Friends of the Earth Malta

Environmental issues in relation to Cancer prevention

National Cancer Platform Seminar
Verdala Palace Saturday 9th April 2016

Friends of the Earth Malta

Who we are...

Friends of the Earth International

We are the world's largest grassroots environmental network, uniting 75 national member groups and some 5,000 local activist groups on every continent. With over 2 million members and supporters around the world.

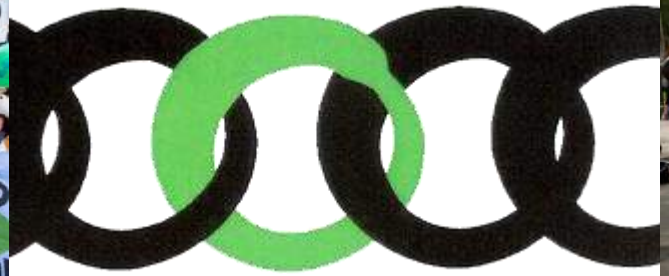
Friends of the Earth Malta

Who we are…

Friends of the Earth International

Our **decentralized** and **democratic** structure allows all member groups to participate in decision-making. We strive for **gender equity** in all of our campaigns and structures.

Our **international positions** are informed and strengthened by our work with communities, and our **alliances** with indigenous peoples, farmers' movements, trade unions, human rights groups and others.



Friends of the Earth Malta

Who we are…

Friends of the Earth Europe

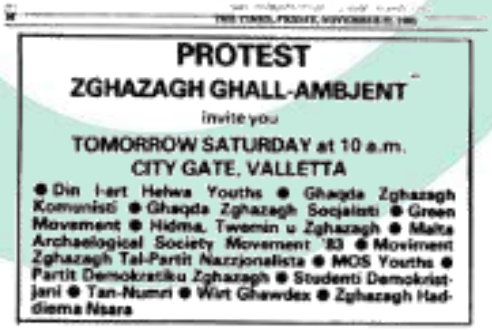
FoE Europe office unites more than 30 national organisations with an office in Brussels

Influence EU policy and political agenda

Raise public awareness on environmental issues

Friends of the Earth Malta

Who we are...



PROTEST

ZGHAZAGH GHALL-AMBJENT

invite you

TOMORROW SATURDAY at 10 a.m.

CITY GATE, VALLETTA

● Din l-art Helwa Youths ● Ghaqda Zghazagh Komunisti ● Ghaqda Zghazagh Socjalisti ● Green Movement ● Hidma, Twemin u Zghazagh ● Malta Archaeological Society Movement '83 ● Moviment Zghazagh Tal-Partit Nazzjonalista ● MOS Youths ● Partit Demokratiku Zghazagh ● Studenti Demokristjani ● Tan-Numri ● Wirt Ghawdex ● Zghazagh Haddiema Nsara

THE TIMES

TUESDAY, JULY 15, 1986

LETTERS TO THE EDITOR

SAVING THE SEA TURTLE

THE TIMES

Strength in unity of NGOs

Letters to the Editor

Friends of the Earth Malta, formerly 'Zghazagh ghall-Ambjent' and later 'Moviment ghall-Ambjent', has been active in the environmental field since 1985.

Friends of the Earth Malta

Who we are...

Our Mission:

To be the human voice of the earth to bring about a peaceful, just, equitable and sustainable society, respectful of present and future generations by inspiring change and promoting alternatives.

Friends of the Earth Malta

What we do…

Reconnecting people with nature

Friends of the Earth Malta

What we do…

Political work / Lobbying

NGOs were invited to put forward their proposals in the presence of MEPA CEO Johann Buttigieg, Environment Minister Leo Brincat and parliamentary secretary Michael Falzon

Members of NGOs and the media being addressed by Opposition leader Simon Busuttil at the Opposition Room in the new Parliament building on May 16. Dr Busuttil told the NGOs the PN was ready to do its part but urged civil society to take the lead. Photo: Jason Borg

Friends of the Earth Malta

What we do…

Mobilizing people

Friends of the Earth Malta

What we do…

Meeting stakeholders and public

Friends of the Earth Malta

What we do…

Environmental awareness events

Friends of the Earth Malta

Embracing diversity through conservation

In a year when migration became a controversial political topic, Friends of the Earth Malta addressed diversity through the joint exploration of Malta's unique biodiversity.

Spices and flowers have an identity and story for people from all cultural and religious backgrounds. In a series of informal workshops the Stejjer Imfewħa, or 'Scented Stories' project documented the historical and cultural significance of spices and flowers across cultures.

The works were published and used in an interactive exhibition in the spring.

Friends of the Earth Malta

Bees

What we're doing

Friends of the Earth Malta

Comino Project

COMINO ECO2000 PROJECT

AN ECO/AGRO TOURISM & RENEWABLE ENERGY CENTRE

A PROPOSAL BY FRIENDS OF THE EARTH MALTA

Friends of the Earth Malta

Comino Project

"The project focuses on turning an **unmanaged Natura 2000** small island between the islands of Malta and Gozo which is a major tourist destination into a fully managed island, leading to the conservation and **regeneration of the fauna and flora existing on the island**, focusing on the environmental problems which this island faces."

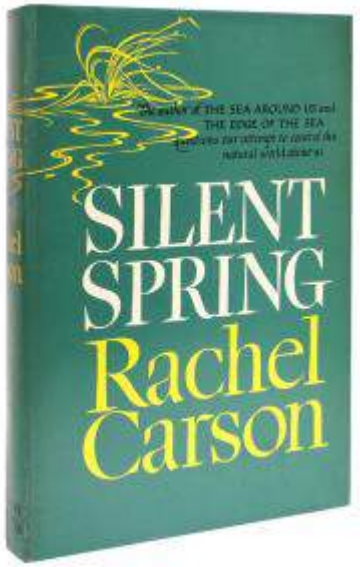
Friends of the Earth Malta

Good for nature
Good for you...

Friends of the Earth Malta

Silent Spring

Historical context



In the 1960s, Rachel Carson's Silent Spring provoked a controversy about the use of harmful pesticides and brought environmental concerns to the forefront.

She argued that government should regulate and drastically reduce pesticide usage because even trace amounts can be dangerous to humans.

She was in her fifties and dying of breast cancer.

Friends of the Earth Malta

The Evidence

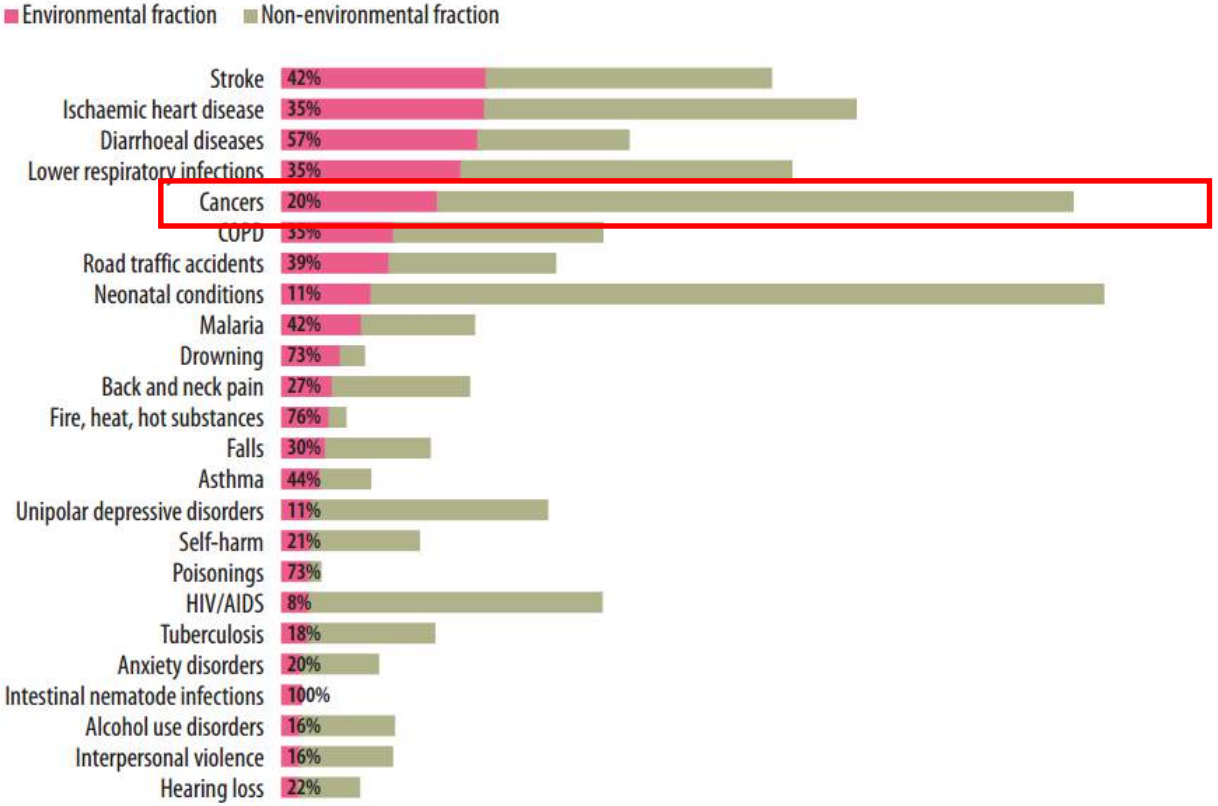
Scientific evidence supports the notion that cancer is not simply a matter of "bad luck"

Tomasetti, C. & Vogelstein, B. Variation in cancer risk among tissues can be explained by the number of stem cell divisions. *Science* **347,** 78–81 (2015).
Ashford, N. A. *et al.* Cancer risk: role of environment. *Science* **347,** 727 (2015).
Wild, C. *et al.* Cancer risk: role of chance overstated. *Science* **347,** 728 (2015).
Potter, J. D. & Prentice, R. L. Cancer risk: tumors excluded. *Science* **347,** 727 (2015).
Gotay, C., Dummer, T. & Spinelli, J. Cancer risk: prevention is crucial. *Science* **347,** 728 (2015).
Song, M. & Giovannucci, E. L. Cancer risk: many factors contribute. *Science* **347,** 728–729 (2015).
O'Callaghan, M. Cancer risk: accuracy of literature. *Science* **347,** 729 (2015).
Tomasetti, C. & Vogelstein, B. Cancer risk: accuracy of literature—response. *Science* **347,** 729–731 (2015).
Altenberg, L. Statistical problems in a paper on variation in cancer risk among tissues, and new discoveries. Preprint at http://arxiv.org/abs/1501.04605 (2015).

Friends of the Earth Malta

The Evidence

Figure 7. Diseases with the largest environmental contribution



Prüss-Üstün, A., et al (2016). *Preventing disease through healthy environments*. Geneva, Switzerland: World Health Organization

Friends of the Earth Malta

The Evidence

Cancer Types	Extrinsic risk	Examples of potential extrinsic risk factors*
Breast	substantial	Oral contraceptive, hormone replacement therapy, lifestyle (diet, smoking, alcohol, weight)
Prostate	substantial	Diet, obesity, smoking
Lung	>90%	Smoking, air pollutant
Colorectal	>75%	Diet, smoking, alcohol, obesity
Melanoma	65-86%	Sun exposure
Basal cell	~90%	UV
Hepatocellular	~80%	HBV, HCV
Gastirc	65-80%	H. pylori
Cervical	~90%	HPV
Head & Neck	~75%	Tobacco, alcohol
Esophageal	>75%	Smoking, alcohol, obesity, diet
Oropharyngeal	~70%	HPV
Thyroid	>72%	Diet low in iodine, radiation
Kidney	>58%	Smoking, obesity, workplace exposures
Thymus	>77%	Largely unclear
Small intestine	>61%	Diet, smoking, alcohol
Extranodal non-Hodgkin's lymphoma (NHL)	>71%	Chemicals, radiation, immune system deficiency
Testis	>45%	Largely unclear
Anal and anorectal cancers	>63%	HPV, smoking

*http://www.cancer.org/cancer.

Wu, S., Powers, S., Zhu, W., & Hannun, Y. A. (2016). Substantial contribution of extrinsic risk factors to cancer development. *Nature*,*529*(7584), 43-47.

Friends of the Earth Malta

The Evidence

- Around 20% of all cancers were estimated to be attributable to environmental factors (WHO, 2016).
- Environmental factors contribute to childhood cancers (IARC, 2014; Norman et al, 2014)
- Early exposures to environmental risk factors continue to impact cancer development in later life (Carpenter & Bushkin-Bedient, 2013).

Friends of the Earth Malta

Lung Cancer

- It was estimated that 14% of lung cancers are attributable to ambient air pollution, 17% to household air pollution (WHO, 2014c; WHO, 2014d), 6.5% to residential radon*, 1.8% to second-hand tobacco smoke and 6.6% to occupational risks (in DALYs) (IHME, 2014).

- Occupational (Nielsen et al, 2014) and domestic (Goswami et al, 2013) asbestos exposure (including chrysotile) leads to lung cancer and mesothelioma (sufficient evidence), a rare cancer predominantly of the outer lining of the lung (IARC, 2015).

- Many more environmental and occupational exposures are proven causes of lung cancer, including diesel engine exhaust, hexavalent chromium, silica dust, aluminium production, and painting (IARC, 2015).

*Thankfully local levels are very low.

Friends of the Earth Malta

Colorectal Cancer

- The Global Burden of Disease Study 2010 estimated that 27% of all colon and rectum cancers can be attributable to low physical activity (IHME, 2014) – and physical activity levels can be modulated by the environment.

Friends of the Earth Malta

Breast Cancer

- Breast cancer is the most deadly cancer in women with over half a million deaths in 2012 (WHO, 2015d). The GBD 2010 estimated that 30% of breast cancer cases are attributable to physical inactivity or low physical activity (IHME, 2014), which can be influenced by the environment.

- The causal link with ionizing radiation is supported by strong evidence from studies of women exposed at younger ages (IARC, 2015). Causal links to several other environmental exposures such as PCBs, ethylene oxide and shift work that involves disruption of the biological rhythm (circadian rhythm) are supported by limited evidence (IARC, 2015).

Friends of the Earth Malta

Glyphosate Testing

Glyphosate testing around European countries

TIMES OF MALTA | Friday, June 14, 2013 5

National

Nine out of 10 people had weed killer traces in urine

Patrick Cooke

Nine out of 10 people tested in Malta had traces of the weed killer glyphosate in their urine, the highest rate in Europe.

The testing was conducted by Friends of the Earth Malta as part of a wider exercise carried out by Friends of the Earth groups in 18 European countries.

Ten people were tested in each country. Across 18 countries, the average percentage of people who tested positive for traces of glyphosate was 45 per cent.

Friends of the Earth Malta's Martin Galea De Giovanni acknowledged that a more in-depth study was needed to determine the prevalence of the weed killer in humans across the continent, adding that the preliminary tests raised the flag on the issue.

"This was a test, not a full blown scientific study. Its main aim was to test whether this herbicide has made it into our bodies. The result is a yes," he said.

"What's even more worrying is that the Maltese sample of positives was higher than anywhere else.

"These results suggest that we are being exposed to glyphosate in our everyday lives.

"Yet, we don't know where it is coming from, how widespread it is in the environment or what it is doing to our bodies," he added.

Environmental groups are concerned that the effects of glyphosate on human health are not fully understood and the process of

Some councils in Malta employ people to spray weed killer in urban areas. Photo: John Portelli

The volunteers came from different localities and a questionnaire ensured that gardeners and farmers were not included.

This was the first time monitoring has been carried out across Europe to determine the presence of the

The biggest producer of glyphosate is Monsanto, which sells it under

What is glyphosate?

A broad-spectrum herbicide that was first marketed by Monsanto under the name Roundup in the 1970s.

Numerous companies now produce glyphosate under different trade names.

Twenty years after the herbicide came onto the market, Monsanto developed genetically engineered plants ('Roundup ready plants') that are resistant to glyphosate and, therefore, allow a wider application of the herbicide.

Source: Greenpeace

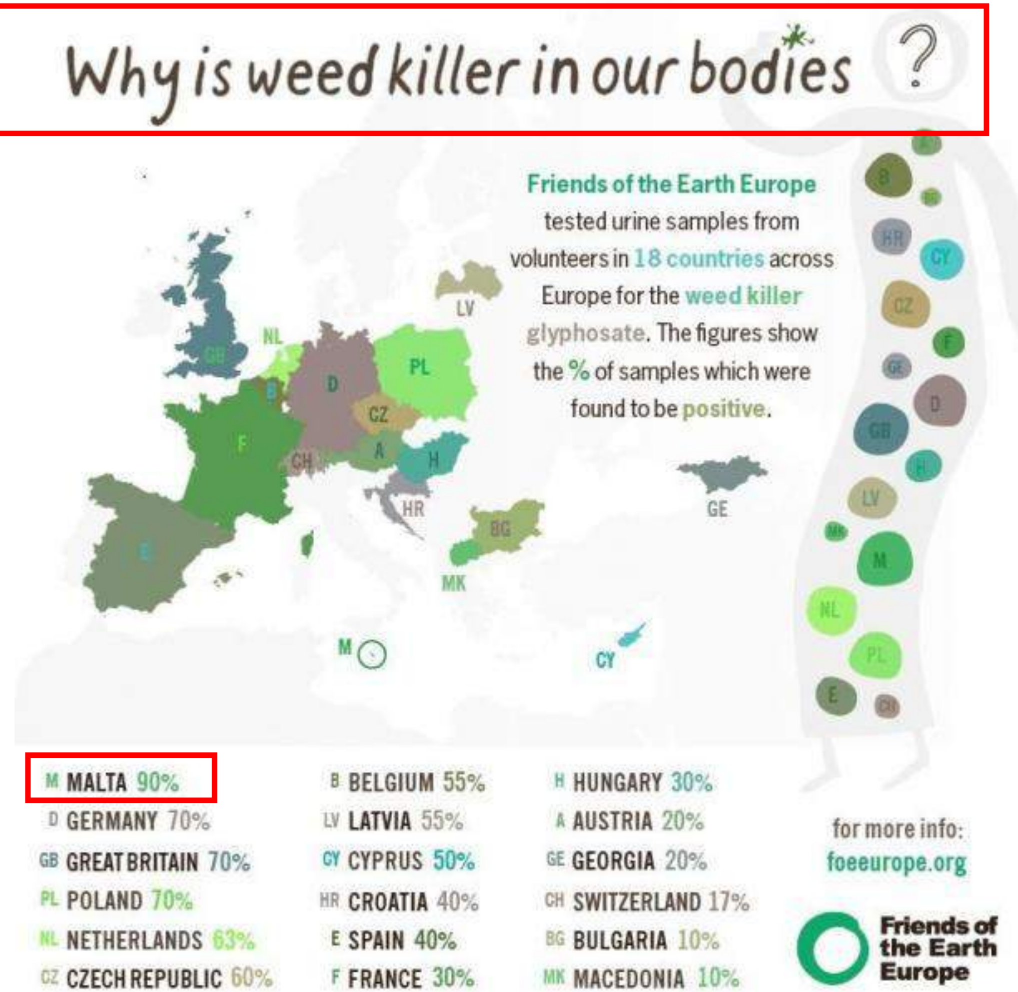
Is it safe for humans?

According to Monsanto, the acceptable daily intake is "quite favourable" and "no impact on human health is to be expected for the consumer of food treated with glyphosate according to good agricultural practices".

However, opponents claim industry studies are biased and outdated.

Laboratory and epidemiological studies in Argentina have suggested the herbicide poses serious health hazards, including endocrine (hormone) disruption, DNA damage, cancer, birth defects and neurological disorders.

Source: ec.europa.eu earthopensource.org

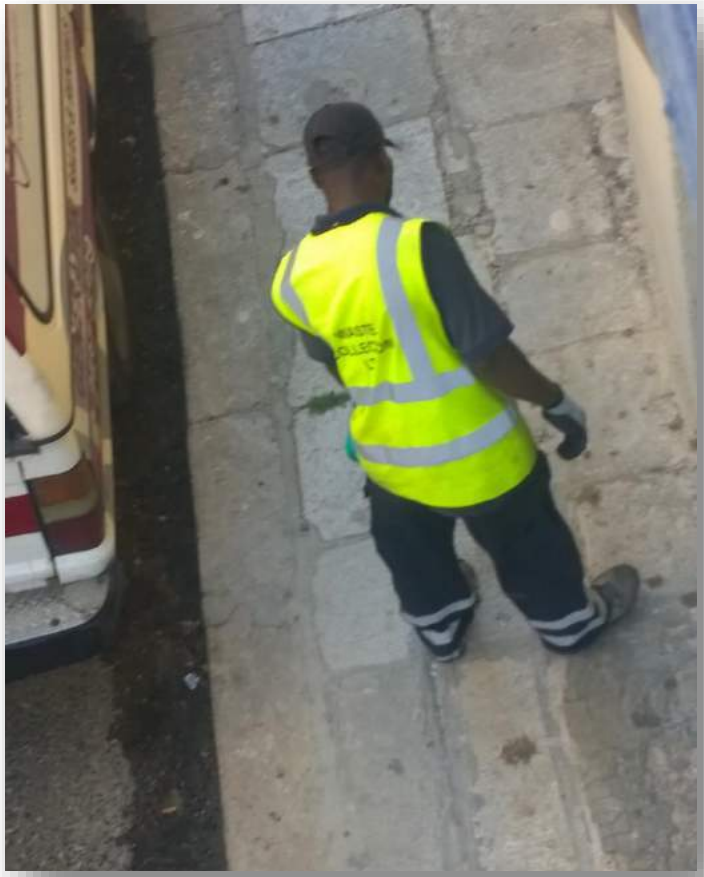


Friends of the Earth Malta

Glyphosate Testing

Glyphosate testing around European countries

- It is the best-selling herbicide in the world and the most widely-used in Europe. Some 650,000 tonnes of glyphosate products were used globally in 2011.
- Glyphosate is toxic to all plants – unless they have been genetically modified to resist it.
- Independent studies of glyphosate have suggested that the Acceptable Daily Intake (ADI) should be 12 times lower than the level in force in the EU.



Friends of the Earth Malta

Glyphosate Testing

Glyphosate testing around European countries

- Studies have shown that glyphosate may be linked to changes in the human hormone system, birth defects and cancer.
- Glyphosate is combined with other chemicals in weed killer – and these alter the toxicity of the final product, making it as much as 150 times more toxic.
- Desiccation - In some parts of Europe (including Malta), glyphosate is sprayed on to crops before they are harvested – to dry the crop out and make it easier to harvest.
- Industry studies focus almost exclusively on short-term, high dose animal trials – but real life exposure occurs over the long term, at low or fluctuating doses.

Friends of the Earth Malta

Glyphosate Testing

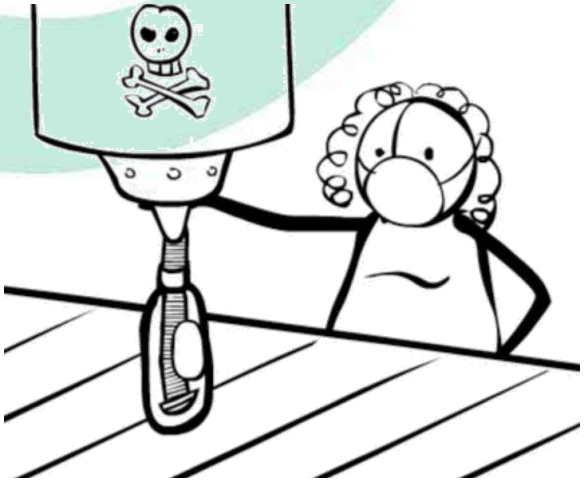
Glyphosate testing around European countries

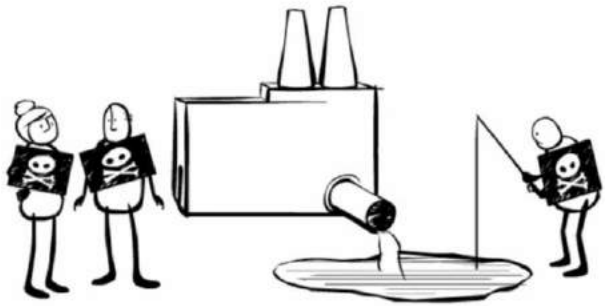
"*Future historians may well be amazed by our distorted sense of proportion. How could intelligent beings seek to control a few unwanted species by a method that contaminated the entire environment and brought the threat of disease and death even to their own kind? Yet this is precisely what we have done.*"

- Rachel Carson, Silent Spring, 1962

Friends of the Earth Malta

Green industrial chemistry





http://storyofstuff.org/movies/

Friends of the Earth Malta

Sustainable agriculture

CONVENTIONAL STRAWBERRY

Ingredients: Captan, Pyraclostrobin, Boscalid, Tetrahydrophthalimide, Myclobutanil, Pyrimethanil, Fludioxonil, Bifenthrin, Malathion, Fenhexamid, Cyprodinil, Carbendazim, Malaoxon, Azoxystrobin, Methomyl, Quinoxyfen, Fenpropathrin, Acetamiprid, Propiconazole, Bifenazate, Thiamethoxam, Spinosad A, Methoxyfenozide, Triflumizole, Dichlorvos, Hexythiazox, Metalaxyl, Propiconazole II, Thiabendazole, Spinosad D, Imidacloprid, Endosulfan sulfate, Propiconazole I, Iprodione, Piperonyl butoxide, Endosulfan II, Chlorpyrifos, Carbaryl, Pyriproxyfen, Endosulfan I, 1-Naphthol, Acephate, Clothianidin, Azinphos methyl, Naled, Cyhalothrin, Dicloran, Folpet, Tebuconazole, Fenbuconazole, Propargite, Dimethoate, Heptachlor epoxide, Diazinon

ORGANIC STRAWBERRY

Ingredients: Strawberry

Friends of the Earth Malta

Economic Evaluations

Putting people before profits

Occupational lung and bladder cancer cost €88 million to the Spanish National Health System in 2008 (Garcia Gomez et al, 2012).

Costs due to occupational cancer deaths in Italy in 2006 were estimated at around €360 million in indirect economic loss and €456 million in health care costs (Binazzi et al, 2013).

Occupational respiratory cancers were also shown to be a considerable economic burden in France in 2010 (Serrier et al, 2014).

Friends of the Earth Malta

Research / Data

Friends of the Earth Malta

Meat Consumption

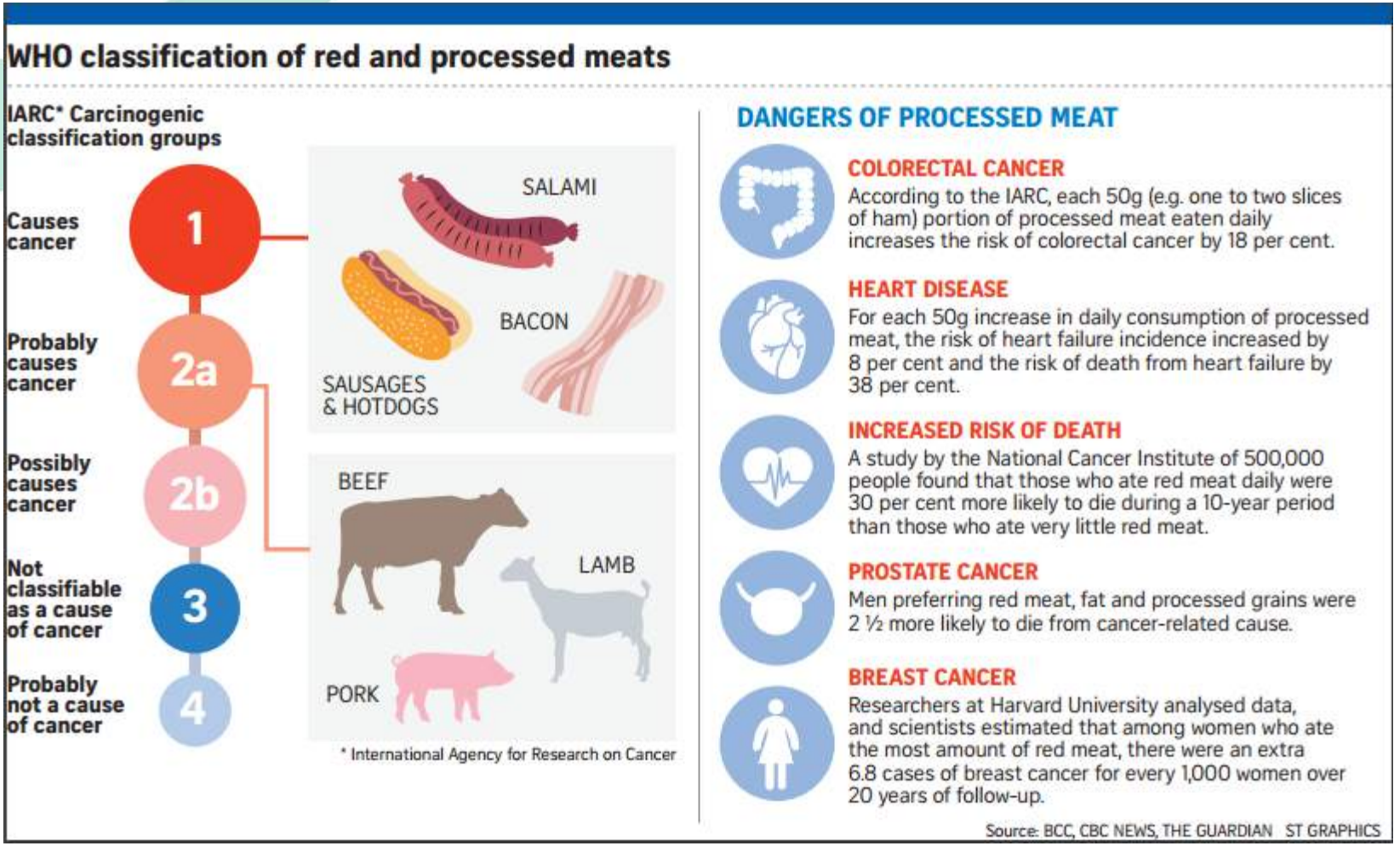
- 200 studies in the epidemiological literature have been reviewed and relate the lack of adequate consumption of fruits and vegetables to cancer incidence.

- The quarter of the population with the lowest dietary intake of fruits and vegetables compared to the quarter with the highest intake has roughly twice the cancer rate for most types of cancer (lung, larynx, oral cavity, esophagus, stomach, colon and rectum, bladder, pancreas, cervix, and ovary).

- Block G, Patterson B, Subar A, Fruit, vegetables and cancer revention: A review of the epidemiologic evidence, Nutr Cancer 1992; 18: 1–29.
- Steinmetz KA, Potter JD, Vegetables, fruit, and cancer. I. Epidemiology, Cancer Causes Control, 1991; 2: 325–57.
- Hill MJ, Giacosa A, Caygill CPJ, ed., Epidemiology of Diet and Cancer, West Sussex: Ellis Horwood, 1994

Friends of the Earth Malta

Meat Consumption



Friends of the Earth Malta

Energy / Transport

TIMESOF MALTA.COM

News | Sport | Business | Comment | Life | Escape | Classifieds

National | World | Social & Personal | Education | Interview | Environment | Gozo | Pictures

2 Email

Tuesday, January 19, 2016, 11:29

Increase in motor vehicles

The stock of licensed motor vehicles at the end of last month stood at 346,918, 0.7 per c higher than in the previous quarter, the National Statistics Office said.

It said 79.4 per cent were passenger cars, 13.7 per cent commercial vehicles and 5.8 per cent motorcycles. Buses and minibuses accounted for less than one per cent.

A total 5,445 new licences were issued in the fourth quarter, of which 4,360 were for passenger cars and 528 for motorcycles.

During the same period106 vehicles were exported, 2,139 garaged and 3,431 scrapped.

As at the end of December, 210,289 vehicles, or 60.6 per cent of the total, had petrol engines.

Friends of the Earth Malta

Safeguarding open spaces

The importance of open spaces - physical activity levels can be modulated by the environment.

Friends of the Earth Malta

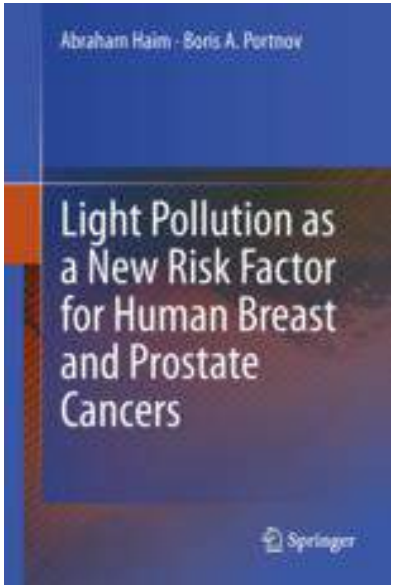
Light Pollution

Disruption of the biological rhythm can lead to depression, insomnia, cardiovascular disease and cancer

Friends of the Earth Malta

Light Pollution

Haim, A., & Portnov, B. A. (2013). *Light pollution as a new risk factor for human breast and prostate cancers* (pp. 61-65). Dordrecht, Heidelberg, New York, London: Springer.



Friends of the Earth Malta

Social & Environmental Justice

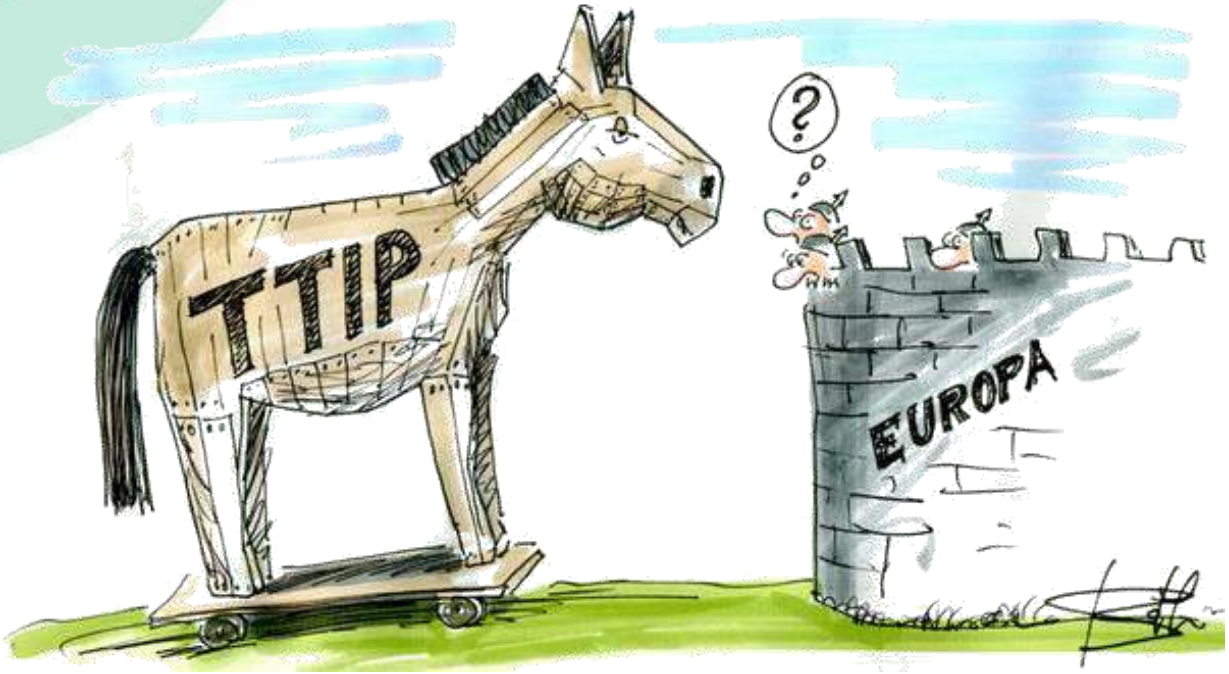
Not everybody can afford to go and enjoy scenic open spaces abroad

Not everybody can afford to buy the (generally) more expensive non-toxic products

Friends of the Earth Malta

TTIP

What is TTIP ?



The US-EU trade deal is a Trojan horse treaty; a dangerous deal that puts big business ahead of our society, health and environment.

Friends of the Earth Malta

TTIP A TOXIC AGREEMENT

The chemical law in the EU is much stricter than that in the US. The threat pf "harmonization" of existing legislation through TTIP would erode our European standards.

CHEMICALS IN COSMETICS

In the US several compounds are allowed which are forbidden in the European Union. For example, the USA still allows lead to be used in lipstick.

11 COMPOUNDS FORBIDDEN IN THE US

1300 COMPOUNDS FORBIDDEN IN EU

PROTECTION FROM ENVIRONMENTAL AND HEALTH HAZARDS

An advisory panel of the US president , has called the American chemicals legislation as a " kick-ass example of the ineffective regulation of environmental contaminants ."

540
HAZARDOUS

30.000
HAZARDOUS CHEMICALS TESTED

Friends of the Earth Malta

More info:
foemalta.org/links/ttip

Friends of the Earth Malta

TTIP

What we've done…

Friends of the Earth Malta

Creating a new public paradigm

Friends of the Earth Malta

Creating a new public paradigm

Organisations need to base their new paradigm on the precautionary principle, which places the burden of proof regarding the health effects of chemicals on the producers rather than the consumers.

- broaden public awareness of potential environmental causes of cancer;
- increase research into environmental causes of cancer;
- create policy that could prevent environmental causes of cancer; and
- increase activist participation in research.

McCormick, S., Brown, P., & Zavestoski, S. (2003, December). The personal is scientific, the scientific is political: the public paradigm of the environmental breast cancer movement. In Sociological Forum (Vol. 18, No. 4, pp. 545-576). Kluwer Academic Publishers-Plenum Publishers.

Friends of the Earth Malta

Allies

TerraFirma E-NGO Coalition Founding members

TERRAFIRMA
EMPOWERING MALTESE NGOS

Friends of the Earth Malta

Martin Galea De Giovanni
Director

www.foemalta.org
martin@foemalta.org
+356 79420042