluation has estimated that in 2013 lead exposure accounted for 853 000 deaths and 16.8 million disability adjusted life years (DALYs) due to long-term effects on health, with the highest burden in developing regions. Of particular concern is the role of lead exposure in the development of intellectual disability in children. Even though there is wide recognition of this problem and many countries have taken action, exposure to lead, particularly in childhood, remains of key concern to health care providers and public health officials worldwide.

Link to campaign website

Link to the official website of the Global Alliance to Eliminate Lead Paint

Video statement by Dr Maria Neira, WHO Director for the Department of Public Health, Environment and Social Determinants of Health

JOURNAL ARTICLES

Air Pollution

Smoke Signals: Teasing Out Adverse Health Effects of Wildfire Emissions

Worldwide, the preponderance and severity of wildfires is increasing due to a number of factors, among them changes in temperature and precipitation patterns consistent with climate change. Aside from the acute threat of imminent death, wildfires expose people to a range of

Press Releases

Countries agree to curb powerful greenhouse gases in largest climate breakthrough since Paris

Nearly 200 countries struck a landmark deal on 15 October to reduce the emissions of powerful greenhouse gases, hydrofluorocarbons (HFCs), in a move that could prevent up to 0.5 degrees Celsius of global warming by the end of this century. The amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer endorsed in Kigali today is the single largest contribution the world has made towards keeping the global temperature rise “well below” 2 degrees Celsius, a target agreed at the Paris climate conference last year. The amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer endorsed in Kigali today is the single largest contribution the world has made towards keeping the global temperature rise “well below” 2 degrees Celsius, a target agreed at the Paris climate conference last year. UNEP (15/10/2016)

Five in six children under two not getting enough nutrition for growth and brain development

Five in six children under two years old are not fed enough nutritious food for their age, depriving them of the energy and nutrients they need at the most critical time in their physical and cognitive development, according to a new UNICEF report. UNICEF data show that poor nutritional practices— including the delayed introduction of solid foods, infrequent meals and lack of food variety – are widespread, depriving children of essential nutrients when their growing brains, bones and bodies need them the most. UNICEF (14/10/2015)

Over 300,000 children under five died from diarrhoeal diseases linked to limited access to safe water, sanitation and hygiene in 2015
harmful pollutants in smoke. Although health effects are well documented for many of these individual pollutants—including carbon monoxide, nitrogen dioxide, particulate matter, and more—it is difficult to gauge the public health impact posed specifically by wildfire smoke inhalation. In a new review, investigators present evidence linking wildfire smoke exposures to increased overall mortality rates and multiple respiratory conditions. 

Environmental Health Perspectives

*Intrauterine Inflammation and Maternal Exposure to Ambient PM2.5 during Preconception and Specific Periods of Pregnancy: The Boston Birth Cohort*

Prenatal exposure to ambient PM2.5, (i.e., fine particulate matter, aerodynamic diameter ≤ 2.5 μm) has been associated with preterm birth and low birth weight. The association between prenatal PM2.5 exposure and intrauterine inflammation (IUI), an important risk factor for preterm birth and neurodevelopmental outcomes, has not been evaluated. The aim of this study was to investigate the association between maternal exposure to PM2.5 and IUI in the Boston Birth Cohort, a predominantly urban low-income minority population. This analysis included 5,059 mother–infant pairs in the Boston Birth Cohort. IUI was assessed based on intrapartum fever and placenta pathology. Despite relatively low exposures, our results suggest a monotonic positive relationship between PM2.5 exposure during preconception and pregnancy and IUI. IUI may be a sensitive biomarker for assessing early biological effect of PM2.5 exposure on the developing fetus. 

*Environmental Health Perspectives*

*Chemicals*

*When smokers quit: exposure to nicotine and carcinogens persists from thirdhand smoke pollution*

Over a 6-month period, tobacco smoke pollutants (also known as thirdhand smoke, THS) that remained in the homes of former smokers and the exposure to these pollutants was examined. 90 smokers completed the study measures at baseline. Measures were repeated among verified quitters 1 week, 1 month, 3 months and 6 months following cessation. Measures were analysed for THS pollutants on household surfaces, fingers and in dust and for urinary exposure. It was found that homes of smokers remained polluted with THS for up to 6 months after cessation. Residents continued to be exposed to THS toxicants that

With cholera spreading fast in the aftermath of Hurricane Matthew in Haiti, and with a new outbreak in war-ravaged Yemen, UNICEF urges children, families and communities to make washing hands with soap a habit to help prevent the spread of diseases. “Every year, 1.4 million children are dying from largely preventable diseases like pneumonia and diarrhoea,” said UNICEF’s global head of water, sanitation and hygiene Sanjay Wijesekera. “These are staggering numbers, but they could be greatly reduced by working with children and families to adopt a very straightforward solution – handwashing. We know, for example, that handwashing with soap before meals and after using the toilet could reduce the incidence of diarrhoeal infections by 40 per cent.” UNICEF (10/10/2016)

*Asia-Pacific countries call for stronger action on environment and health*

Countries from Bhutan to the Cook Islands today pledged to redouble efforts to jointly tackle the pressing issues of climate change, air pollution, safe water, sanitation and hazardous chemicals in pursuit of health and sustainable development. Concluding the Asia-Pacific Regional Forum on Health and Environment, ministers and officials from 14 countries signed the Manila Declaration, which also calls for action on the emerging issues of (1) antimicrobial resistance, (2) transboundary haze and air pollution, (3) transnational waste shipments, and (4) marine pollution and destruction of coral reefs. WHO WPRO (8/10/2016)

*The early years: silent emergency or unique opportunity?*

Today’s children will drive growth and development in the societies of tomorrow. We should be deeply concerned, therefore, that an estimated 250 million children (43%) younger than 5 years in low-income and middle-income countries are at risk of falling short of their potential because of adversities they face in their early, formative years. Helping these children reach that potential by investing in early childhood development—and developing their physical, cognitive, emotional, and social capacities—will benefit not only them but also all of us. Failing to make such investments will have profound implications for children, their families, and their societies, exacerbating inequalities and deepening societal divisions. When it comes to early childhood development, the cost of inaction is high. WHO (5/10/2016)
accumulated in settled house dust and on surfaces before smoking cessation. Further research is needed to better understand the consequences of continued THS exposure after cessation and the efforts necessary to remove THS. *Tobacco Control Journal*

**Adverse Associations of both Prenatal and Postnatal Exposure to Organophosphorus Pesticides with Infant Neurodevelopment in an Agricultural Area of Jiangsu Province, China**

Prenatal exposure to organophosphorus (OP) pesticides has been found to be associated with adverse effects on child neurodevelopment, but evidence on potential effects induced by both prenatal and postnatal OP exposure in infants is limited. The aim of this study was to investigate the associations of both prenatal and postnatal OP exposure with birth outcomes and infant neurodevelopment. Exposure to OP in 310 mother–infant pairs was assessed by measuring dimethylphosphate (DM), diethylphosphate (DE), and total dialkylphosphate (DAP) metabolites in urines from pregnant women and their children at 2 years of age. The Gesell Developmental Schedules was administered to examine neurodevelopment of 2-year-old children. Both prenatal and postnatal OP exposure may adversely affect the neurodevelopment of infants living in the agricultural area. The present study adds to the accumulating evidence on associations of prenatal and postnatal OP exposure with infant neurodevelopment. *Environmental Health Perspectives*

**Reproductive Health**

**Lactational Exposure to Polybrominated Diphenyl Ethers and Its Relation to Early Childhood Anthropometric Measurements**

Polybrominated diphenyl ethers (PBDEs) are ubiquitous environmental contaminants that may influence growth and development. The aim of this study was to investigate the association between exposure to PBDEs via breast milk and anthropometric measurements in early childhood. Overall, PBDE exposures via breast milk were not associated with early-life anthropometric measures in the PIN Babies cohort. When stratified by sex, PBDEs in milk were inversely associated with weight-for-age z-scores (WHZ) for boys; however, associations did not follow a consistent pattern across the concentration gradient and were imprecisely estimated. Among girls, PBDEs tended to be associated with increased WHZ except for

**Nearly 385 million children living in extreme poverty, says joint World Bank Group – UNICEF study**

Children are more than twice as likely as adults to live in extreme poverty, according to a new analysis from the World Bank Group and UNICEF. Ending Extreme Poverty: A Focus on Children finds that in 2013 19.5 per cent of children in developing countries were living in households that survived on an average of US$1.90 a day or less per person, compared to just 9.2 per cent of adults. Globally, almost 385 million children were living in extreme poverty. UNICEF (3/10/2016)

**Immunization officers urged to strengthen efforts to reach every child with vaccines and other health services**

The World Health Organization has called for renewed efforts to reach every child in the African Region with vaccines and other health services. The call came at a meeting held in Harare, Zimbabwe for immunization officers from the East and Southern African sub-Region (ESA). Speaking at the event, Dr Felicitas Zawaira, Director of Family and Reproductive Health of the WHO Regional Office for Africa, said: “Immunization is one of the key interventions that contribute to averting a large proportion of preventable deaths and we need to prioritize the attainment of universal immunization coverage by 2020 in East and Southern Africa.” She noted that according to the 2015 UN report, the WHO Africa Region continued to report the highest number of under-five deaths rates. Of grave concern to the region is the large number of unvaccinated children – who make up a large portion of the one-in-five children not accessing the required vaccines. WHO AFRO (26/9/2016)

**Taxing sugar-sweetened beverages could reduce childhood overweight and obesity in the Western Pacific Region**

In the Western Pacific Region, childhood overweight and obesity are serious public health problems. More than 6.2 million children under 5 years of age are overweight in the Region. The prevalence of overweight among adolescents is increasing at alarming rates, reaching almost 60% in some Pacific island countries and more than 20% in some Asian countries. Rapid urbanization, globalization and trade liberalization have made sugar-sweetened beverages easily available, accessible and affordable. Data from Global School-Based Student Health Surveys across the Region reveal that 22–77% of adolescents reported
BDE-153, which was inversely associated with WHZ, though all estimates were imprecisely estimated. Therefore, little evidence was observed of associations between early-life PBDE exposures via breast milk and anthropometric measurements overall; however, the results prompt the need for sex-specific investigations in larger cohorts.

*Environmental Health Perspectives*

**A Longitudinal Study of Peripubertal Serum Organochlorine Concentrations and Semen Parameters in Young Men: The Russian Children’s Study**

Exposures to endocrine disrupting chemicals during critical phases of testicular development may be related to poorer semen parameters. However, few studies have assessed the association between childhood organochlorine (OC) exposure and adult semen parameters. The aim of this study was to examine whether peripubertal serum OC concentrations are associated with semen parameters among young Russian men. Higher quartiles of TCDD and PCDD TEQs were associated with lower sperm concentration, total sperm count and total motile sperm count (p-trends≤0.05). The highest quartile of peripubertal serum TCDD concentrations was associated with a decrease of 40% (18, 66%), 29% (3, 64%) and 30% (2, 70%) in sperm concentration, total sperm count, and total motile sperm count, respectively, compared with the lowest quartile. Similar associations were observed for serum PCDD TEQs with semen parameters. Serum PCBs, furans and total TEQs were not associated with semen parameters. Therefore, higher peripubertal serum TCDD concentrations and PCDD TEQs were associated with poorer semen parameters.

*Environmental Health Perspectives*

**E-waste**

*Decreased vaccine antibody titers following exposure to multiple metals and metalloids in e-waste-exposed preschool children*

This study explored acquired immunity resulting from vaccination in 3 to 7-year-old children, chronically exposed to multiple heavy metals and metalloids, in an e-waste recycling area (Guiyu, China). Child blood levels of ten heavy metals and metalloids, including lead (Pb), arsenic (As), mercury (Hg), chromium (Cr), cadmium (Cd), manganese (Mn), nickel (Ni), copper (Cu), zinc (Zn) and selenium (Se), and seven vaccine drinking one or more carbonated soft drinks per day. WHO WPRO (22/9/2016)

**Member States call for stronger tobacco control measures to end tobacco industry interference**

Tobacco use kills approximately six million people every year worldwide. The Western Pacific Region has one third of the world’s smokers and two people die every minute from tobacco-related diseases. It is estimated that in 2025, one fourth of the adult population would still be current smokers. As governments strive to put in place measures to reduce the rate of tobacco use, the tobacco industry continuously invents new tactics to interfere with such policies. “Six million people a year succumb to tobacco, that is one death every six seconds,” said Dr Shin Young-soo, WHO Regional Director for the Western Pacific. “We must continue to work together to protect future generations from the dangers of tobacco through new and innovative regulations and policies.” WHO WPRO (16/9/2016)

**WHO Fact sheets**

Ambient (outdoor) air quality and health Updated September 2016

Lymphatic filariasis Updated October 2016

Cholera Updated October 2016

Microcephaly Updated October 2016

Onchocerciasis Updated October 2016

**In the Media**

The Global Cost of Electronic Waste

The increase in consumption of electronics has two major adverse ecological effects. First, it significantly increases mining and procurement for the materials needed for the production of gadgets. And second, discarded devices produce large quantities of electronic waste. That waste could be reduced through reuse, repair, or resale. Whether it ever will be is an open question. Electronics have always produced waste, but the quantity and speed of discard has increased rapidly in recent years. The Atlantic (29/10/2016)

Aviation industry agrees deal to cut CO2 emissions

The first deal limiting greenhouse gases from international aviation has been sealed after years of wrangling. From 2020, any increase in airline
antibodies (diphtheria, pertussis, tetanus, hepatitis B, Japanese encephalitis, polio, measles) were measured. The exposed group had higher levels of blood Pb, Mn, Cu, Zn and Cr compared to the reference group, and levels of all vaccine antibodies in the exposed group were significantly lower than in the reference group. Results suggest multiple heavy metal and metalloid exposure, especially to Pb, Zn and Cu, may be a risk factor inhibiting the development of child immunity, resulting in decreased child antibody levels against vaccines.

New Publications

Investing in early childhood development essential to helping more children and communities thrive

An estimated 43 percent—249 million—of children under five in low-and middle-income countries (LMICs) are at an elevated risk of poor development due to extreme poverty and stunting, according to findings from The Lancet’s new Series, Advancing Early Childhood Development: from Science to Scale.

The Series reveals that early childhood development interventions that promote nurturing care—health, nutrition, responsive caregiving, security and safety, and early learning—may cost as little as 50 cents per child per year, when combined with existing services such as health. WHO, the World Bank, and UNICEF contributed to and offered guidance to the Series.

The findings in this Series underscore the importance of increased global commitment to early childhood development. Individuals are estimated to suffer a loss of about a quarter of average adult income per year, while countries may forfeit up to as much as two times their current GDP expenditures on health or education. Consequences of inaction impact not only present but future generations.

The Lancet

Fiscal policies for diet and the prevention of noncommunicable diseases

CO2 emissions will be offset by activities like tree planting, which soak up CO2. The deal comes in a momentous week for climate policy when the Paris agreement to stabilise climate change passed a key threshold for becoming law. Scientists applauded both commitments, but warned that plans to cut emissions are far too weak. BBC (7/10/2016)

NIH to recognize 12 champions of environmental health research

Twelve individuals will receive the first-ever Champion of Environmental Health Research Award from the National Institute of Environmental Health Sciences (NIEHS), for their significant contributions to the field. The champion awards recognize outstanding researchers, leaders, and communicators that have contributed to the NIEHS mission to discover how the environment affects people in order to promote healthier lives. The awardees are Charles E. Blumberg, Jeffrey Gordon, Thomas Kunkel, Philip Landrigan, John Peterson (Pete) Myers, Jeanne Rizzo, Kurt Straif, Allen Wilcox, Linda Birnbaum, Kenneth Olden, David Schwartz, and Samuel Wilson. National Institute of Health (7/10/2016)

Expectant Mothers Grow Anxious over Toxic Chemicals

Pregnant women in Korea have grown more anxious than ever with widespread media coverage of toxic chemicals used in daily products, on top of deadly cases such as the Oxy humidifier sterilizer scandal. According to a survey study by obstetricians at Ewha Womans University Medical Center (Mok-dong), 99.2 percent of 128 pregnant participants were found to be feeling anxious over potential exposure to chemical substances from daily activities, a 28.9 percent increase from when they were not pregnant. However, medical experts are concerned that excessive wariness or suspicion could lead to stress in pregnant women, potentially affecting fetal health. The Korea Bizwire (6/10/2016)

By failing to rein in climate change, our children's rights are being disregarded

A paper from the prominent Nasa climate scientist James Hansen reminds us of the debt young people face if we continue our high fossil fuel emissions. “Global warming has reached a level such that we can ascribe with a high degree of confidence a cause and effect relationship between the greenhouse effect and observed warming ... It is already happening now,” he said. That humans
The 2030 Agenda for Sustainable Development sets out an ambitious vision for universal progress on urgent issues over the next 15 years. Building on achievements to date, the Agenda commits us to meeting the Sustainable Development Goals (SDGs) “for all nations and people and for all of the world’s population, including the least advantaged and the most vulnerable, and especially those living in poverty and in fragile situations.” The Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020 proposes that “as appropriate to national context, countries consider the use of economic tools that are justified by evidence, and may include taxes and subsidies, to improve access to healthy dietary choices and create incentives for behaviours associated with improved health outcomes and discourage the consumption of less healthy options”. The Comprehensive Implementation Plan on Maternal, Infant and Young Child Nutrition 2012 also considers that “trade measures, taxes and subsidies are an important means of guaranteeing access and enabling healthy dietary choices”. Furthermore the Report of the Commission on Ending Childhood Malnutrition in 2016 recommends to “implement an effective tax on sugar-sweetened beverages”.

It was concluded that there is reasonable and increasing evidence that appropriately designed taxes on sugar sweetened beverages would result in proportional reductions in consumption, especially if aimed at raising the retail price by 20% or more. There is similar strong evidence that subsidies for fresh fruits and vegetables that reduce prices by 10–30% are effective in increasing fruit and vegetable consumption.

WHO

Scientific Issues Relevant to Setting Regulatory Criteria to Identify Endocrine-Disrupting Substances in the European Union
Endocrine disruptors (EDs) are defined by the World Health Organization (WHO) as exogenous compounds or mixtures that alter function(s) of the endocrine system and consequently cause adverse effects in an intact organism, or its progeny, or (sub)populations. European regulations on pesticides, biocides, cosmetics, and industrial chemicals require the European Commission to establish scientific criteria to define EDs. The authors address the scientific relevance of four options for the identification of EDs proposed by the European Commission. Environmental Health Perspectives

Harnessing the Power of Data for Girls: Taking stock and looking ahead to 2030
The 2030 Agenda for Sustainable Development sets out an ambitious vision for universal progress on urgent issues over the next 15 years. Building on achievements to date, the Agenda commits us to meeting the Sustainable Development Goals (SDGs) “for all nations and people and for all are affecting the Earth’s climate is one of the most thoroughly researched and well-established scientific findings of all time. What should be done with that knowledge is something that people have been struggling with since before 1988. If we are to avoid crippling future generations with debts and dangerously degraded environments, then time is running out for us to come to workable solutions. The Guardian (4/10/2016)

Flint Hit With Bacterial Illness as Residents Shun City Water
Residents of Flint, Mich., affected by the contaminated-water crisis have added a new complication to their lives: an outbreak of shigellosis, a bacterial illness that is easily transmitted when people do not wash their hands. Health department officials in Genesee County, where Flint is the largest city, said there has been an increase in the gastrointestinal illness, which can lead to severe diarrhoea, fever, nausea, vomiting, cramps and stools containing blood and mucus, according to a statement issues last month. The New York Times (4/10/2016)

The country that cracked its stunting crisis
A programme of cash transfers tied to regular health checks for children has turned Peru into a remarkable success story in tackling infant malnutrition. For years, some Peruvians assumed that being short was a trait that was innate to the country’s indigenous people, until a multi-pronged campaign of health checks, a conditional cash transfer scheme and public spending managed to halve childhood stunting in less than a decade. In the seven years between 2007 and 2014 stunting among children under five dropped from 29% to 14%, according to Peru’s National Statistics Institute. It is one of the most successful achievements in reducing child malnourishment in the world. The Guardian (30/9/2016)

World Bank to name and shame countries that fail to prevent stunting in children
The president of the World Bank has warned he will name and shame countries that fail to tackle the malnourishment and poor growth of their children, as part of a mission to rid the world of stunting. Jim Yong Kim, the former physician who heads the Bank, told the Guardian he would take to the podium at the World Economic Forum in Davos every year to point the finger at governments who failed to live up to promises to tackle a scourge affecting tens of millions of children. Kim said stunting – which refers to children with a height
segments of society” and pledges to leave no one behind. This presents a critical opportunity to advance the well-being and empowerment of a large segment of the world population that is at risk of being left out of global progress: 1.1 billion girls. Data tell us that the lives of girls today are better in many respects than those of preceding generations. Girls are now more likely to survive childhood, more likely to attend school and complete their education, less likely to be undernourished and less likely to marry as children. Yet girls still suffer significant deprivations and inequalities, many of which result from the persistent gender discrimination faced by girls and women everywhere. And for many girls, further disadvantage based on disability, location, race, ethnicity or migration status compounds the challenges of building a fulfilling future.

UNICEF

Pollen Overload: Seasonal Allergies in a Changing Climate
Watery red eyes, runny nose, sneezing, coughing—these familiar symptoms mean spring is in the air. Millions of people suffer from seasonal allergies triggered by airborne pollen—not just in spring but in summer and fall, too—and now evidence suggests their numbers will rise in a changing climate. The evidence so far is preliminary, but it points to a confluence of factors that favour longer growing seasons for the noxious weeds and other plants that trigger seasonal allergies and asthma attacks. Physicians who treat allergic airway diseases are already reporting an uptick in symptoms that they attribute to climate change. In a statement published last year, the World Allergy Organization, comprising 97 medical societies from around the world, opined that climate change will affect the start, duration, and intensity of the pollen season and exacerbate the synergistic effects of pollutants and respiratory infections on asthma.

Environmental Health Perspectives

UPCOMING EVENTS

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

9th Global Conference on Health Promotion
21–24 November 2016. Shanghai, China

Concern expands over Zika birth defects
After a year caring for patients at the heart of Brazil’s Zika epidemic, pediatric neurologist Vanessa van der Linden has seen some of the worst cases. She was one of the first researchers to link Zika virus to microcephaly, a now well-known birth defect marked by a small, misshapen head and, sometimes, a forehead that slopes backward. Babies with the defect can have other symptoms, too: Van der Linden has seen 24-hour crying bouts, spasms, extreme irritability and difficulty swallowing. But microcephaly is just the tip of the Zika iceberg. That’s something public health officials have been warning about for months. Now, scientists have begun to describe a head-to-toe assortment of health problems linked to Zika virus infection in utero; they’re calling it congenital Zika syndrome. Science News (28/9/2016)

SA faces much more serious problem of indoor air pollution: study
The South African population faces a far more serious problem of indoor air pollution compared to outdoor air pollution, the Institute of Race Relations (IRR) said. The think tank produced a paper on air quality which found that low indoor air quality affected 20% of the population, with most of the burden falling on poor black households. The report said when examining the country’s air quality, the media and activists focused too often on mining and industrial pollution, and the liability of corporations and state-owned enterprises. It said throughout the country, but mainly in rural areas, one third of South African households burnt solid fuels such as wood, cow dung and coal to cook and keep warm, according to a study published by the South African Medical Journal. The institute said the problem of indoor air pollution accounted for higher healthcare costs, hindered adult productivity, lowered school attendance among children and degraded the environment. Times Live (28/9/2016)

Government won't act on UN ruling defence base firefighting chemical is toxic
The Australian Department of Health is not changing its health advice on a defence base contaminant, despite a United Nations (UN) toxins committee ruling the chemical is linked to serious disease. The UN’s Persistent Organic Pollutants Review Committee to the Stockholm Convention agreed the chemicals PFOS and PFOA were linked considerably below the average for their age – was a humanitarian disaster but also an economic issue that held back nations. The Guardian (30/9/2016)
to six diseases, including some cancers, and warranted a global response. The chemical was a firefighting foam at Queensland’s Oakey Aviation Base, west of Toowoomba, and Williamtown RAAF Base, north of Newcastle in New South Wales, which leached into groundwater. Residents near both bases cannot drink the groundwater and have suffered from a fall in property values, prompting calls for compensation for unusable land. ABC News (28/9/2016)

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