

Choosing our future

FOR A HEALTHIER LIFE,
CONSUME CHEMICALS IN MODERATION!



“Choosing our future” campaign

Toxic chemicals in plastic bottles, sunscreens, non-stick pans and garden pest sprays may literally be killing us. It's high time to put human health before company profits by effectively regulating the chemicals industry. The Health and Environment Alliance (HEAL) and Mouvement pour le Droit et le Respect des Générations Future (MDRGF) have come together to highlight the evidence of harm to health from certain widely used chemicals – and to point out the policy opportunities that could change our future for the better.

THE “CHOOSING OUR FUTURE” WEBSITE IS AVAILABLE AT
www.choosingourfuture.eu



Comic strips in this publication were created by David Ratte, author of “Toxic Planet” series, Paquet publishers.



The publication is part of a joint campaign between the Chemicals Health Monitor project of the Health and Environment Alliance (HEAL) and MDRGF (Mouvement pour le Droit et le Respect des Générations Futures).

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Choosing our future

How does continual exposure to man-made chemicals affect our health?

Chemicals are an integral part of modern life. They are found in our homes, gardens, schools, clothes, the air we breathe, our food, our portable telephones, our computers and our cars. As a result, we are all exposed to a real chemical cocktail every day!

Even though chemical products improve our daily life, some of them will have an impact on our health - creating suffering that could be avoided.

Studies show that more than 70 man-made chemicals can be found in our bodies. Many of them have been detected in young children, and in certain cases at a level higher than in adults. Once these chemicals are in our blood, some stay there because our bodies have difficulty getting rid of them. Do you find this shocking?

We know little about the manner in which pollutants accumulate in the human body and we do not fully understand the effect this cocktail of chemicals could have on us in the long term. However, more and more scientific studies reveal that these substances are linked to the development of certain cancers, brain development disorders, asthma, allergies, immune deficiencies, and low sperm count. Equally shocking, isn't it?

Because we also find this shocking, we have decided to create a comic strip book about these concerns to attract the attention of more people, in particular young people and health professionals who are not always aware of the risks.



Génon K. Jensen



Francois Veillerette

How could a more effective public health policy deal with this situation?

First, we need food to be safer. For example, ensuring that fruits and vegetables no longer contain residues of dangerous pesticides. Manufactured products should also be made safer and be labelled better. This is particularly true for food packaging, cleaning products, kitchen utensils and cosmetics.

Next, our work environments should be made safer so that no one is any longer exposed to substances of high risk. So, for example, those working in agriculture should no longer be exposed to toxic pesticides that put them at risk of developing illnesses, such as Parkinson's Disease.

If such a clean up happened, our bodies would gradually have the chance to clear the "chemical soup" that is currently in our blood, urine, and even breast milk. As a result, we'll ultimately see a fall in the number of breast and prostate cancers, fewer cases of Parkinson's, fewer people developing allergies, and fewer couples finding it difficult to conceive. Isn't that choosing a better future?

This book gives all of us the chance to make it happen.

Génon K. Jensen
Executive Director,
Health and Environment
Alliance (HEAL)

Francois Veillerette
Président, MDRGF
(Mouvement pour le
Droit et le Respect des
Générations Futures)

About this comic strip

We hope you will enjoy these four comic stories by the successful French “bande dessinée” artist, David Ratte. The likable characters and witty narratives make the links between exposure to chemicals in everyday life, the consequences for our future health, and the possibilities open to us to choose a better future.*

Once you have read the comic strips, we expect you to want to know more. On page 19, we explain the facts “Behind the dialogue”. Each explanatory note is underpinned with scientific references, which are available on the “Choosing our Future” website.

If you decide you want to act on what you have discovered, please see the box with information and website links after the “Behind the dialogue” section for each comic strip. There is also a glossary of terms on page 30.

We have also included a guide to what we believe the EU should be doing to confirm its image as a global model in protecting the health and environment of people living in Europe.

The information provided by these comic strips and texts is not exhaustive although we have made every attempt to ensure its accuracy.

The “Choosing our Future” website is accessible at www.choosingourfuture.eu and via the project partners at www.env-health.org, www.mdrjf.org and www.chemicalshealthmonitor.org

** David Ratte is especially well known as author of the Toxic Planet series: funny tales from a world so polluted that everyone is forced to wear gas masks!
His website is at www.toxicplanet.info*

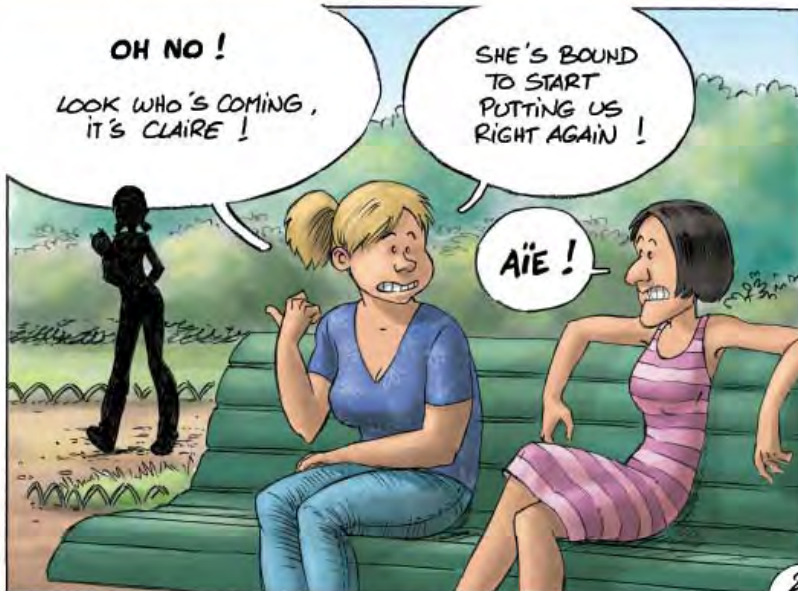
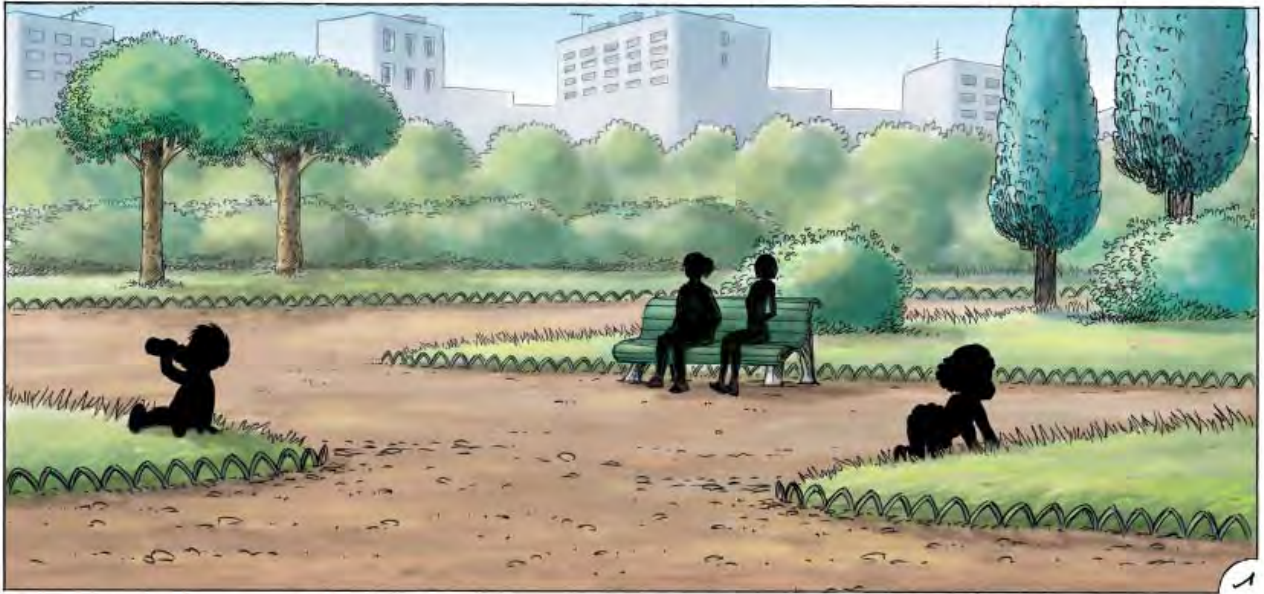
GREEN PASTURES?

How are chemicals harming our health

No matter how old we are, where we live, or what we do, none of us can escape exposure to man-made chemicals in our everyday lives that threaten our health.

We are exposed through food and water, through cosmetics that we rub into our skin and through the fumes from cleaning products and polluted city air.

The unborn child and children are most at risk because they have fewer defences and longer periods of life ahead of them in which cancer and other health problems may emerge.



OH NO !
LOOK WHO'S COMING ,
IT'S CLAIRE !

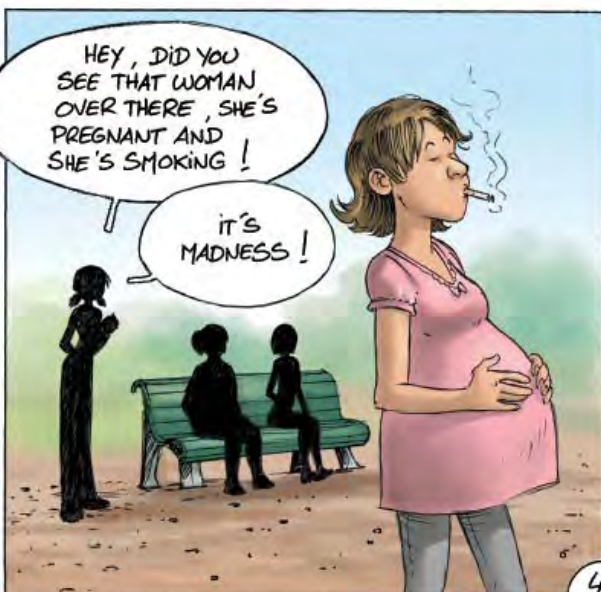
SHE'S BOUND
TO START
PUTTING US
RIGHT AGAIN !

AÏE !



Hi LADIES ,
HOW ARE YOU ' ?

Hi
CLAIRE !



HEY , DID YOU
SEE THAT WOMAN
OVER THERE , SHE'S
PREGNANT AND
SHE'S SMOKING !

it's
MADNESS !

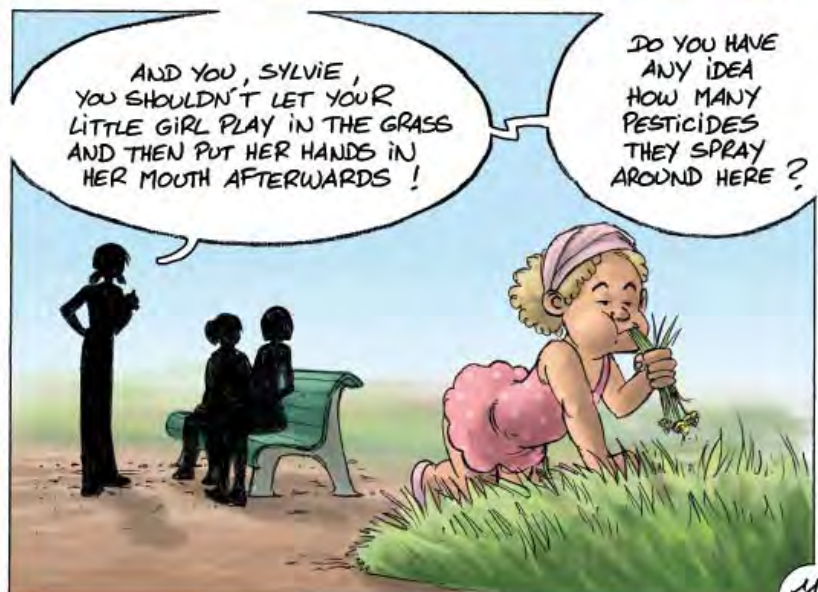
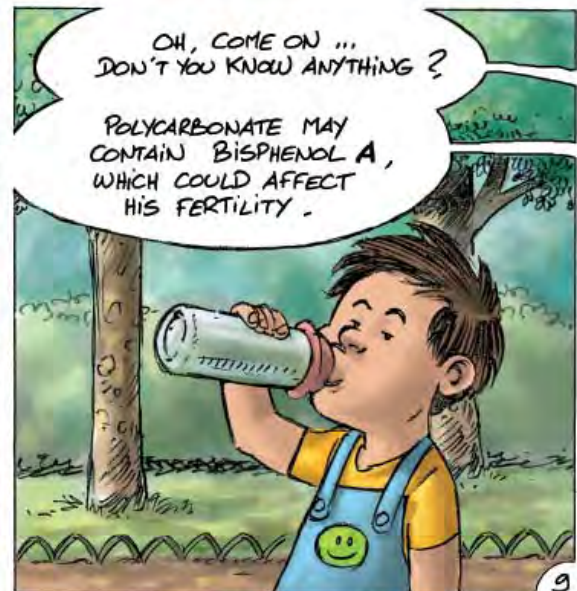
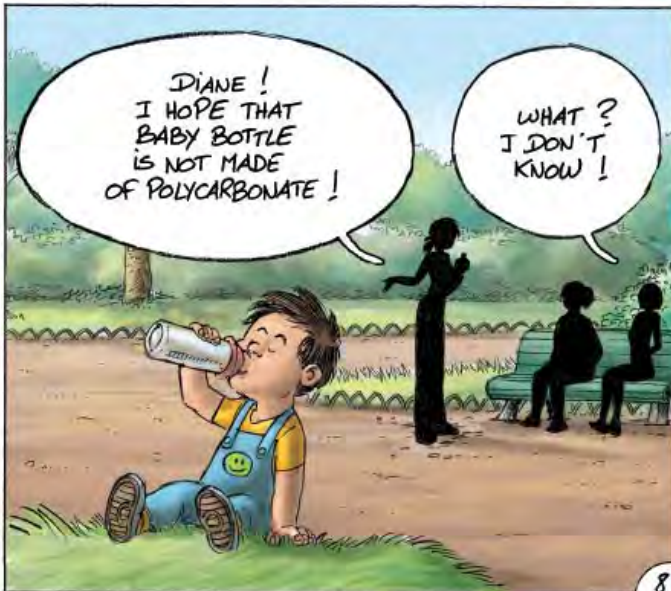
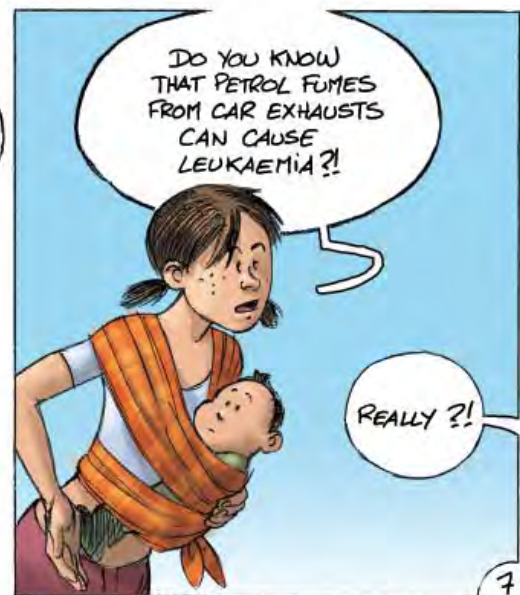
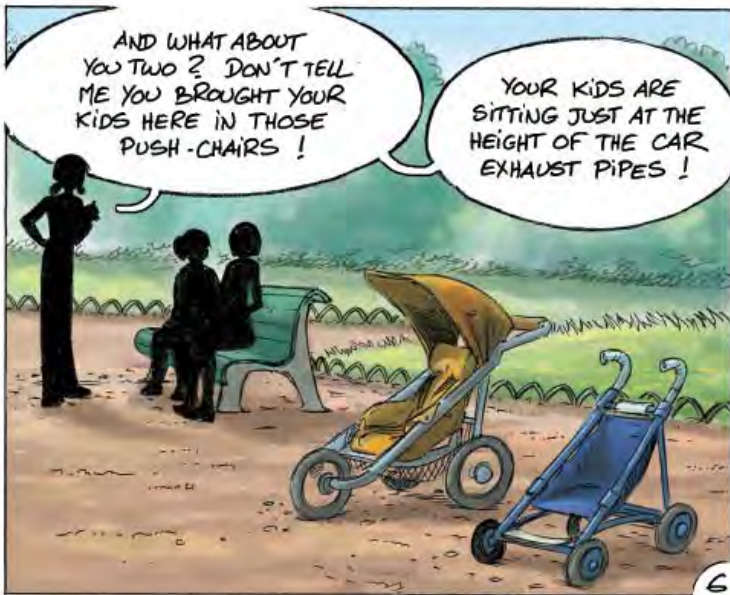


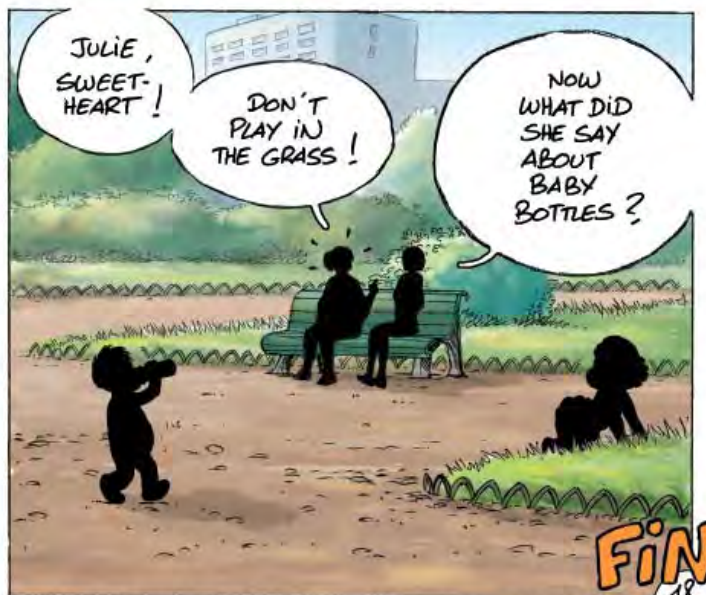
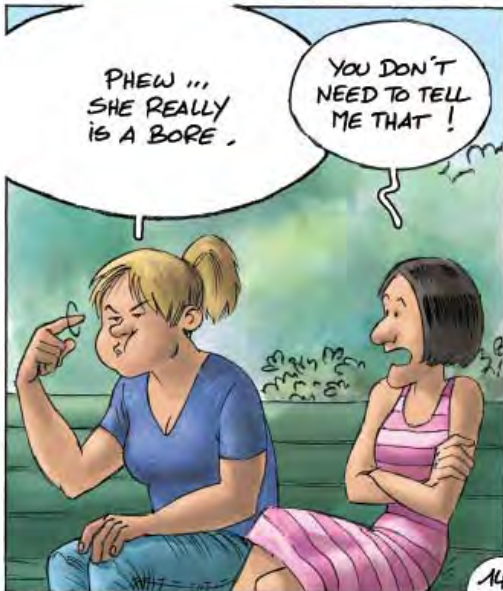
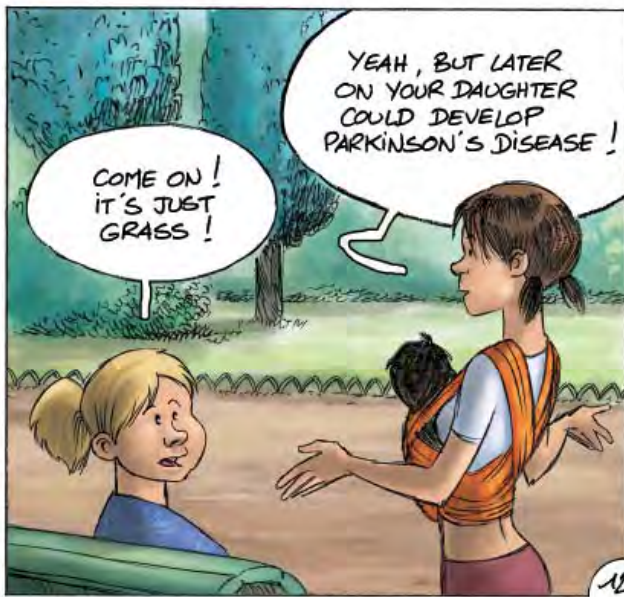
DO YOU KNOW
HOW MANY CHEMICALS
SHE IS EXPOSING
HER BABY TO ?

ER,
NO .

4000 !!!

AND I BET
SHE'S THE TYPE
WHO COOKS IN
NON-STICK PANS
- WITH ALL THE
DANGERS THAT
ENTAILS .





FIN

SCÉNARIO ET DESSINS : DAVID RATTE

COULEURS : SYLVIE SABATER

SUPERMAN AND THE MARTIANS

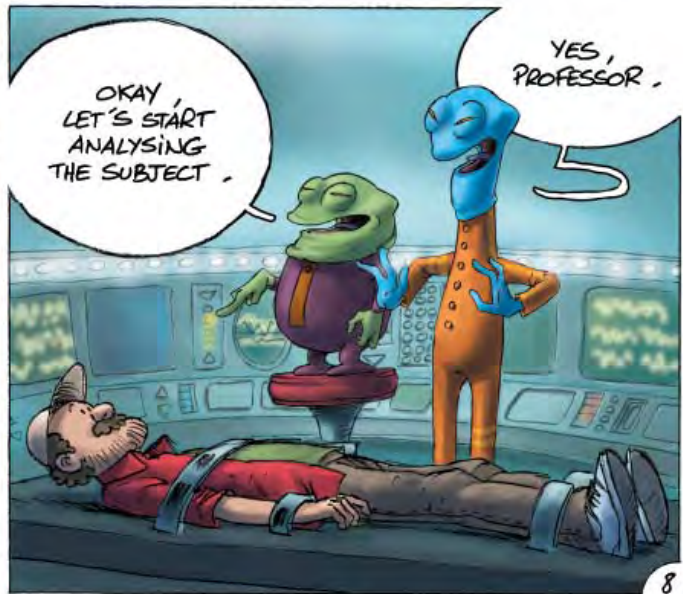
*Life on earth means exposure to chemicals
and living in a chemical soup*

Several man-made chemicals are building up in our body that haven't been properly tested for health effects and shouldn't be there.

No one knows precisely what the long-term effects of having these chemicals in our blood will be for us, for our children and for future generations.

Traces of chemicals that were banned many years ago are still found in our blood.







UNFORGETTABLE CINDERELLA

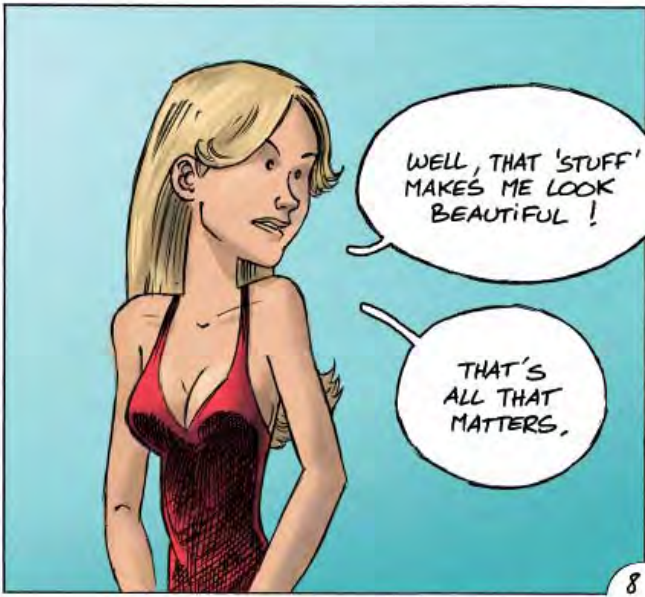
Beware of certain cocktails!

We are exposed to a daily “cocktail” of different man-made chemicals, which may be more potent than just one chemical on its own.

Despite this daily multiple exposure, we have insufficient scientific information about the safety and impact of these chemicals on our health. But absence of proof of harm doesn't mean that they are safe to use!

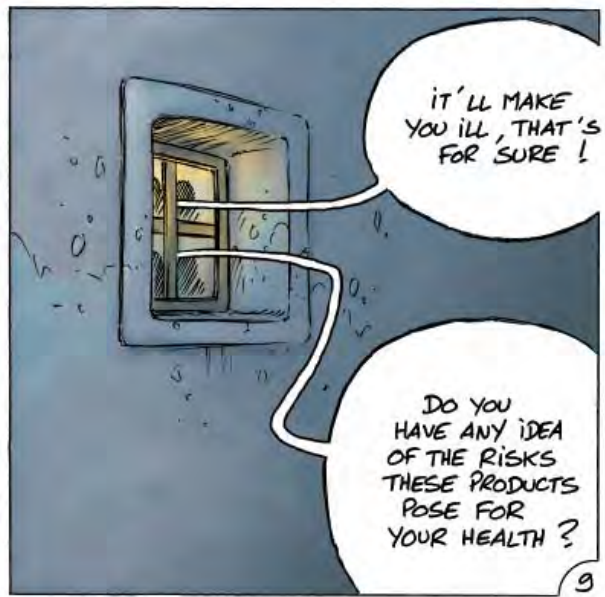
We have the right to know that products are safe and which chemicals are used in them.





WELL, THAT 'STUFF' MAKES ME LOOK BEAUTIFUL !

THAT'S ALL THAT MATTERS.



IT'LL MAKE YOU ILL, THAT'S FOR SURE !

DO YOU HAVE ANY IDEA OF THE RISKS THESE PRODUCTS POSE FOR YOUR HEALTH ?



YES OF COURSE !

LISTEN, THIS EVENING IS THE GALA OF THE YEAR.

THERE'LL BE DOZENS OF PRODUCERS, CASTING DIRECTORS ...



WELL, YOU WILL CERTAINLY DO THAT !

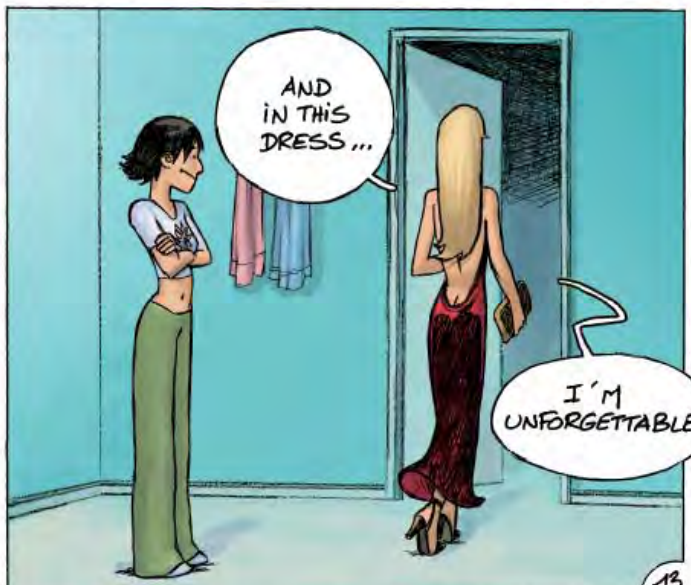
IT'S MY BIG MOMENT TO ATTRACT ATTENTION.



GO ON, MAKE FUN OF ME THEN !

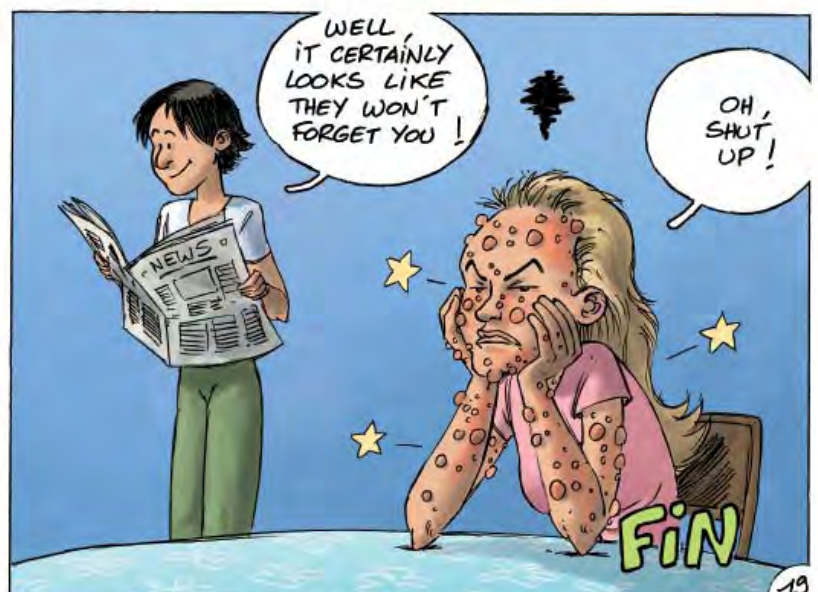
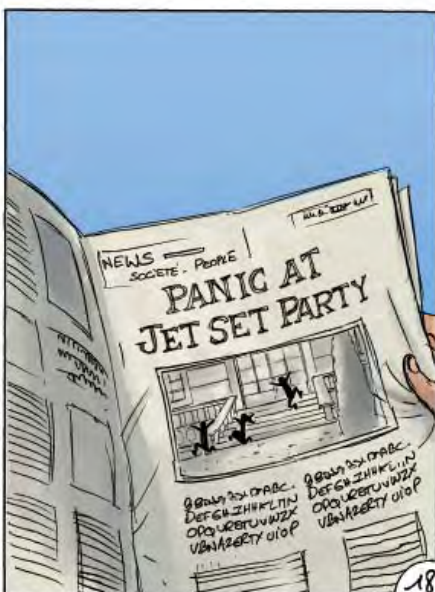
BUT, AT LEAST I KNOW HOW TO GET NOTICED.

I HAVE TO LEAVE AN IMPRESSION.



AND IN THIS DRESS ...

I'M UNFORGETTABLE



SCÉNARIO ET DESSINS : DAVID RATTE

COULEURS : SYLVIE SABATER

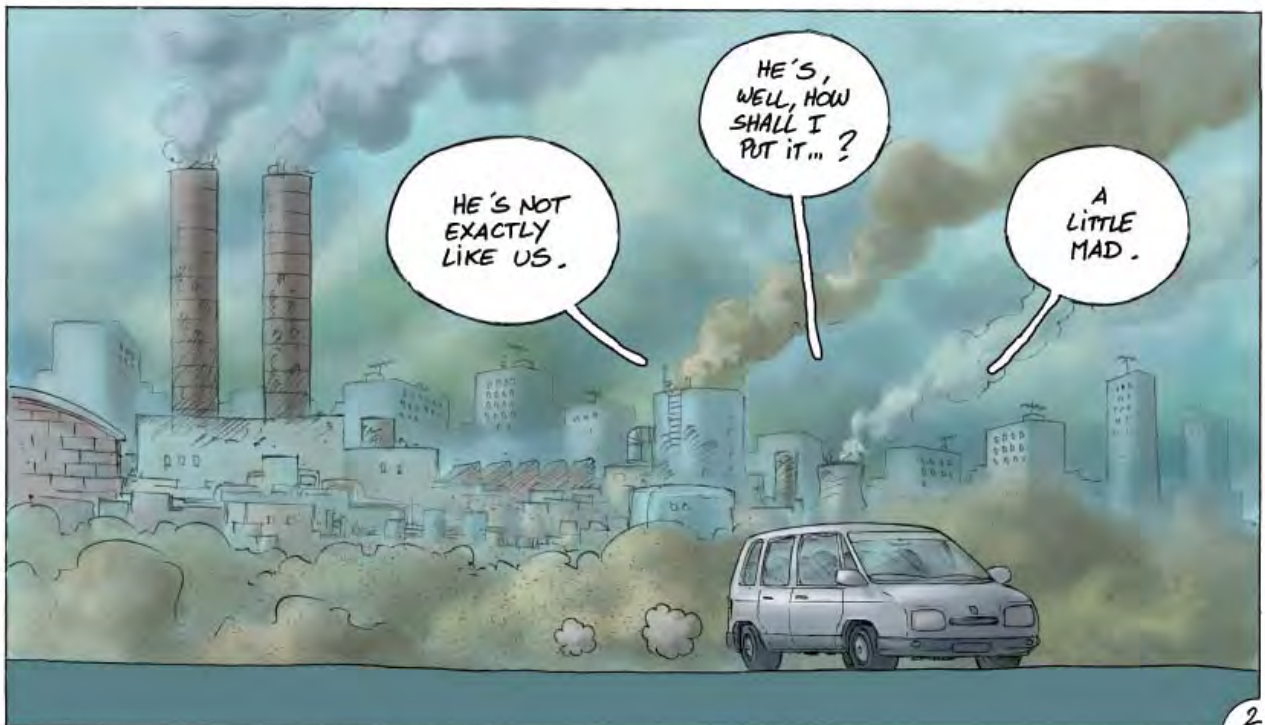
HI UNCLE! STILL A BIT CRAZY?

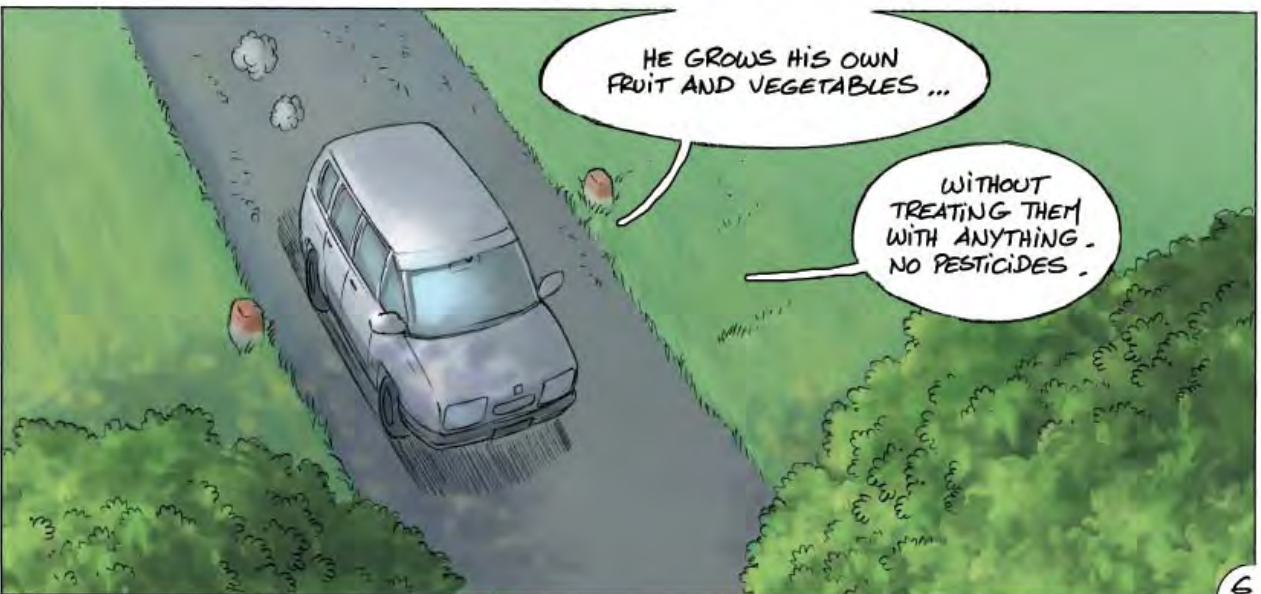
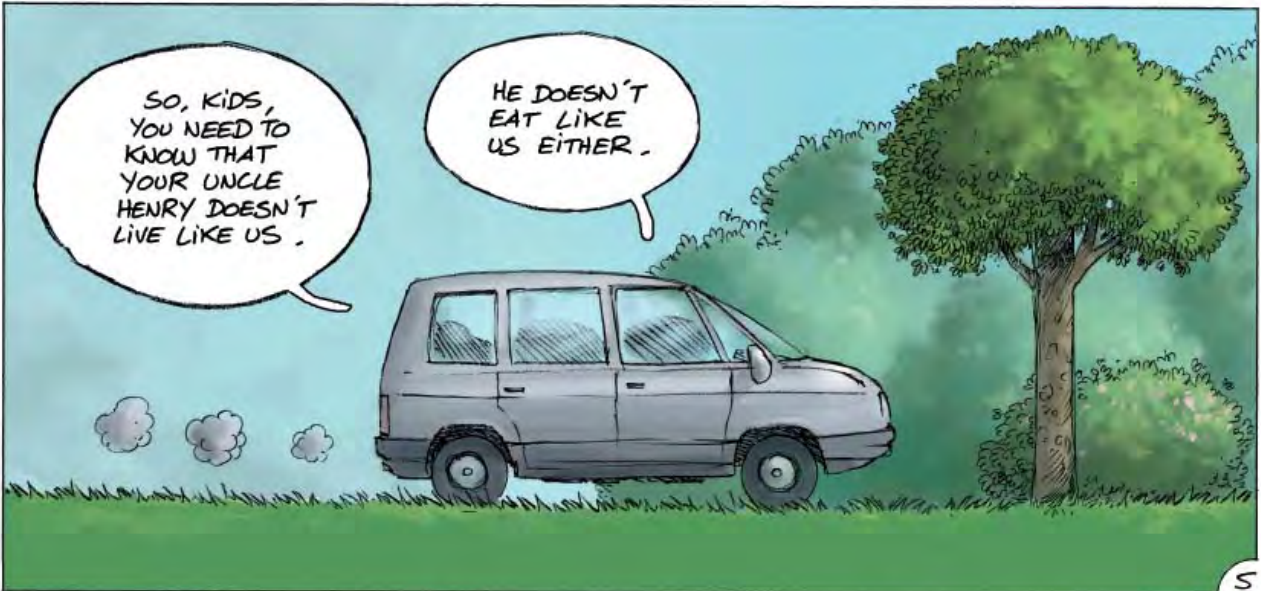
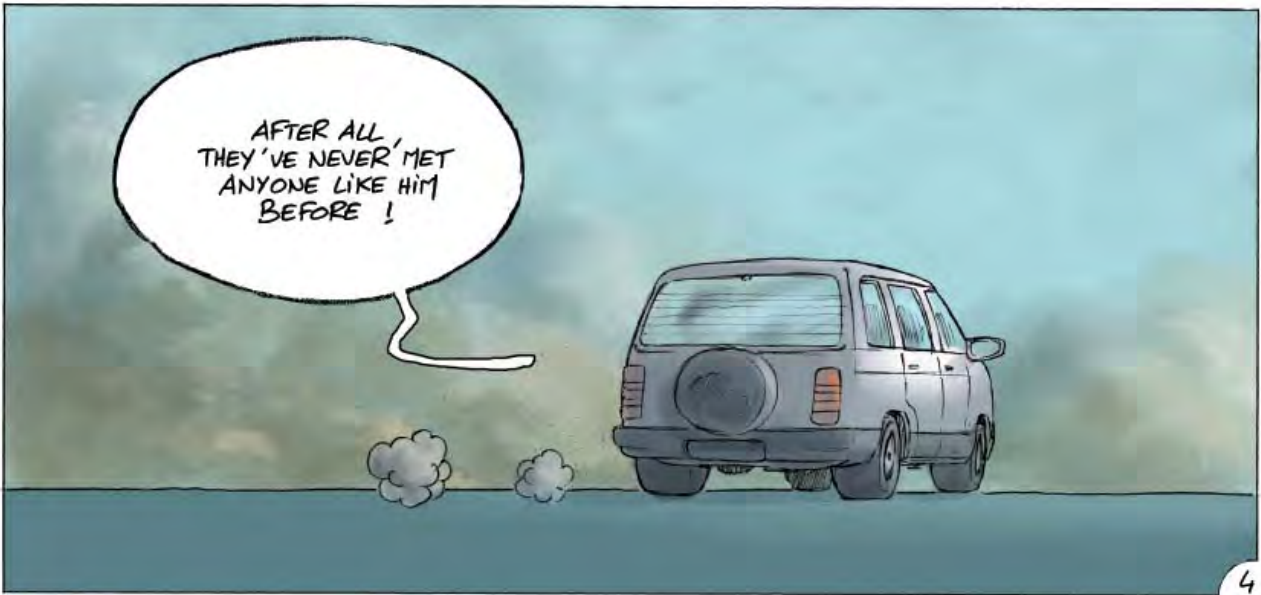
Switching to a healthier lifestyle also means asking governments for better protection from harmful chemicals

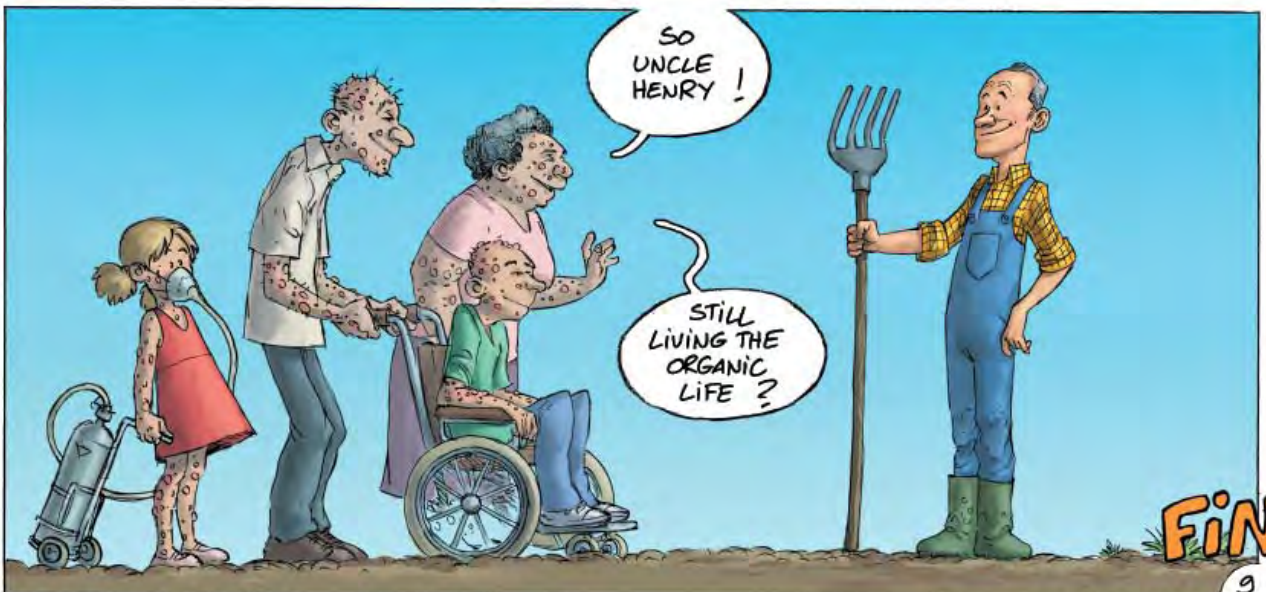
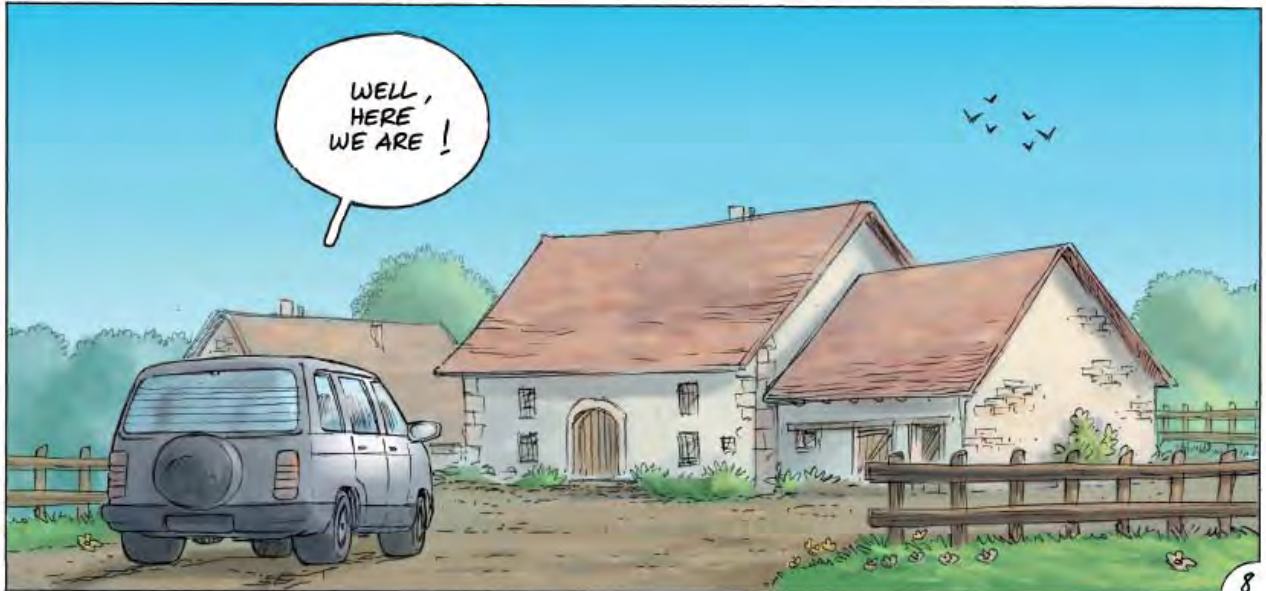
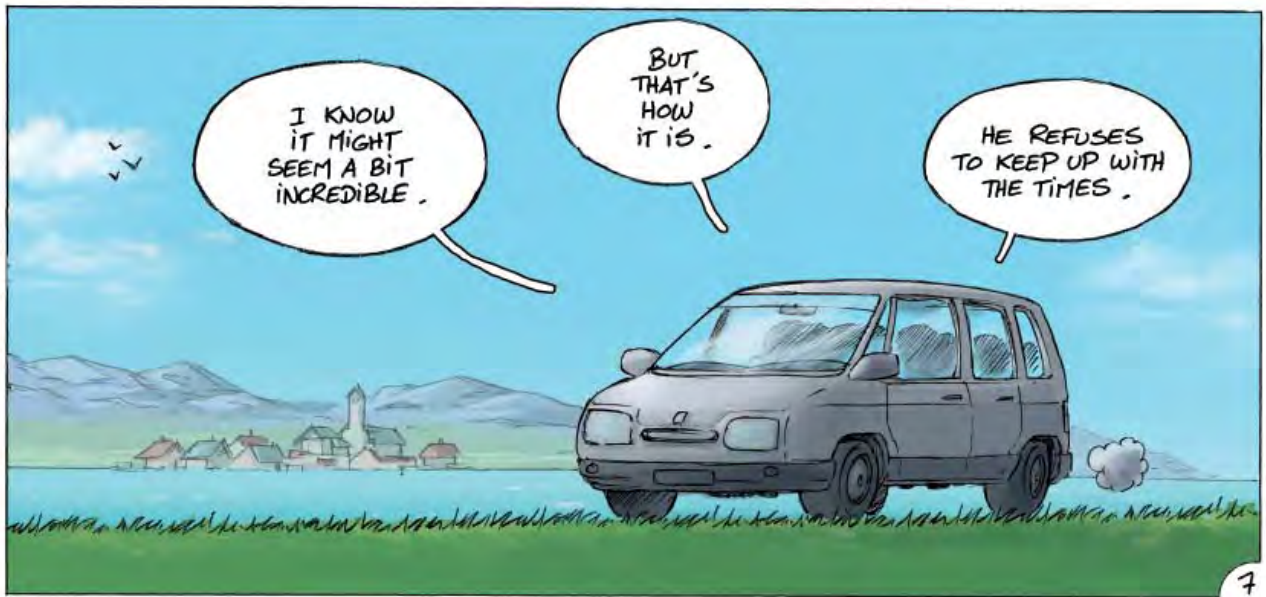
Since we are uncertain about the safety of some chemicals, we should act with precaution.

Safer alternatives to harmful chemicals exist. Ask your government!

Apart from changing our lifestyle as individuals, governments should help to protect us from harmful chemicals.







Behind the dialogue

Provided here is some information on the topics as they arise in the cartoon stories. A glossary at the end of this book explains various words and terms that you may not be familiar with. Full references for the statements below are available on the "Choosing our Future" website at www.choosingourfuture.eu.

GREEN PASTURES? (pages 3-6)

Box 4:

Pregnancy: Certain man-made chemicals are accumulating in human beings. These hazardous chemicals can be passed on from a pregnant mother to a baby in the womb. Even at very low doses, these chemicals may harm unborn babies and affect their future development and intelligence. A few industrial chemicals are the recognised cause of brain damage to children who have been exposed in the womb.

Smoking: Tobacco use seriously affects our own health and cigarette smoke harms the health of others. Tobacco smoke contains over 4,000 chemical compounds, including 50 substances that are known to provoke cancer and more than 100 are toxic (poisons). Tobacco use can damage a woman's reproductive health and can also cause complications during pregnancy for both mother and baby.

Box 5:

Non-stick pans: Many frying pans and saucepans with a non-stick coating that we use for cooking contain PFOA (perfluorooctanoic acid). Studies have shown that at normal cooking temperatures, these chemicals are released into the air and the food so that it enters our bodies. PFOA is suspected to be a cause of cancer, and may retard the growth and brain development of babies. PFOA is a perfluorinated chemical (PFC).

Box 7:

Car fumes: Breathing in benzene from motor vehicle fumes has been associated with certain types of cancer, such as leukaemia, and worsens the risk of asthma in children.

Leukaemia: is a type of cancer of the blood or bone marrow that can affect both children and adults. Inhaling benzene from car exhaust fumes can cause leukaemia. The rate of cancer in children is increasing each year in Europe.

Box 8:

Baby bottle: many baby feeding bottles are made of polycarbonate plastic (PC) that contains a harmful hormone disrupting chemical called Bisphenol A (BPA). When BPA leaches from the baby bottle into the liquid drink, very young babies and children are directly exposed to this chemical.

Box 9:

Bisphenol A: BPA is a man-made chemical found in polycarbonate plastic (PC). It is produced in high volumes and used in every day products, such as baby bottles or the lining of food cans. BPA can leach from the tin or bottle into the food. Studies have shown that BPA can interfere with the normal functioning of our hormone system and produces adverse effects including reproductive, developmental and behavioural problems.

Male fertility: There is mounting scientific evidence that men's ability to father children may be reduced as a result of exposure to certain man-made chemical substances.

Box 11:

Vulnerable: Compared with adults, small children and babies absorb and keep in their bodies more of the harmful chemicals that they are exposed to. They are also more exposed because they are nearer to dust on the ground where these chemicals can accumulate. Young children ingest the chemicals they are in contact with because they often put their hands in their mouths.

Pesticides: Exposure to certain pesticides, such as herbicides and insecticides, can increase the risk of children developing cancer, including non-Hodgkin's lymphoma and leukaemia.

Box 12:

Parkinson's Disease: People with long-term, low-level exposure to certain pesticides have a higher likelihood of developing Parkinson's Disease compared with those who have not been exposed. Parkinson's is a disease that causes stiffness, shaking and slowness of movement as a result of the death of certain cells in the brain.

Box 15:

Bronchitis: Bronchitis can occur when you inhale fumes or dust that cause irritation. Chemical solvents and smoke, including tobacco smoke, have been linked to acute bronchitis.

Asthma: Asthma is a chronic disease that affects your airways and makes it difficult to breathe. It is provoked by exposure to certain allergens, including toxic chemicals that can be found in tobacco smoke, pesticides, paint, hair dye products and so on. Pesticide exposure during childhood may increase the risk of asthma.

What can you do yourself?

LEARN MORE ABOUT THE IMPACT OF MAN-MADE CHEMICALS ON OUR HEALTH

- Find out more about how chemicals enter your body
<http://www.environmentaldefence.ca/toxicnation/pollutionInYou/HowYouExposed.htm>
- Information on diseases related to chemical exposure is available on the Chemical Health Monitor website
www.chemicalshealthmonitor.org
- Read the consumer guide to Bisphenol A produced by HEAL and Friends of the Earth Europe, available at
http://www.env-health.org/IMG/pdf/15_foee_bisphenol_cons_lr.pdf
- Make your home safe for your new baby with the help of the Nesting project from Women in Europe for a Common Future
<http://www.projectnesting.org/>
- Read the fact sheet from the Danish government on “Good chemistry to pregnant and nursing mothers”:
<http://www.mst.dk>
- Doctors in the US have produced a series of documents on Toxics and Health, see the website of Physicians for Social Responsibility (PSR)
http://www.psr.org/site/PageServer?pagename=enviro_resources#Toxics

REDUCE EXPOSURE TO HARMFUL CHEMICALS

- **Do not smoke** and make your home and car non-smoking zones.
- **Reduce pesticide exposure** – Don’t use herbicides, insecticides or fungicides in your home. Ask your local municipality, town and school to go pesticide free in public places. Buy organic.
- **Help reduce traffic pollution** – Walk, bike, use public transport or car pooling to reduce traffic exhaust and improve air quality.
- **Choose to breastfeed your baby** but if you need baby bottles, buy one that is not made from polycarbonate. To find out more, have look at: <http://zrecs.blogspot.com/2008/02/z-report-on-bpa-in-infant-care-products.html> or <http://www.babybornfree.co.uk/>
- Reduce your child’s exposure to asthma-provoking factors by learning more at:
<http://www.thegreenguide.com/doc/92/asthmachecklist>
- Find out what you can do to avoid possible exposure to toxic chemicals from non-stick coatings on cooking utensils
<http://www.thegreenguide.com/doc/109/toxin>
- Check out the shoppers-guide for non-toxic products:
http://www.wecf.eu/english/publications/2007/reach_guide.php
- Follow some tips on how to make your home a healthy home:
<http://www.environmentaldefence.ca/toxicnation/pledge/index.php>
- Learn about “Alternatives to Pesticides” from the Armenian Women for Health & Healthy Environments, available at: http://awhhe.am/downloads/alt_pest_eng_2008.pdf

HELP SPREAD THE MESSAGE

Watch with friends and family, “Contaminated Without Consent”, a 16-minute video available free of charge, about the hidden risks from chemical contaminants found in our homes and workplaces, in the products we buy, and in our bodies. Download the video at: <http://www.contaminatedwithoutconsent.org/>

SUPERMAN AND THE MARTIANS (pages 7-10)

Box 8:

Analysing the subject: When body tissues (for example, blood, urine, breast milk or hair) are tested to learn more about people's exposure to pollutants, the process is known as human biomonitoring. The information collected from the analysis may provide links with possible health effects and suggest options for policy measures to reduce exposure.

Box 12:

DDT - is a pesticide that has been widely used as an insecticide in agricultural production and malaria control. Its use is banned in all European Union countries. This is because DDT accumulates in our body. Even though it was banned decades ago, traces of it can still be found in humans today. When pregnant mothers are exposed to DDT, the baby in the womb may suffer from developmental disorders in future life.

PBDE - are "flame-retardant" chemicals added to plastics and household furniture and used in televisions, computers and stereos to help prevent them catching fire. Exposure to polybrominated diphenyl ethers (PBDE) usually happens through inhaling the fumes, contact with house dust or via food. Scientists are concerned about the accumulation and persistent levels of PBDE found in human tissues. Some sub-types of PBDE are associated with cancer, thyroid problems and neuro-developmental toxicity.

DEHP - is a chemical compound widely used to soften PVC plastic in consumer goods and some medical disposable devices. It can leach from the PVC and has been classified by the EU as toxic to reproduction. Concerns focus on its potential to disrupt the human endocrine (hormone) system. The European Union has banned the use of DEHP and some other phthalates in PVC toys, and EU chemicals legislation known as REACH has put DEHP on a list of "substances of very high concern". It may eventually be banned from the EU market.

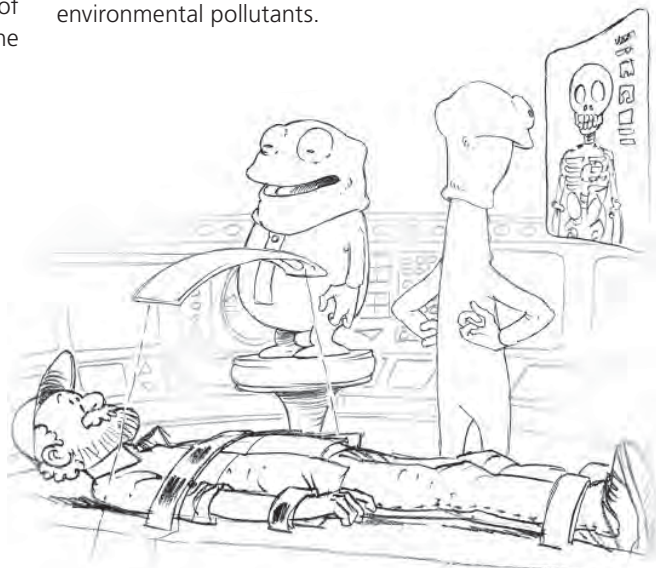
PCBs - were used widely as coolants and lubricants in electrical equipment, such as transformers and capacitors, until they were banned in Europe. PCBs are hazardous chemicals and persist and accumulate in our bodies. Humans may be exposed through eating certain fish that contain relatively high levels of PCBs. Chronic low-level exposure can cause liver damage, reproductive abnormalities, immune suppression, neurological and endocrine system disorders, retarded infant development, and stunted intellectual function. PCBs are found widely in human blood, fatty tissue and breast milk.

Box 13:

70 non-natural substances - Irrespective of where we live or what we do, we are every day exposed to numerous man-made chemical substances that enter our blood and may accumulate in our bodies, where they could damage our health. In WWF's Generation X campaign in 2005, samples from 39 European women volunteers were shown to contain a total of 73 man-made chemicals. The blood of each woman in the three-generational study contained organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs), both of which are banned in Europe. Most blood samples contained at least one brominated flame retardant (BFR) and a "non-stick" perfluorinated chemical (PFC), such as PFOS or PFOA, which are mostly unregulated. Sixteen women had Triclosan in their blood, and the blood of nine women contained Bisphenol A.

Box 17:

Low sperm count - A common cause of male infertility is low sperm count. There are generally no predictable signs of low sperm count other than infertility. One of the causes for infertility is exposure to environmental pollutants.



What can you do yourself?

LEARN MORE ABOUT THE IMPACT OF MAN-MADE CHEMICALS ON OUR HEALTH

- Do the quiz: how toxic are you?
http://www.panda.org/about_wwf/what_we_do/policy/toxics/reduce_your_risks/toxic_quiz/index.cfm
- Find out more about pesticides and what they do:
Get the “pesticides in produce” guide: <http://www.foodnews.org/>
- Read “Cutting back on pesticides for healthier lives”, a briefing by HEAL and Pesticides Action Network available at http://www.env-health.org/IMG/pdf/Briefing_Feb_2007_FINAL-2.pdf
- Find out more about the health risks of DDT and other pesticides, visit the Pesticide Action Network site: http://pesticideinfo.org/Detail_Chemical.jsp?Rec_Id=PC33482

REDUCE YOUR EXPOSURE TO HARMFUL CHEMICALS

- Check out the Green guide of cleaning products:
<http://www.thegreenguide.com/doc/gginnews/commercialappeal110207>
- Read the UK Women’s Environmental Network fact sheet on the alternatives for Household Cleaning at http://www.wen.org.uk/general_pages/resources.htm
- Find out which foods to avoid. The Pesticides Action Network UK has identified the “worst ten foods for pesticide residues” <http://www.pan-uk.org/Projects/Food/index.htm>
- How to avoid exposure to the harmful chemical PBDE?
<http://www.doh.wa.gov/ehp/oehas/pbde/pbdeavoidexposure.htm>
- Limit your exposure to PCBs in fish, read the “Healthy fish, healthy families” leaflet available in the “Toxics and health” section on Physicians for Social Responsibility (USA) website at <http://www.psr.org> (Environment and Health/Resources/Toxics and health)
- See Fact sheet on Mercury in Fish produced by HEAL and Healthcare without Harm (HCWH): http://www.env-health.org/IMG/pdf/Fish_consumption.pdf

TAKE ACTION WITH OTHERS

- Join the **HEAL postcard campaign: A vote for my child’s health** to ban the use of pesticides in children’s playgrounds: http://www.env-health.org/IMG/pdf/HEA_013-07_FINAL.pdf
- Find out more about human biomonitoring initiatives, visit the Chemicals Health Monitor, “Human Biomonitoring” section at <http://www.chemicalshealthmonitor.org>

UNFORGETTABLE CINDERELLA (pages 11-14)

Box 7:

Oxybenzone: is used as an ingredient in sunscreens and other cosmetics because it absorbs UV-A ultraviolet rays. A recent study by the U.S. Center for Disease Control (CDC) reveals that 97% of Americans are contaminated with oxybenzone (also known as benzophenone). UV filters have been linked to allergies, hormone disruption, and human cell damage.

Phthalates: Phthalates are a group of chemicals used in hundreds of products, such as vinyl flooring and wall covering, toys, glues and inks and as additives in cosmetics and toiletries. Studies show that some phthalates damage the developing sexual organs in male animals, such as rats. Certain phthalates, including DEHP, are therefore suspected of being hormone disruptors in humans.

Triclosan – is an anti-bacterial chemical used in soaps, deodorants, toothpastes, shaving creams, mouth washes and cleaning supplies and infused in an increasing number of consumer products, such as kitchen utensils and even socks. It is very a toxic chemical that accumulates in our body. Studies have raised concerns about their capacity to cause cancer, alter our hormonal system and create development problems in children. In the US, it is classified by the United States Environmental Protection Agency as a probable human carcinogen.

Toluene: Toluene is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes. It can affect the nervous and immune system and cause developmental delays in children.

Fragrances – fragrance enhancers are added to many products, such as perfumes, cosmetics and laundry detergents. The commonly used polycyclic musks are persistent chemicals, which accumulate in the food chain. They may cause skin allergies and some research suggests they may be capable of interfering with hormonal systems in fish and mammals. The EU chemicals legislation known as REACH has put musk xylene on a list of “substances of very high concern”, which may eventually be banned from the EU market.

Box 16:

My face feels a little tingly: A cocktail of different chemical substances in personal care products and cosmetics, such as fragrances and preservatives, can cause skin allergies and irritation. Allergy can lead to a skin rash or eczema where the product is applied. The application of a cocktail of products containing hazardous chemicals could also lead to cancer, respiratory disorders, diseases of the nervous system and other conditions. This is known as the “cocktail effect”.



What can you do yourself?

LEARN MORE ABOUT THE IMPACT OF MAN-MADE CHEMICALS ON OUR HEALTH

- Take part in the Toxic Tour, Women's Environmental Network (WEN), cosmetics, to find the hazardous chemicals in your cosmetic products and the action you can take: <http://www.wen.org.uk/cosmetics/resources.htm>
- Find out about the "Dirty dozen" chemicals in cosmetics: 12 chemicals used in cosmetics to be avoided: <http://www.thegreenguide.com/doc/122/dirtydozen>
- Toiletries: What is lurking in your soap? <http://www.foodandwaterwatch.org/water> (Scroll down to Learn more/Fact sheets).

REDUCE EXPOSURE TO HARMFUL CHEMICALS

- Check out the Skin Deep Cosmetic Safety Guide: <http://www.cosmeticsdatabase.com/special/parentsguide/index.php?nothanks=1>
- How to avoid phthalates: 3 Steps to Help Avoid a Hormone-Mimicking Chemical <http://www.thedailygreen.com/environmental-news/latest/phthalates-47020418>
- Sunscreens and sunblocks: what to look for? <http://www.thegreenguide.com/reports/product.mhtml?id=27&sec=2>
- Check out the sunscreen guide: what works and what is safe? <http://www.cosmeticsdatabase.com/special/sunscreens/summary.php>
- Find out which kinds of products contain the anti-bacterial chemical Triclosan and what impact it may have on our health <http://www.cosmeticsdatabase.com/ingredient.php?ingred06=706623¬hanks=1>
- Check out cosmetic products containing oxybenzone, phthalates and others <http://www.cosmeticsdatabase.com>

HELP SPREAD THE MESSAGE

- Find out and share with others how children are exposed to the chemical cocktail effect every day. Read the results of a survey carried out by the Environmental Working Group: <http://www.cosmeticsdatabase.com/special/parentsguide/Exposuresaddup.php>
- Write to the manufacturer if you want to know more about the ingredients of a product that you recently bought that lacks the information you want on the label. A sample letter can be found on the "Choosing our Future" website at www.choosingourfuture.eu
- Ask assistants and managers in shops about the ingredients used in the products before you buy them. A shopper's guide to toxic-free products and your rights under the new EU chemical safety legislation REACH is available at http://www.wecf.eu/english/publications/2007/reach_guide.php

HI UNCLE! STILL A BIT CRAZY? (pages 15-18)

Box 6:

Pesticides: Around 471 different pesticide substances are currently used in the European Union, including at least 45 substances, according to EU classification, that are carcinogenic, mutagenic, or toxic to reproduction, or which may have endocrine disrupting properties. More than 140,000 tonnes of synthetic pesticides are applied to EU food crops each year - equivalent to 280 grams of pesticides per European citizen. Almost half (45.7%) of food items tested are shown to contain pesticide residues, including 5% - one item in 20 - at levels above EU legal limits. While fruits and vegetables are most likely to be contaminated with pesticides, cereals, processed foods and baby foods are also often affected.

Box 9:

Organic life: an organic lifestyle means not only eating organic food but also choosing to avoid synthetic chemicals and becoming aware of your environment and your health. Organic food is produced using methods that avoid the use of man-made fertilisers, pesticides, growth regulators and livestock feed additives. An organic life means healthy and sustainable consumption, such as eating and buying locally-produced food, choosing consumer, cleaning and gardening products that contain the least hazardous chemicals, and reducing energy consumption to avoid further air pollution and climate change.



What can you do yourself?

SEVEN EASY STEPS TO HEALTHY AND SUSTAINABLE LIVING

- Buy organic, locally-produced food
- Discover the top 10 most important fruits and vegetables to buy organic:
<http://www.pan-uk.org>
- Learn more about the benefits of organic food, see Frequently Asked Questions
<http://www.soilassociation.org/web/sa/saweb.nsf/shop/index.html>
- Check how to reduce exposure to toxic chemicals in your home
http://www.panda.org/about_wwf/what_we_do/policy/toxics/reduce_your_risks/index.cfm
- Learn more about the least toxic home and garden pest control products <http://www.pan-uk.org/>
- Buy from the companies that have taken specific steps to substitute hazardous substances in different product areas. Find out which ones they are at: <http://www.greenpeace.org/raw/content/international/press/reports/chemical-home-company-progress.pdf>
- A healthy and sustainable life means reducing consumption and your contribution to climate change: Visit "What you can do about climate change: 50 top tips" www.climnet.org

ASK THOSE RESPONSIBLE FOR CHANGE!

- Write to companies to request information about harmful substances in the products you buy and ask them to substitute these chemicals for safer ones. Sample letter available on the "Choosing our Future" website at www.choosingourfuture.eu (Take Action!).
- Read "Navigating REACH: An activists' guide to using and improving the new EU chemicals legislation"
<http://www.greenpeace.org/eu-unit/press-centre/reports/navigating-reach>
- Ask your government, MP or MEP for stronger legislation on chemicals and for safer alternatives to harmful chemicals to be made available on the EU market. For a sample letter, visit the "Choosing our Future" website at www.choosingourfuture.eu (Take Action!).
- Join the **HEAL postcard campaign: A vote for my child's health** to ban the use of pesticides in children's playgrounds: http://www.env-health.org/IMG/pdf/HEA_013-07_FINAL.pdf
- Ask your government to promote increased production of organic, locally produced food and provide information on alternatives to pesticides. To learn how you can get involved visit the Soil Association website
<http://www.soilassociation.org/web/sa/saweb.nsf/getinvolved/index.html>

SHARE INFORMATION WITH ADOLESCENTS AND CHILDREN

- Certainly don't miss the hilarious rebellious organic fruit and vegetable war on the French internet channel www.terre.tv then "La Guerre des Etats" in the search function. (The film shows with sub-titles in French because the original version is English.)
- Why organic food? Find out more, including great tips for healthy children:
<http://www.kidsorganics.com/Why%20Organics.htm>

What EU chemicals policy could achieve

The European Union has become a recognised global model for policies that protect the health and environment of its citizens. However, often the legislation has weaknesses and turns out to be not as ambitious as we have been led to believe. This is particularly the case in relation to the application of the precautionary principle, which if more rigorously applied, would protect our health better.

Below we present you with our perspective on a range of policies related to chemicals. Even though these initiatives are moving in the right direction, they are sometimes still not adequately protecting our health.

Making improvements in chemical safety

REACH: a first step towards chemicals management in Europe

In 2007, a new law on chemicals called REACH (Registration, Evaluation, Authorisation and restriction of Chemical substances) entered into force in the European Union. One of its aims is to improve the protection of human health and the environment through better control of chemical substances. Until now, the vast majority of the 100,000 chemicals available on the market have not been adequately tested for human health or safety.

Over the next decade, thousands of chemicals will be registered, some of them will be further evaluated, and some chemicals will have to be replaced by safer alternatives. The most harmful chemicals, called “substances of very high concern”, will be put on a “Candidate List” and must obtain authorisation if they are to remain available on the market.

The list will include chemicals that:

- cause cancer, damage genes or
- are toxic to reproduction, or
- build up and persist in our bodies, or
- have hormone disrupting or other harmful properties.



to information from manufacturers on whether a given product produced in Europe contains any of the substances on the list.

REACH has the merit of being a first step towards a more responsible approach to chemicals management. However, it still is inadequate in many ways. For example, the lengthy authorisation process leaves the door open for industry to continue selling some harmful chemicals. Chemical companies will still not be legally required to give sufficient safety information on the majority of chemicals in use today. Each chemical will be assessed for its risks separately even though research clearly shows that many substances can act more powerfully together in our bodies (the so-called “cocktail effect”). Equally importantly, many key decisions are being delayed, for example whether industry must always replace substances that can mimic hormones (endocrine disruptors) with safer alternatives wherever substitutes exist.

More information can be found on the “Chemicals policy, including REACH” section of HEAL’s Chemicals Health Monitor website at www.chemicalshealthmonitor.org

In October 2008, the first so-called Candidate List was published. Consumers now have the right, on request,

An activists’ guide to using and improving the EU’s chemicals legislation, called “Navigating REACH” is available at www.chemicalshealthmonitor.org/spip.php?article273

Tightening up regulations on pesticides

Protecting our children’s health

Europe is currently reviewing its EU policy on pesticides. One of the objectives is to reduce the impact of pesticides and its negative effects on our health and the environment. A proposal from the European Commission in 2006 sets out to modernise the system that permits the use of chemical pesticides, taking into consideration scientific evidence and their safety assessments.

Many pesticides are overused in EU countries, end up in our food, and some pose a serious threat to human health,

especially to children’s health. Relatively low doses of hazardous pesticides may be a factor in the occurrence of various diseases including cancer, neurodevelopmental disorders, Parkinson’s Disease, asthma and allergies. Strong legislative measures are therefore needed to protect human health and to address the special vulnerability of children, women of childbearing age and pregnant women, and to prevent their exposure to hazardous pesticides.

The so-called “pesticides policy package” proposed by the

Commission includes different pieces of legislation and a strategy*. These proposals present a once-in-a-generation opportunity to reduce pesticides use, and to update existing rules on how pesticides are approved by bringing them into line with current scientific understanding of the health impacts of dietary exposure to hazardous pesticide residues.



Hopefully, the final package (expected by the end of 2008 - beginning of 2009) will include a ban on the sale and use of pesticides linked with cancer, DNA mutation, reproductive toxicity, and hormonal disruption (the so called "cut-off criteria"). Pesticides in these categories together contaminate up to 22% of food items tested under the European Community food monitoring programme. Members of the European Parliament supported such a ban in their first reaction to

the Commission's proposal (first reading).

We would like to see two additions to the final package: a ban or severe restriction on pesticides that may damage our immune and neurological systems, and harm foetal development, and a ban on pesticide spraying in and around "sensitive areas". Currently, pesticides are sprayed in fields bordering residential areas and playgrounds. They are also sprayed in parks and used in gardens around healthcare facilities where children and vulnerable groups, such as pregnant mothers, spend time.

* *The "pesticides policy package" includes the "Thematic Strategy", a Directive on the Sustainable Use of Pesticides, and a Regulation on placing plant protection products on the market.*

More information on HEAL website - Pesticides section: www.env-health.org/r/68, Pesticides Action Network Europe website: www.pan-europe.info and MDRGF website: www.mdrgf.org

Ensuring beauty and hygiene products are safer

EU cosmetics legislation: an opportunity to avoid hazardous chemicals?

The Cosmetics Directive is the main EU law that regulates the manufacture and sale of beauty and hygiene products on the European market. This includes make-up and perfume and also products such as sunscreens, toothpaste, deodorants, shampoo and baby care goods, many of which have an important place in our everyday lives.

The main aim of this directive is to ensure that cosmetics are not harmful under normal or foreseeable conditions of use. Over the years since its adoption in 1976, it has been substantially revised.

The European Commission has recently announced new proposals to change the EU cosmetics law to:

- reinforce the responsibility of manufacturers for ensuring the safety of their products,
- simplify the existing regulatory system and
- get rid of certain existing inconsistencies in the law.

Under the new proposals, minimum requirements for product safety assessment have been established to ensure that manufacturers have to prove that their products are safe.

However, as it stands, the proposed law will allow some substances classified as carcinogenic, mutagenic or toxic for reproduction (CMR) to be used in products. This weakens the current law in which these substances are automatically banned.



HEAL considers that the current ban on existing CMRs should be maintained and that the precautionary principle should be applied in the area of cosmetics. For example, cosmetics should not contain endocrine-disrupting chemicals.

This law is now being discussed in the decision-making institutions of the EU, the Parliament, and the Council. The new law that emerges from the political process is likely to come out in 2009.

More info: Consolidated version of the Cosmetic Directive, http://ec.europa.eu/enterprise/cosmetics/html/consolidated_dir.htm

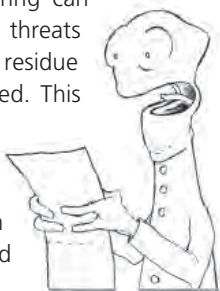
See also: "Cosmetics free from dangerous chemicals" in the BEUC's 8 priorities for the French Presidency, The European Consumers' Organisation (BEUC), Paris, 19 June 2008, <http://www.beuc.eu>

Monitoring what we have in our bodies

The EU Human Biomonitoring programme

Human biomonitoring (HBM) is a scientific technique that aims to assess people's exposure to chemical pollutants by measuring the levels of these substances in human tissues and fluids (blood, hair, urine, breast milk and so on). Through linking biomonitoring results with environmental and health data, we will be able to better understand the impact of multiple exposure to harmful chemicals in our body, and decide which measures are necessary to better protect human health and the environment.

The European Union has launched an initiative to harmonise HBM data from different EU countries. The idea is to allow links to be made between trace levels of pollutants in human fluids and possible health effects so that policy makers can fine tune measures to reduce exposure to certain chemicals where necessary. Human biomonitoring can provide an early warning of potential threats to human health. It can also show that residue levels fall when a substance is banned. This has been the case for DDT. Since the ban, trace levels in breast milk have fallen. Similarly, trace levels of lead in children's blood have fallen dramatically since the ban on leaded petrol in Europe.



No overall European inventory on human biomonitoring activities currently exists. However, the EU has committed itself to launching a pilot programme across EU countries so that biomonitoring levels will be comparable. This initiative is still in its preparatory phase.

To find out why the EU believes biomonitoring is important and what they expect to gain from it, see "Human biomonitoring - breaking the divide between environment and health" at http://ec.europa.eu/environment/health/pdf/hbm_leaflet.pdf

To find out how communities are using biomonitoring to advocate for better protection from chemicals, see WWF's Generation X report, "European Family Biomonitoring Survey", available at: assets.panda.org/downloads/generationsx.pdf and visit the Commonwealth Biomonitoring Resource Center <http://www.commonweal.org/programs/brc/index.html>

To find out more about public interest campaigns and the latest news on EU human biomonitoring initiatives, visit the Human Biomonitoring section of the Chemicals Health Monitor at <http://www.chemicalshealthmonitor.org>

Glossary

The references in this glossary are government or international agency website sources wherever possible.

Information on many diseases related to chemical exposure is available on the Chemical Health Monitor website www.chemicalshealthmonitor.org

Allergy – An allergy is an overly sensitive reaction by your body to a particular stimulus, known as an allergen. People who have allergies are often sensitive to more than one allergen, such as dust, pollen, tobacco smoke, certain household products, and pesticides.

<http://www.nlm.nih.gov/medlineplus/allergy.html>

<http://www.nlm.nih.gov/medlineplus/indoorairpollution.html>

Asthma – Asthma is a chronic disease that affects your airways. Exposure to certain chemicals or irritant chemicals, such as tobacco smoke, certain pesticides, paint, hairdressing products and so on can provoke asthma. It is a serious health problem that affects worldwide millions of adults and children every day.

<http://www.nlm.nih.gov/medlineplus/asthmainchildren.html>

<http://www.hse.gov.uk/asthma/index.htm>

Benzene – Benzene is a component of products derived from coal and petroleum and is found in gasoline and other fuels. It is produced by burning. Benzene is also used in the manufacture of plastics, detergents, pesticides, and other chemicals. It has been associated with certain types of cancer, such as leukaemia.

<http://www.epa.gov/safewater/dwh/c-voc/benzene.html>

<http://www.nlm.nih.gov/medlineplus/secondhandsmoke.html>

http://www.atsdr.cdc.gov/csem/benzene/physiologic_effects.html

Bioaccumulation – This means the accumulation of a substance, such as a toxic chemical, in various tissues of a living organism. Substances that bioaccumulate are persistent in the environment, they do not break down but rather accumulate in our bodies and in wildlife.

Bisphenol A – BPA is a man-made chemical substance found in polycarbonate plastic (PC). It is produced in high volumes and used in every day products, such as the lining of tin food cans and plastic bottles. BPA can leach from the tin or bottle into the food. It is a recognised endocrine disrupting chemical, which means that it can disturb our hormone systems.

http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/bisphenol-a_fs-fr_e.html

http://www.chemicalsubstanceschimiques.gc.ca/faq/bisphenol_a_qa-qr_e.html

Bronchitis – Bronchitis is an acute inflammation of the air passages within the lungs. It can occur when you inhale

fumes or dusts that irritate the lungs. Chemical solvents and tobacco smoke have been linked to acute bronchitis.

http://www.emedicinehealth.com/bronchitis/article_em.htm

CMR chemicals – an abbreviation for chemicals that are Carcinogenic – those that cause cancer, Mutagenic – those that cause change in DNA, and Reprotoxic, meaning they are harmful to human reproduction and can cause miscarriages and birth defects.

Cocktail effect – a term commonly used to describe the possible effect of being exposed to a mixture of chemical substances, for example, several different pesticides or chemicals in cosmetics. Testing of contaminants usually takes place one by one and does not take into account the effect of combinations of different chemicals that create a “cocktail effect”.

<http://www.food.gov.uk/safereating/chemsafe/pesticides/pesticidesglossary/>

For further explanation, see Chemicals Health Monitor website, www.chemicalshealthmonitor.org (see section on “Chemicals and Diseases – Breast Cancer – Publications”). The “cocktail effect” is explained in a publication entitled “Factors influencing the risk of breast cancer – established and emerging”, page 9)

DDT – DDT (dichloro diphenyl trichloroethane) is an organochlorine pesticide (OCP), which is banned in Europe. The International Agency for Research on Cancer (IARC) classifies DDT in group 2B as “possibly carcinogenic to humans”. <http://monographs.iarc.fr/ENG/Classification/crthgr02b.php>

DEHP – or Di (2-ethylhexyl) phthalate is a chemical compound widely used to soften PVC plastic in consumer goods and some medical disposable devices. It can leach from the PVC and has been classified by the EU as a CMR because it is toxic to reproduction. See also “Phthalates”.

Endocrine Disrupting Chemicals – EDCs have the ability to mimic our hormones or interfere with the hormonal systems of people and wildlife, in particular with the thyroid hormones and sex hormones. The endocrine system is made up of the glands, such as the pituitary and the thyroid, which make hormones. In lay terms these chemicals are known as hormone disruptors.

<http://www.chemicalshealthmonitor.org> (See Resource – Glossary)

Exposure – When toxic chemicals are released, either through industrial or agricultural processes or from consumer products, they make their way into our bodies through the lungs (by us breathing in), through the skin (by absorption of toiletries cosmetics, for example), and through the mouth, which is known as ingestion.

<http://www.toxicnation.ca/toxics-in-your-body>

Falling fertility – Infertility is a disorder of the reproductive system diagnosed when a couple fails to have a child after one year of unprotected, well-timed intercourse, or when the woman suffers multiple miscarriages. There is mounting scientific evidence that fertility decrease in men is related to exposure to certain man-made chemical substances.

<http://www.chemicalshealthmonitor.org> (See Diseases and Conditions - Infertility)

Harmful/hazardous man-made chemicals – Chemicals are vital to life but some synthetic chemicals are harmful. We are exposed to chemicals everywhere - in our homes, our schools, in the air we breathe and the food we eat. Some of them are toxic but remain in our bodies because they break down only very slowly or not at all. They can interfere with our hormone system, cause cancer, alter our genetic system or affect the intelligence and behaviour of our children. See CMR chemicals and PBT at:

<http://www.chemicalshealthmonitor.org>

Hormone disrupting chemicals or Hormone disruptors – formally known as **Endocrine Disrupting Chemicals** have the ability to mimic our hormones or interfere with the hormonal systems of people and wildlife, in particular with the thyroid hormones and sex hormones. The endocrine system is made up of glands, such as the pituitary and the thyroid, which make hormones. In lay terms these chemicals are known as hormone disruptors.

Oxybenzone – is a chemical used as an ingredient in sunscreens and other cosmetics because it absorbs UV-A ultraviolet rays. Oxybenzone is also a penetration enhancer, a chemical that helps other chemicals penetrate the skin. It is also known as benzophenone. In the EU, products intended for skin protection must be labelled if they contain 0.5% or more oxybenzone. There remain many gaps in the data on the safety of oxybenzone and its toxic impact on health.

<http://www.cosmeticsdatabase.com/ingredient.php?ingred06=704372&refurl=/wordsearch.php?query=oxybenzone&¬hanks=1>

PBDE – polybrominated diphenyl ethers (PBDE) are flame-retardant chemical compounds added to plastics and foam products to make them less likely to catch fire. While the US EPA has classified it as a possible carcinogen (causing cancer), the International Agency for Research on Cancer (IARC) does not classify it as a carcinogen pointing out that

the data is lacking. It is known to persist in the environment and therefore categorised as a Persistent Organic Polluting chemical (POP). We are exposed to these types of chemicals mainly by inhalation, ingestion and skin contact with house dust. Because PBDE dissolve readily in fat, they can accumulate in fatty tissue and breast milk, and may therefore be passed on to babies and young children.

<http://www.atsdr.cdc.gov/tfacts68-pbde.html#bookmark02>

<http://www.ourstolenfuture.org/newscience/oncompounds/PBDE/whatarepbdes.htm>

PCBs – Polychlorinated biphenyls represent a group of man-made chemicals with 209 different PCB molecules, known as “congeners”. The commercial products were mixtures. PCBs were used widely as coolants and lubricants in electrical equipment such as transformers and capacitors, as heat exchange fluids and as flame retardants. PCBs are hazardous, persistent and bioaccumulative chemicals. Chronic low-level PCB exposures can cause liver damage, reproductive abnormalities, immune suppression, neurological and endocrine system disorders, retarded infant development, and stunted intellectual function. Even though the use and marketing of PCBs in the European Community has been very heavily restricted since 1985 and they are no longer produced in any EU country, PCBs are still frequently found in human blood serum, adipose (fat tissue) and breast milk.

http://assets.panda.org/downloads/fact_sheet___pcbs_food.pdf

Pesticides – A collective term for chemicals whose properties are capable of killing unwanted organisms. It includes *herbicides* - which kill plants, *insecticides* that kill insects, and *fungicides* that kill fungus. Some chemical compounds in pesticides accumulate in our body over the course of our lifetime. Work exposure to some pesticides can increase the risk of reproductive problems, and of developing Parkinson’s Disease later in life. Exposure of the unborn child in the womb to traces of chemicals found in pesticides increase a future child’s risk of developing chronic diseases or dysfunctions.

<http://www.epa.gov/pesticides/about/index.htm>

<http://www.nlm.nih.gov/medlineplus/pesticides.html>

PFCs – Perfluorinated chemicals, including PFOA, are used in non-stick coatings on cooking utensils and are also used in fast-food containers, carpets, furniture and a host of other everyday household products. Recent studies suggest that they are retarding babies’ growth. For example, a Danish study shows that PFOA levels in maternal plasma are inversely related with low birth weight.

<http://www.ewg.org/node/21726>, see section on Health concerns

PFOA – Perfluorooctanoic acid belongs to the family of perfluorinated chemicals or perfluorochemicals, known as PFCs. They are used to make products that resist heat, oil, stains, grease and water. PFOA is used in the coatings of non-stick cookware and all-weather clothing. Several scientific studies have shown it poses risks for the healthy development of babies and children.

<http://www.health.state.mn.us/divs/eh/hazardous/topics/pfcshealth.html>

Phthalates – are a group of chemicals used in hundreds of products, such as toys, vinyl flooring and wall covering, detergents, lubricating oils, food packaging, pharmaceuticals, blood bags and tubing, and personal care products, such as nail polish, hair sprays, soaps, and shampoos. They are endocrine disrupting substances that can interact with hormone systems. Particular concern exists about their effect on the sex hormones – the female oestrogens and male androgens – because of the important roles of these sex hormones in the development of the reproductive system.

http://www.cdc.gov/exposurereport/pdf/factsheet_phthalates.pdf

<http://database.healthandenvironment.org/index.cfm?toxinID=2625>

POPs – Persistent organic pollutants, known as POPs, are toxic substances released into the environment through a variety of human activities. They have adverse effects on the health of people, wildlife and ecosystems.

United Nations Environment Programme, chemicals
<http://www.chem.unep.ch/pops/>
International POPs Elimination Network (IPEN) website is at
<http://www.ipen.org/>

Toxic substance – A substance is seen as toxic if it represents a threat to human and animal health. While some toxic substances can be quickly broken down in the body or in the environment, those that are also persistent and bioaccumulative, are of very high concern.

<http://www.chemicalshealthmonitor.org>

Toluene – comes from benzene and is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber, and in some printing and leather tanning processes. It can have short- and long-term adverse health effects. Inhaling toluene can cause euphoria, dizziness and confusion while longer term the effects are on the central nervous system and many other organs. Exposure in the mother-to-be can affect the neurodevelopment of her future child.

<http://www.tripdatabase.com/spider.html?itemid=206586>

<http://www.atsdr.cdc.gov/tfacts56.html>

<http://www.cosmeticsdatabase.com/ingredient.php?ingred06=706577>



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www.chemicalshealthmonitor.org

www.env-health.org/stopmercury

www.choosingourfuture.eu

* Formerly known as EPHA Environment Network (EEN)

The **Health and Environment Alliance** aims to promote a healthy environment for healthy people. It represents a diverse network of more than 50 groups representing citizens, patients, women's groups, health professionals, and environmental advocates across Europe. Working at the European level, HEAL focuses on air quality, chemicals, mercury, pesticides, climate change, children's vulnerabilities and many other aspects of EU policy that are relevant to people's health and the environment.

Chemicals Health Monitor provides an online source of information on chemicals and diseases www.chemicalsmonitor.org The project aims to highlight the rationale for more restrictions on certain chemicals, and for the substitution of all hazardous chemicals. It was launched by the Health and Environment Alliance (HEAL) in conjunction with partner organisations.



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MDRGF (Movement for the Rights and Respect of Future Generations) is a French not-for-profit organization founded in 1996. MDRGF works on issues related to toxic chemical pollution and particularly on pesticides, which are a major public health issue in France. Its aim is to bring attention to the negative consequences of industrial agriculture and promotes real alternatives, such as organic farming and integrated pest management (IPM) methods. MDRGF is the leading NGO working on the pesticide issue in France.

The "Choosing our Future" website containing the cartoons, the text from this publication, and other materials is available at www.choosingourfuture.eu

Important disclaimer: The cartoon depictions and text in this publication are general information and are not intended to substitute for informed professional medical, scientific or other professional advice. The publication is not intended either to endorse or condemn, and expressly disclaims liability for any unintended reference to any product, manufacturer, distributor, service or service provider.

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