FROM PINK TO PREVENTION
time to make it happen
STOPPING BREAST CANCER BEFORE IT STARTS

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NEWS RELEASE

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BREXIT & BREAST CANCER: In this Breast Cancer *Prevention* Month, the real impact of Brexit on breast cancer needs to be understood.

Event hosted by the National Alliance of Women's Organisations; From Pink to Prevention, and Alliance for Cancer Prevention. As we come to the end of Breast Cancer *Prevention* Month, we will be considering the implications of Brexit on breast cancer and exploring the answers with a range of experts and campaigners.

Date: Thursday 26 October 11am-1pm Venue: Attlee Room, Portcullis House

The chances are you'll never have thought about breast cancer prevention in relation to Brexit. Yet they are linked. For example, our clean beaches and seas benefit from progressive EU legislation. Our health as citizens, consumers and workers most certainly has benefited and continues to benefit from EU legislation. The European chemicals regulation REACH is a highly sophisticated, progressive pan-EU system to control toxic chemicals and, though not perfect, is nevertheless regarded as the best in the world. At its heart is 'the precautionary principle' which means to take action to prevent harm, even if there is uncertainty.

'The EU has been at the forefront of driving equality for women. Women have benefitted significantly by the UK's membership of the EU. We need to campaign to ensure hard fought rights are maintained and the UK keeps pace with the EU on rights for women and girls, including the right to the enjoyment of a healthy environment. Given the complexities surrounding the Brexit process and the potentially significant implications for gender equality and women's rights it is essential that women's voices are represented at every level in the Brexit negotiations. *Zarin Hainsworth, Chair NAWO*

But in a visit to the UK earlier this year, the UN Special Rapporteur on Human Rights and Toxics Baskut Tuncak said: "There is a very real risk that the additional demands placed by Brexit will …place further strains on the complex governance structure and stretched resources of relevant regulators. It is crucial that the citizens of the United Kingdom who often already suffer from lack of information, participation and effective remedy when it comes to exposure to toxic substances, do not fall victim to lower protections and human rights standards as a result of Brexit"

For the UK to be de-coupled from REACH as a consequence of Brexit would have a devastating impact on many aspects of consumer, workplace and environmental health as we all as our economic wellbeing.

'Many trade unionists and campaigners are very concerned that business will see the commercial opportunity to cut what they would regard as 'red tape' and 'burdensome' health and safety standards which currently serve to protect workers. Rolling back from these standards and the enforcement of them will have devastating effects on breast cancer prevention, if regulation of toxic chemicals linked to breast cancer is 'traded away' on the back of an increased bottom line ' says *Hilda Palmer of the Hazards Campaign*

A woman's chances of being diagnosed with breast cancer are getting higher with each decade. 'We cannot afford -either morally or economically - the increasing numbers of breast cancer cases which has risen from 1 in 12 in the 1990s to 1 in 8 in 2017. Across the 28 countries of the EU, 1 in 8 women will develop the disease in her lifetime and the total economic cost is estimated at 16 billion euros. In post-Brexit Britain, we must do all we can to ensure we remain under the progressive EU chemicals legislation - for the sake of our health, workplace and environment'. *Helen Lynn Alliance for Cancer Prevention*

The EU's REACH regulation provides protection to women's health since it prevents exposures to chemicals linked to breast and other cancers. These exposures happen in the home, work-place and wider environment and are present from pre-birth throughout our entire lives.

REACH is all the more pressing since there is no cancer strategy in England which addresses the environmental and occupational risk factors for breast cancer. This despite an almost doubling of breast cancer cases since the 1970s. This massive increase is not accounted for by 'lifestyle risk factors' (smoking, alcohol and weight) since they are linked to some 30-50% of breast cancer cases. Since at least 50% of cases have no known cause, to ignore the scientific evidence linking environmental and occupational exposures to breast cancer, especially in the workplace, is highly negligent.

'For more than 40 years the evidence has grown ever greater, linking environmental and occupational risks to breast cancer. Increasingly, such new evidence is being picked up by popular media, for example most recently published evidence showing that hormone disrupting chemicals affecting the endocrine system are found in household dust. Those who either argue that there is no evidence or that we need more evidence, fly in the face of the work of REACH and the World Health Organisation. We must stay under REACH and implicit in this is the need to act upon the impact of toxic chemicals on our health in general and breast cancer in particular. This includes action by government, industry and breast cancer charities'. *Deborah Burton From Pink to Prevention*

These health concerns do not begin with adulthood. Exposure begins pre-birth, through infancy and childhood. A new report launched by Pesticide Action Network UK (PAN UK)

reveals that the fruit and vegetables given out to four-to-six year olds via a government scheme aimed at promoting healthy eating habits contained residues of 123 different pesticides. These include suspected endocrine disruptors which interfere with the endocrine system, known carcinogens, and organophosphates that can negatively affect children's cognitive development. In many cases, multiple residues were found on the produce. This is another area of serious concern as the scientific community has little understanding about the complex interaction of different chemicals in what is termed the 'cocktail' effect.

"We know that young children are one of the groups most vulnerable to the health impacts of pesticides…Their bodies are still developing so exposure to certain pesticides at critical stages can lead to health complications in later life'' *Nick Mole, Policy Officer, PAN UK*

All this cumulative evidence is part of the reason why, six years ago, the World Health Organisation called for all governments to include environmental and occupational prevention measures as part of all national cancer plans. Additionally the American Public Health Association called for the links between breast cancer and certain chemical exposures to be acknowledged by their government.

And just this week, reported in The Guardian and other places, The Lancet Commission on Pollution Health was published. Prof Philip Landrigan, at the Icahn School of Medicine at Mount Sinai, US, who co-led the commission, said his biggest concern was the unknown impact of the hundreds of industrial chemicals and pesticides already widely dispersed around the world: "I worry we have created a situation where people are exposed to chemicals that are eroding intelligence or impairing reproduction or weakening their immune system, but we have not yet been smart enough to make the connection between the exposure and the outcome, because it is subtle."

So, given the many calls for action by international bodies (scientific, health, trade union, civil society) to address this evidence, coupled with ever rising rates of diagnosis, why is there such reluctance by all those with the power and responsibility – government, industry and breast cancer charities - to act? For 60 years the evidence linking these risks to breast cancer has increased, so why are we still waiting?

ENDS

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NOTES for editors

1. Event speakers: Helen Hayes MP; Zarin Hainsworth OBE & Chair *NAWO*; Helen Lynn *From Pink to Prevention;* Hilda Palmer *Hazards Campaign*; Nick Mole Policy Office *Pesticide Action Network UK.*
2. REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals. The main aim of the REACH Regulation is to protect humans, wildlife and the environment from the threat of industrial chemicals, whilst not undermining the competitiveness of the chemical industry. REACH came into force in 2007 and gradually established a level playing field for old and new chemicals so that they had the same degree of testing. It therefore removed the 'squatters rights' of old chemicals, which prior to REACH had been able to stay on the market without adequate safety data just because they had been around for a long time. REACH also put the onus on industry, making them responsible for the safety of their chemicals. This is often termed 'reversal of the burden of proof'. Prior to REACH, industry had not been required to check that chemicals were safe prior to use and discharge. There is more information on REACH at the European Chemicals Agency

3.For a definition of Endocrine (Hormone) Disrupting Chemicals
http://www.who.int/ceh/risks/cehemerging2/en/
4.World Health Organisation Asturias Declaration 2011
http://www.who.int/phe/news/events/international_conference/Call_for_action_en.pdf
5.From Pink to Prevention - scientific evidence summary (not exhaustive but key refs)
https://frompinktoprevention.org/resources/scientific-evidence/
6.PAN UK http://www.pan-uk.org/food-for-thought/ Pesticide Action Network
A new report launched by Pesticide Action Network UK (PAN UK) reveals that the fruit and vegetables given out to four-to-six year olds via a government scheme aimed at promoting healthy eating habits contained residues of 123 different pesticides. These include suspected endocrine disruptors which interfere with the endocrine system, known carcinogens, and organophosphates that can negatively affect children's cognitive development. In many cases, multiple residues were found on the produce. This is another area of serious concern as the scientific community has little understanding about the complex interaction of different chemicals in what is termed the 'cocktail' effect

ADDITIONAL & RECENT EVIDENCE 2016-2017

(i)PAPER TILL RECEIPTS coated with harmful chemicals

US researchers have shown that handling till receipts can contribute to workers' exposure to three compounds, used as developers in thermal papers. They conclude that thermal receipt paper is a potential source of occupational exposure to BPA, BPS and BPSIP. However, they say the results also raise questions on whether the latter may be "more environmentally persistent", "less readily cleared from the body" and "more widespread" than assumed. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4927604/)

12/10/17 http://chemsec.org/why-keeping-the-uk-in-reach-is-the-best-option-post-brexit/ The EU has agreed to ban the use of the endocrine disruptor Bisphenol A (BPA) in thermal paper till receipts by 2020. We all handle till receipts. And how many handled by cashiers every day, every week? Leaving the EU regulation

will impact this. "The UK Government is currently proposing to set up a duplicate of the REACH system. This is likely to mean that companies would have to register chemicals in both the UK and in the normal EU REACH system, thus creating extra work".

(ii) BREXIT, UK BUSINESS & EU CHEMICALS REGULATION

http://www.chemtrust.org/ 4/4/17 UK manufacturing industry: Brexit threatens businesses unless UK stays in EU chemical regulations. A wide range of stakeholders, including companies, politicians, the UK government and NGOs, gathered (29.9.17) to discuss Brexit's impact on future chemicals. The overwhelming conclusion was that the UK should aim to stay in the EU's main chemicals regulation REACH after Brexit, as otherwise supply chains would be disrupted, costs for UK industry would increase and public health and environment quality in the UK would be threatened.

http://www.chemtrust.org/eac-brexit-reach-report/29/4/17 MPs call for post-Brexit UK to remain as close as possible to EU's main chemicals law REACH.The UK House of Commons Environmental Audit Committee (EAC) published the report of its inquiry on chemicals regulation after the EU referendum, which particularly focussed on the EU's world-leading REACH system for regulating chemicals. The EAC criticise the UK Government's lack of openness about its post-Brexit plans, and point out that most respondents want the UK to remain '*as closely aligned to REACH as possible*'.

(iii) SILENT SPRING INSTITUTE CHEMICALS & HOUSEHOLD DUST

http://www.sciencedirect.com/science/article/pii/S0013935117307971
Environmental chemicals and breast cancer: An updated review of epidemiological literature. Exposure to certain chemicals in household and industrial products is a significant risk factor for breast cancer, especially when the exposure occurs at an early age. Silent Spring Institute scientists have been studying the link between breast cancer and environmental exposures—to chemicals in the air we breathe, the food we eat, and the products we use on a daily basis—for many years. In 2007, a widely cited review from the Silent Spring Institute identified 216 such chemicals that cause mammary tumours in animals, providing a roadmap for future studies in humans. A decade later, Silent Spring scientists have published an update in the journal *Environmental Research*, and they say that the evidence today—including documented effects in people of all ages—is stronger than ever.

http://www.chemtrust.org/dust-not-only-a-nuisance-but-also-a-source-of-hazardous-chemicals/?utm_content=buffer953b6&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer
Dust-Not only a nuisance, but also a source of hazardous chemicals eg Brominated Flame Retardants from furniture, phthalates from plastic. We spend up to 90% of time in our homes, our offices or at school. However, studies show that indoor air can be more polluted and therefore worse for our health than air outdoors, as indoor air and dust can contain a number of worrying harmful chemical pollutants. Children, particularly babies and toddlers playing on floors, are specifically vulnerable to ingesting these pollutants through breathing in or eating dust.
Chemicals of concern include flame retardants, plasticisers and non-stick and water-proofing chemicals. Many are toxic and some are persistent (do not break down) and bio-accumulative (increase in concentration in our bodies and we do not tend to excrete them)'

http://www.telegraph.co.uk/news/2017/07/12/household-dust-makes-people-fat-groundbreaking-research-indicates/
A pioneering study in the US revealed that normal house dust is capable of carrying hormone-altering chemicals that prompt cells in the body to accumulate fat. The dust particles were found to contain endocrine-disrupting chemicals (EDCs), synthetic or naturally occurring compounds that can interfere with or mimic the body's hormones. These include flame retardants in sofas and carpets, as well as phthalates, substances added to plastics to increase their flexibility and in fragrances and cleaning products.

(iv)DRINKING WATER, PLASTICS & CHEMICAL INTAKE

https://www.theguardian.com/environment/2017/sep/06/plastic-fibres-found-tap-water-around-world-study-reveals
Tests show billions of people globally are drinking water contaminated by plastic particles, with 83% of samples found to be polluted. The US had the highest contamination rate, at 94%, with plastic fibres found in tap water sampled at sites including Congress buildings, the US Environmental Protection Agency's headquarters, and Trump Tower in New York. Lebanon and India had the next highest rates. European nations including the UK, Germany and France were the lowest but still high at 72%. Microplastics are also known to contain and absorb toxic chemicals and research on wild animals shows they are released in the body. Prof Richard Thompson, at Plymouth University, UK, told Orb: "It became clear very

early on that the plastic would release those chemicals and that actually, the conditions in the gut would facilitate really quite rapid release." His research has shown microplastics are found in a third of fish caught in the UK.

(v) PESTICIDES, FRUIT & VEG and FORMATIVE CHILD EXPOSURES

October 2017 http://www.pan-uk.org/food-for-thought/ Pesticide Action Network. A new report launched by Pesticide Action Network UK (PAN UK) reveals that the fruit and vegetables given out to four-to-six year olds via a government scheme aimed at promoting healthy eating habits contained residues of 123 different pesticides. These include suspected endocrine disruptors which interfere with hormone systems, known carcinogens, and organophosphates that can negatively affect children's cognitive development. In many cases, multiple residues were found on the produce. This is another area of serious concern as the scientific community has little understanding about the complex interaction of different chemicals in what is termed the 'cocktail' effect.

http://www.pan-uk.org/site/wp-content/uploads/Food_For_Thought_Press_Release_FINAL.pdf For an additional cost of roughly 1p per child per day, or £5.6 million per year, all of the core produce given out through the Department of Health's School Fruit and Vegetables Scheme could be switched to organic. Not only would this better protect children's health, it would also provide much-needed support to the British organic sector. The full list of the 123 pesticides is available on PAN UK's website along with spreadsheets containing all other original data and the complete 'Food for Thought' report. Visit www.panuk.org/food-for-thought.

(vi)THREE QUARTERS OF ALL HONEY CONTAINS HARMFUL PESTICIDES

(Oct 2017) http://www.dailymail.co.uk/sciencetech/article-4952858/Three-quarters-honey-contains-harmful-pesticides.html Three quarters of samples were laced with at least one neonicotinoid chemical Neonicotinoids are neuro-active chemicals that can attack the nervous system. One scientist warned that it was impossible to predict the long term effects. Experts called the findings 'sobering' and a 'serious environmental concern'. Dave Goulson, Professor of Biology at the University of Sussex, said: 'Beyond doubt ... anyone regularly eating honey is likely to be getting a small dose of mixed neurotoxins

(vii) UN SPECIAL RAPPORTEUR ON HUMAN RIGHTS AND TOXICS

Visit to UK January 2017 with full report here
https://www.theguardian.com/environment/2017/sep/10/uk-flouting-duty-to-cut-air-pollution-deaths-says-un-human-rights-report Britain flouting duty to protect citizens from toxic air pollution – UN Special rapporteur's mission finds government has violated obligation to protect people's lives and health. The UN's Baskut Tuncak warned that unless the UK's future green standards equalled those of the European Union, "the UK could risk becoming a haven for 'dirty' industries and a dumping ground for products failing to meet EU regulations

(viii) BREAST CANCER PREVENTION PARTNERS (BCPP formerly Breast Cancer Fund) STATE OF EVIDENCE REVIEW 2017

https://www.bcpp.org/resource/state-evidence-2017/
Breast Cancer Fund USA State of the Evidence Review. Published in the journal *Environmental Health*, the continually expanding and increasingly compelling data linking radiation and various chemicals in our environment to the current high incidence of breast cancer is reviewed.
Abstract: Singly and in combination, these toxicants may have contributed significantly to the increasing rates of breast cancer observed over the past several decades. Exposures early in development from gestation through adolescence and early adulthood are particularly of concern as they re-shape the program of genetic, epigenetic, and physiological processes in the developing mammary system, leading to an increased risk for developing breast cancer. The evidence cited in this review reinforces the conclusion that exposures to a wide variety of toxicants – many of which are found in common, everyday products and by-products – can lead to increased risk for development of breast cancer. The evidence is in 7 major areas:
Hormones: Pharmaceutical agents & personal care products; Endocrine disrupting compounds (EDCs); Hormones in food: Natural and additives; Non-EDC industrial chemicals; Tobacco smoking: Active and passive; Shift work, light-at-night and melatonin; Radiation
As concluded by the reports of the Presidential Cancer Panel and the Interagency Breast Cancer and Environmental Research Coordinating Committee, it is critical to recognize the growing literature demonstrating connections between

exposures to environmental toxicants and later development of disease, including breast cancer, and to prioritize prevention both at the research and the public health levels.

(ix) THE LANCET (May 2017) CANCER, ENVIRONMENT, PREVENTION
http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(17)30268-1/fulltext

A Lancet report of the annual American Association of Cancer Research conference: 'Cancer is a product of both nature and nurture, in which environmental risk is an equally crucial—and often neglected—factor because it is a multi-sectorial issue….can this insatiable desire to enhance our fundamental understanding of tumour biology overshadow the health gains that could be secured by improved environmental protection? To eradicate cancer, governments need to both identify and act not only on increased risk susceptibility, but also ensure that people are not exposed to carcinogenic materials through gross environmental mismanagement.

(x) 20/10/17 http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(17)32345-0.pdf

The Report from The Lancet Commission on Pollution and Health analyzes and communicates the massive scope of the health and economic costs of air, water and soil pollution.

Chemical pollution is a great and growing global problem. The effects of chemical pollution on human health are poorly defined and its contribution to the global burden of disease is almost certainly underestimated. More than 140000 new chemicals and pesticides have been synthesised since 1950. Of these materials, the 5000 that are produced in greatest volume have become widely dispersed in the environment and are responsible for nearly universal human exposure. Fewer than half of these high-production volume chemicals have undergone any testing for safety or toxicity, and rigorous pre-market evaluation of new chemicals has become mandatory in only the past decade and in only a few high-countries. The result is that chemicals and pesticides whose effects on human health and the environment were never examined have repeatedly been responsible for episodes of disease, death, and environmental degradation.

Historical examples include lead, asbestos, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), and the ozone- destroying chlorofluorocarbons. Newer synthetic chemicals that have entered world markets in the past 2–3 decades and that, like their predecessors, have undergone little pre-market evaluation threaten to repeat this history. They include developmental neurotoxicants, endocrine disruptors, chemical herbicides, novel insecticides, pharmaceutical wastes, and nanomaterials. Evidence for the capacity of these emerging chemical pollutants to cause harm to human health and the environment is beginning to become evident.

These emerging chemicals are of great concern, and this concern is heightened by the increasing movement of chemical production to low-income and middle-income countries public health and environmental protections are often scant. Most future growth in chemical production will occur in these countries. A further dimension of pollution is the global archipelago of contaminated hot-spots: cities and communities, homes, schoolyards polluted by toxic chemicals, radionuclides, heavy metals released into air, water, and soil by active and abandoned factories, smelters, mines, and hazardous waste sites.