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The Air Pollution

Problem… solutions

SOMMAIRE

Press review

Pollution and especially the air pollution is nowadays a big problem if it is not the principal preoccupation's one … In some cities, CO2 rejections and other kinds of atmosphere pollution are so important that living in a nuclear disaster site like Chernobyl one could be less dangerous for your health. We have to find solutions to face this problem, but how to reduce these CO2 emissions?

In cities like London you can find some streets where pollution is so big that it is worse than nuclear fallout… Those pollutions are coming from smoking or CO2 emissions. For example, studies show that a big smoker can see his life expectancy reduced of ten years (the problem is the same with obesity… overweight people can lose four to ten years of life) while an atomic explosion survivor who was exposed to high level emissions lose just 2.6 years of life.
Also 1 per cent of the people exposed to radiation can contract a fatal cancer, but a passive smoker living with people smoking a lot have 1.7 chances to contract a cancer and someone living in the center of London has 2.8 per cent increased risk of dying by breathing polluted air.
We can see now that risks we encounter in our daily lives are as many dangerous as if we were living next to a very radiated site… Sometimes those risks are just eating, drinking or breathing!
For example, Smoking 70 cigarettes, Drinking 25 litres of wine, Travelling 500 miles by bicycle (accident), Eating 2,000 tablespoons of peanut butter or breathing polluted air every days, are the same as if you were exposed to 1 millisievert of radiation (5 in 100,000 of dying in any year).

But the big problem is how to reduce those pollutions and change people way of life? There are many things where everybody waste a lot of energy, polluting the

atmosphere at the same time, but they sometimes just don't know it or don't put intention on it… A simple example is Christmas time, soon will come Santa Close and who says Christmas says beautiful lights and illuminations in each house, in every street and all the cities.

Yes it is beautiful but what an enormous wasting of energy (and carbon emission)!

For example, we could fill 15,500 hot air ballons with the carbon dioxide produced by our Christmas lighting. We can't say that we don't know it; it is evident for everyone that a million coloured bulbs in a street are consuming too much energy for what it is!

Yes but cities like to have decorated streets and places for the events, even if it is producing quantities and quantities of CO2. But the tendency seems to change with installation of a new less polluting lights technology called LED (light-emitting diode). Indeed these lights are not as many powerful as there parents the bulbs, they are only producing light radiation and not heat radiation and so don't use electricity to produce it unlike bulbs. Less consumption…less pollution…

The only problem of those LED is that they are very expansive to install even if one they are in place they only use 10 per cent of a classic bulbs installation…

The other big advantage of LED installation is that it's a cold light; they are not hot like little light bulbs, risk of fire with Christmas tree or others are so reduced to none.

Solar powered lights could also be a solution to reduce this Christmas consumption…

Lots of others technologies going in the same way have been founded during the last years and now people can live with low carbon emissions without restricting them… and so have fun. For example you can now find a system that generates energy as you walk and move around like everyday, and uses it to charge up your personal electronic devices like mobile phone or others. We can see with this system that it is becoming possible to collect energy efficiently from a variety of new sources, even the vibrations in the world around us. Collecting this energy means that appliances using electricity can be less dependent on energy generated from using carbon dioxide-emitting fossil fuels.

Recent studies showed that the less polluting way to travel far away is a very old technology, maybe one of the first flying one: airships, but a modern version with restaurant, gyms equipments etc. A journey by airship emits much less carbon dioxide than the equivalent journey by aeroplane per person. The airship allows

people to continue visiting exotic destinations, faster than by boat, with 20 hours for a London New-York travel, and with less pollution than a plane.
And those examples are only a few part of the total existing one, and they are certainly our future solutions to save the planet.

We can see that pollution is now an everyday problem; cities are already very touched by the CO2 emissions. But everyone can do something if he really wants it, even if the solutions are not well-known for the moment, there are existing and maybe we will found it currently everywhere in a few time. We hope…

Articles

City air worse than nuclear fallout

From *The Times* - April 3, 2007

Everyday hazards such as inhaling polluted city air or other people's cigarette smoke are potentially worse for your health than being exposed to the radioactive fallout of an atomic bomb, according to new research.

A study of radiation exposure caused by the atomic bombs dropped on Japan in 1945 and the explosion at the Chernobyl nuclear power plant has suggested that they have posed similar or lower health risks to survivors than the more prevalent problems of air pollution, smoking and obesity.

Moving from Inverness to the more polluted streets of Central London could have worse consequences for your health than choosing to live in the contaminated exclusion zone around Chernobyl, the site of the world's worst nuclear disaster.

Millions of people were exposed to potentially dangerous levels of radiation when the former Soviet nuclear power plant in what is now Ukraine, exploded on April 26, 1986. But the latest findings suggest that the consequences of radiation exposure suffered by survivors of the incident or the bombs dropped on Japan during the Second World War may be much less damaging than previously thought.

The atomic bomb explosions at Hiroshima and Nagasaki together killed more than 200,000 people from a combination of blast effects, burns and acute radiation sickness.

Estimates suggest that a lifelong smoker might on average lose ten years of life because of the habit, while someone who is severely obese (defined as a body mass index score of more than 40) at 35 might lose four to ten years.

By contrast, atomic bomb survivors who were exposed to high levels of radiation within 1,500 metres of the hypocentre of a blast could expect their lives to be shortened by an average of 2.6 years, according to research published online today in the BioMed Central journal *Public Health*. All of the risks studied showed a similar, relatively small increase (about 1 per cent) in mortality rates among a given population.

A 1 per cent increased mortality rate due to radiation exposure equates to a risk of approximately 1 in 100 of contracting a fatal cancer in later life.

The increased risk of dying from heart disease caused by passive smoking if you live with a partner who smokes is estimated to be 1.7 per cent. This compares to a 2.8 per cent increased risk of dying from the adverse effects of the higher air pollution in Central London compared with Inverness.

Jim Smith, of the Centre for Ecology & Hydrology, who carried out the research, said: "It is well known that radiation can potentially cause fatal cancers in people, even at relatively low doses. But our understandable fear of radiation needs to be placed in the context of other risks we encounter in our daily lives.

"The immediate effects of the Hiroshima and Nagasaki atomic bombs led to approximately 210,000 deaths. However, radiation exposures experienced by the most exposed group of survivors led to an average loss of life expectancy significantly lower than that caused by severe obesity or active smoking."

Speaking at a briefing in London yesterday, Dr Smith admitted that his calculations were limited, as they excluded wider social and lifestyle factors, which had a much greater potential impact on health.

"Despite high levels of air pollution, people living in Kensington and Chelsea have the highest life expectancy of anyone in the UK." Dr Smith, who has worked extensively in the Chernobyl exclusion zone, said that the risks of premature death among this group were actually no greater than from being subjected to prolonged passive smoking, or from being obese.

Danger of dying
Average risk of death in any one year from these causes:
1 in 200
Ten cigarettes a day
1 in 300
Heart disease 1 in 400
All cancers
1 in 7,700
Exposure to natural background radiation
1 in 12m
Crash on British airline

Sources: National Radiation Protection Board (Health Protection Agency); Times Database

Risky business
These activities would have the same risk as that for exposure to 1 millisievert of radiation (5 in 100,000 of dying in any year):

- Smoking 70 cigarettes (cancer, heart disease)
- Drinking 25 litres of wine (cirrhosis of the liver)
- 50 hours in a coal mine (black lung disease)
- Travelling 300 minutes by canoe (accident)
- Travelling 500 miles by bicycle (accident)
- Travelling 7,500 miles by car (accident)
- Eating 2,000 tablespoons of peanut butter (liver cancer caused by aflatoxin B)

Can Christmas lights be green?

From *The guardian* - November 8, 2007 9:38 AM

Before we start on Christmas lights I will admit straightaway that my own set has seven settings (still, strobe, blinking, twinkling, running up and down, copacabana, and I forget the seventh - it's been ten months after all). So I am not anti Christmas lights, oh no.

But no matter how much of a Christmas addict you are, and no matter how fed up you are with arguments involving light bulbs and the environment, it's hard not to look at the annual Christmas light extravaganza without a teeny pang of doubt.

Is this really necessary, one wonders? The houses with lights pouring along the roofline , sometimes known as houseblinging, and Santa Claus on the lawn, or the town centres with displays - like London's Oxford Street, switched on yesterday to "recreate the magic of Disney's family blockbuster, Enchanted".

Even if you didn't give a toss about carbon footprints and all that stuff, you might wonder why we must spend so much money and energy lighting the streets with. In the case of Manchesterwith a million light bulbs just so that everyone is absolutely certain that Santa Claus really is coming.

We could fill 15,500 hot air ballons with the carbon dioxide produced by our Christmas lighting, according to the Energy Saving Trust. However there is a new twist this year, because most of the councils in the country at least are making an effort to 'green up' a bit, after a few people, including Mike Tuffrey, leader of the LibDems on the London assembly, got on their backs last year about their elephantine carbon footprint. As a result, almost everyone has switched over to what some are calling the lighting technology of the future: LEDs.

LEDs, or light emitting diodes have spent most of their existence, since being discovered in 1907, under lighting bars or decking or swimming pools: They've been touted for many years as possible saviours on the lighting front because they only use a teeny weeny fraction of the energy of a conventional bulb, but although they're incredibly cheap to run, they are extremely expensive to install. A man who set up his whole New York flat to run on LEDs is using the same amount of electricity for his lighting as he would if he only had four small incandesent light bulbs. But to achieve that he's spent $50,000...

Hmm.

But when it comes to Christmas lights they make perfect sense. LED-maniac Tim Naughton runs Light 4 Fun and says that LED light-emitting diodes only use 10% of the power of a conventional string of Christmas lights. He's running a campaign to ban old fashioned lights, which he points out are not just waseteful, but also dangerous: apparently there are three times more household fires at Christmas due to he combination of hot little light bulbs and dried out Christmas trees surrounded by paper.

The Energy Saving Trust says that the technology with LEDs is still pretty variable and they are currently assessing it, but it's clear it does have something to offer. The solar powered Xmas lights you can buy as an another alternative are pretty, but not quite the explosion of brightness you might be hoping for.

How will we be living in 2022?

From *The guardian* - October 31, 2007 11:29 AM

Trying to live a low-carbon lifestyle currently seems to be all about giving up things; traditional light bulbs, the car, flights to far-flung places, even having a bath. But in 15 years' time, exciting new products could have been developed that actually make eco-living fun.

Take Kinetica, a gadget that uses your own personal energy to charge your mobile or laptop, or Autoconvoy, a conveyor belt for cars, the ultimate in eco-driving. If this sounds like an episode out of Futurama, think again.

According to a report today from sustainable charity, Forum for the Future, called Low Carbon Living 2022, these, and many other ideas, could become reality very soon if we are serious about going low carb. But it's not just all about new technology.

For Atlantic travel, the report ditches the plane in favour of an older from of transport: airships. Using airstream, these vehicles, fitted with offices, gyms and restaurants could get passengers from London to New York in 20 hours. To make low carb online shopping the norm, Shop&Drop is a simple idea that gives everyone a password-protected refrigerated lockup so you don't have to be in when the shopping's delivered.

But to cut down on consumption all together, Locality is an online borrowing scheme that allows people to lend out those items people hardly even use, such as power drills, or what about Ugrow, an easy grow your own food scheme that reduces the food miles of getting your dinner from farm to fork.

Other ideas are already with us, albeit on a small scale, such a modular housing, which the report calls Reef Living, because like coral that grows new nodules when the need arises, it can add modules when your family expands.

Do these products and services sound feasible? Would you use them, or do you have better ideas? What eco-friendly idea do you hope will be mainstream by 2022? If you think this all a bit far fetched, just remember that 15 years ago hardly anyone had mobiles, the internet was just a communication device for universities, and Google and eBay weren't even a twinkle in anyone's eye.