

Sustainable Chemistry, Sustainable Development, Investment and Economics

Lessons from our work
for SC criteria and
principles

ISC3 Launch

www.wecf.org



BERLIN
18 May 2017

Introduction



Women Engage for a Common Future

WECF International - network 50+ countries



Women 2030 Framework Program with **European Commission**: engaging women's CSOs in SDG implementation - 50 countries



Women's Major Group at the United Nations **Agenda 2030** – SDGs and **UN Environment** – alliance of 800 CSOs

WECF & 17 SDGs



Uganda:
Bringing our local partners to international policy negotiations. Here, our partner Gertrude sharing women's experiences and priorities from her local work.



Globally:
Our greatest asset when working to achieve the SDGs is our partners all around the world. Together we cover all expertise of gender empowerment and all sectors of the 17 SDGs.



Tajikistan:
Giving tools to our partners so that they can monitor results of sustainable agriculture and their women land rights project.

South Africa:
Training people locally to sustain their life! South African woman trained to produce her own food in her backyard.



Georgia:
Reducing deforestation and land erosion by introducing solar energy and efficient heating systems for households.



Black Sea:
Demonstrating how to reduce land based pollution of water resources, by building innovative domestic wastewater systems and studying the role of women and men's regarding (micro-) plastic pollution.



Globally:
Following the processes and influencing international climate negotiations, making sure gender equality is integrated. Here, with our network Women & Gender Constituency and delegates from Niger.



Romania:
By piloting projects on the local level, we gather evidence for change on policy level; here a project to improve health by ensuring clean drinking water with less nitrates and pesticide residues.



Kyrgyzstan:
Ensuring, with our school toilet projects, that girls no longer need to skip school when having their period for lack of safe sanitation facilities.



Uganda:
Setting up projects to help create equal access to financial resources and knowledge through, for example, this Ugandan village, saving and loan group* to develop sustainable agriculture.



Germany:
Educating and informing about the health risks of hormone-disrupting chemicals, currently not regulated by law, in daily use products. So consumers can take well-informed decisions and avoid products containing harmful chemicals.



Germany & Ukraine:
Training local partners to carry out energy audits and analysing energy consumption patterns. We are also building partners' capacity to propose and implement more energy efficient measures which are sustainable and affordable to people.



India & Uganda:
Facilitating knowledge transfer between communities. For example, our Indian partners training women in Uganda to produce biogas tanks by using local materials and women's traditional skills.



Europe:
Working with social-responsible local companies to promote innovations for toxic-free alternatives, in



Moldova:
Promoting gender-just and ecological economic development. For example, both women and men are included in the process when providing ecological sanitation in rural areas.



Bulgaria:
Demonstrating ecological, affordable water and sanitation systems for remote rural areas. Training women and men to develop local water and sanitation safety plans.



Georgia:
Training women and men in how to construct and maintain solar hot water systems, household biogas systems and insulate houses to save energy as well as costs.



UNEP



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International



2016

GLOBAL GENDER AND ENVIRONMENT OUTLOOK

The Critical Issues



GGEO

Chemical Projects ongoing



Sustainable Chemistry from NGO Perspective (global)

BRS - Gender Action Plan pilot projects Nigeria & Indonesia

REACH &33: opportunity for baby & children product sector (NL)

Nesting: Training & Website toxic-free children environment (FR)

SAICM: Beyond 2020 (global)

SAICM: Innovative non-chemical technologies (Western Balkans) ...



Beyond 2020: Sustainable Chemistry - NGO recommendations

IPEN / WECF

May 2017

We welcome the initiative by Germany to broaden the discussion about chemicals management and sustainability, including measures to advance Agenda 2030. The recommendations presented here are endorsed by the public interest NGOs listed at the end of the paper, and are based on the IPEN/WECF paper for SAICM entitled, "Beyond 2020: Green chemistry and sustainable chemistry", which was presented at the SAICM intersessional meeting in February 2017 in Brazil.¹ At its best, sustainable chemistry could shift the entire industry to safer production and improve environmental protection, consumer safety and occupational health and safety by eliminating hazards. The goal should be that countries not only manage dangerous chemicals better, but that industries design safer, non-toxic chemistries from the start.

1. Hazard reduction should be fully incorporated into a more precise definition along with a clear set of goals and indicators

The concept of sustainable chemistry is currently not fit for use in international, regional or national policy frameworks. It lacks a clear definition that incorporates hazard reduction, or a set of goals and indicators. The OECD and UBA definitions of sustainable chemistry describe a broad mission, but do not detail any specific targets for the reduction of hazard or improvement of human or environmental health. The aim of sustainable chemistry is vaguely described as, "to reach sustainability in chemistry." Leaving the term "sustainable chemistry" without a clear definition invites labeling all kinds of current chemistries as sustainable chemistry, watering down the term to render it nearly useless and leaving opportunities to "greenwash" chemistries with a term that suggests social or environmental benefits that do not exist. Possible examples of such misleading "green" efforts could be using HBCD in insulation materials, or mercury in light bulbs for the sake of preventing climate change. A more precise definition of sustainable chemistry is needed to clarify the relationship between hazard reduction and other desirable social or environmental outcomes. Green chemistry should be an obligatory part of sustainable chemistry so that hazard reduction is fully incorporated into the sustainable chemistry concept. Overall, sustainable chemistry must assure progress towards chemical safety and the sound management of chemicals with hazard reduction at its core.

2. Prioritize the reduction and elimination of hazardous chemicals from production and use

Sustainable chemistry can contribute to the Post 2020 SAICM process by prioritizing hazardous chemicals for phase-out and substitution. Informed substitution should be achieved by utilizing the process of alternatives assessment. A fundamental goal of alternatives assessment is to ensure that a

safer alternative is implemented. A safer alternative "represents an option that is less hazardous to humans and the environment than the existing chemical or chemical process. A safer alternative to a chemical of concern may include a chemical substitute or a change in materials or design that eliminates the need for a chemical alternative."² A future SAICM should include a focus on the goal of reducing and eliminating the hazards from chemical production and use throughout the life-cycle.

3. Internalize costs and resource the elimination of legacy toxic chemicals

Sustainable chemistry has an important role to play in financing. Legacy issues and internalization of costs are two key issues that must be included in any future chemicals framework. To address the problem of toxic legacy chemicals a robust funding mechanism is needed that incorporates the principles of polluter pays and the public's right to know. None of the countries most threatened by legacy chemicals can finance remediation and clean up activities. Sustainable chemistry does not yet provide a solution for this problem, and it does not even mention it as a priority or a gap. Internalization of costs is another critical component of sustainable chemistry. It is often stated that sustainable products are more expensive than less hazardous ones. However, this is not true for many cases and does not take societal, health and environmental implications into account. Internalizing these externalized costs into the costs of production and the price of products would change the economics of sustainable chemistry and become a driver for less hazardous products and processes. We recommend measuring and disseminating the benefits of pollution prevention and the magnitude of externalized costs and exploring and implementing financing mechanisms to fully implement the polluter pays principle.

4. Include full disclosure of ingredients and information systems

The concept of sustainable chemistry should also include measures to ensure the "right to know" for consumers and users along the entire supply chain. Full transparency of chemical ingredients for all stakeholders along the entire supply chain is key to transforming the chemicals sector. Transparency can empower downstream producers, retailers, consumers and waste handlers to drive market demand for less hazardous products and processes.

This position is supported by the following organisations:

- ALHem (Safer Chemicals Alternative), Serbia
- AMAR Environment Defense Association, Brazil
- APROMAC Environment Protection Association, Brazil
- Arbeitskreis Frauengesundheit in Medizin, Psychotherapie und Gesellschaft e.V. (AKF), Germany
- Association of Environmental Education for Future Generations (AEEFG), Tunisia
- Balifocus Asia, Indonesia
- Basel Action Network, International
- Breast Cancer, UK
- Bund für Umwelt und Naturschutz Deutschland e.V. (BUND), Germany
- Casacem, Mexico
- Center for International Environmental Law (CIEL)

¹ National Research Council, A Framework to Guide Selection of Chemical Alternatives (2014), National Academies Press, page 13. <https://www.nrc.edu/catalog/18872/e-framework-to-guide-selection-of-chemical-alternatives>

Sustainable Water, Wastewater and Nutrient Management in Georgian Rural Communities



Sustainable Sanitation⁶ (SDG 4, 6, 10, 12)

The **Ecosan Toilet** (Urine Diverting Dry Toilet) can be implemented in or adjacent to the **house**, does not smell due to the separate collection and management of urine and faeces.

The Ecosan Toilet provides improved hygiene and **comfort**.

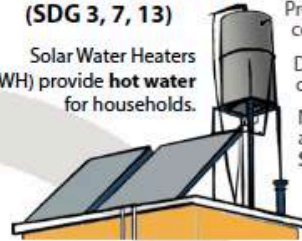


The Ecosan Toilet does not need water but **wood ash or saw dust** for "flushing".

The human excreta are safely managed.

Sustainable Energy¹ (SDG 3, 7, 13)

Solar Water Heaters (SWH) provide **hot water** for households.



Provides increased comfort and saves time.

Does not contribute to climate change.

No running costs or electricity are needed to run the Solar Water Heater.

Safe Use of Human Excreta⁵ (SDG 1, 6, 8, 12)

The use of organic fertilisers can enhance food **security**.

Human excreta is safely **managed** and does not pollute the groundwater and the environment.

Faecal **compost** is safely used as soil conditioner and organic fertiliser.

Human urine is safely used in gardening and agriculture as a nitrogen rich **liquid fertiliser**.



Gender equality⁷ (SDG 4, 5, 6, 8, 10, 11)

Women and men have equal say in decision making through **participatory approach**.

The women save **time** and can do income generation activities.

Girls and boys, women and men have **equal** access to safe water and sanitation.

The women enjoy the increased **comfort** of the technologies.



Water and Sanitation Safety Planning² (SDG 3, 4, 6, 10, 11, 17)

The Water and Sanitation Safety Planning (WSSP) is a risk based approach developed by WHO to protect public health and the environment.

The WSSP increases people's **awareness** about water, sanitation, health and environment.

The population starts to take **actions** to improve their living conditions.



Safe Use of Animal Manure⁴ (SDG 1, 6, 8, 12, 13)

The manure platform ensures the **safe containment** of animal excreta.

The manure can be applied as **organic fertiliser** in gardening and agriculture.

The animal excreta are safely managed and do not pollute the **groundwater** and the environment.

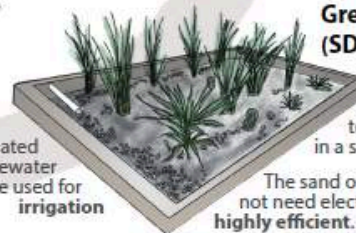


The treated wastewater can be used for **irrigation**

Greywater Management³ (SDG 6, 11, 12, 13)

The greywater (wastewater from households without toilet wastewater) is **treated** in a sand or gravel filter.

The sand or gravel filter does not need electricity and is **highly efficient**.



This project contributed to the



More information:

Footnote 1: [Construction of solar collectors for warm water](#), 2nd revised edition, WECF publication (2013).

Footnote 2: [Developing a Water & Sanitation Safety Plan in a Rural Community](#), WECF publication (2014).

Footnote 3: [Greywater Treatment in Sand and Gravel Filters: Low Tech Solution for Sustainable Wastewater Management](#), WECF publication (2015).

Footnote 4: [Let's talk about keeping livestock](#), http://roads.ge/userfiles/files/postcard_live_stock_1-01.jpg

Footnote 5: [WHO guidelines for the Safe Use of Wastewater, Excreta and Greywater](#), Volume 4 (2006).

Footnote 6: [Urine Diverting Dry Toilets - Principles, Operation and Construction](#), 2nd revised edition, WECF publication (2015).

Footnote 7: [Why gender equality will make or break the Sustainable Development Goals](#), Sascha Gabizon, World Economic Forum (2015).

- Example of Circular Economy – replacing phosphates (fossil) with re-used nutrients from waste water (WECF – UNEP project, Georgia)

Women and Chemicals

The impact of hazardous chemicals on women

A thought starter based on an experts' workshop



WBCF WICF

WBCF | Women In Europe for a Common Future
WBCF International for a Common Future | WICF



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International

From Science to Practice: WECF Best practice of awareness raising for parents, health experts and political decision makers

on hazardous chemicals, especially Endocrine Disrupting Chemicals (EDCs)



Studies show that EDCs play a role in e.g. disrupting human brain development, deterioration of male reproductive health, increased incidence of male and female hormone related cancers, and the increase in cardiovascular disease, obesity and diabetes. Most vulnerable groups are pregnant women, (unborn) babies and children. WECF calls for a precautionary approach. Chemicals that are known to have negative impact on the hormone system should be phased out and/or substituted. However as long as EDCs are not legally regulated, restricted and banned consumers are forced to take initiative supported by NGOs and science and refuse buying products containing EDCs.

WECF activities on reducing and avoiding EDCs

Content: The mobile App "Giftfrei einkaufen" (toxic-free shopping) released by WECF Germany supports consumers to find non-toxic products in various product groups, such as cosmetics, detergents, renovation products, toys, baby care products. The WECF App is one of the three most frequently used apps on toxic-free shopping in Germany.

Everybody can use the app easily: The buttons PRODUCTS and TOXINS guide you, whether you want to buy toxic-free shampoo or toys. With the app you can compare the displayed ingredients on a product with the list of harmful chemicals provided by the app. So you can easily find out which products you want to avoid. On other product groups, which do not have full disclosure of ingredients, the app gives you general tips how to avoid harmful chemicals.

Target Group: Consumers

Results: In three months the App had 7000 downloads.

Funding: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Environment Agency



Project Nesting

Content and main activities: The WECF program "Nesting" aims to inform parents and the health sector about concrete measures to prevent exposure to EDCs and other harmful chemicals. The program is conducted in 10 countries and will expand to Latin America and Portugal soon.

The Nesting project aims at providing new parents, and child health and childcare professionals with precise information and helpful practical advice so that they can make informed choices for healthier products and adopt new practices. Nesting informs via a web platform, trainings and guides, about the quality of the air and environment inside homes and day care centres, and describes the way in which products such as furniture and carpeting, cleaning agents and baby care products can affect indoor air quality, and lead to the exposure of children to toxic substances.

Target groups: Pregnant women, young parents, consumers, child health and childcare professionals

Results: Currently around 7000 visitors per month are using the website, which is at the moment available in eight languages (Dutch, English, French, German, Greek, Hungarian, Estonian and Spanish).

Funding: EU Commission, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Environment Agency, Referat für Gesundheit und Umwelt City of Munich



www.nestbau.info



www.projectnesting.fr

Trainings

Content: WECF provides workshops for parents, child health and childcare professionals, and those who want to become Nesting trainers. Nesting workshops and trainings are a place for discussion and information on topics related to the environment of the newborn (furniture, decoration products, childcare articles, cleaning products, food containers etc.).

People trained by WECF experts on environmental health drive these fun and interactive sessions designed to protect young children and the future of chemical pollution of the indoor environment. This workshop takes place in family centers as well as in frame of conferences for health care professionals and in children day care centers.

Target groups: Parents, child health and childcare professionals, and those who want to become Nesting trainers in the future.

Results: In the last 4 years approx. 3000 participants were trained in France, the Netherlands and Germany.

Funding: Referat für Gesundheit und Umwelt City of Munich, French Ministry of Environment, Région Rhône-Alpes, Région Île-de-France



Nesting training in France



Guides and publications

Content: In frame of the Nesting project WECF has published so far information guides in eight languages in order to provide tips to parents on how to choose toxic-free products. The brochures provide concise information on the most common and hazardous substances found in toys, baby care products, body care products, do-it-yourself products, textiles, detergents, inform about the potential dangers and give concrete advice on how consumers can play it safe when buying toys for their children. One special guide was created for EDCs. Target groups are parents, child health and childcare professionals. Additionally WECF released the brochure "Breastcancer and the Environment" and "Gestörte Weiblichkeit" (Germany) which refers to the relation between EDCs and Women's Reproductive Health.

Target groups: Consumers, child health, health and childcare professionals, policy makers

Results: Most of the guides are available in English, French, German and Dutch. The Toys Guide is available in 13 languages. The guides can be downloaded from the website www.estbau.info, www.projectnesting.it, www.nesting.org. About 200,000 guides and publications had been disseminated at conferences, fairs, workshops since the first edition was released in 2009.

Funding: EU Core, German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Environment Agency, EU LIFE+, French Ministry of Environment, EEH

Exhibition on EDCs



Content: WECF has created a touring exhibition on EDCs tailored down to the information needs of health insurance companies and medical professionals. The exhibition explains (in German) what EDCs are, how they interfere with the hormone system and the related health effects, exposure routes, a economic costs, and recommendations. The exhibition consists of seven pillars of cubes, and aim to be shown at German health insurance companies, national congresses of the health sector, national conventions of political parties, or in the German Bundestag or Federal Parliaments. The aim is to raise awareness on the topic and find new allies for our advocacy work on national and EU level. The exhibition is an innovative tool, which has not been tried in Germany before.

The exhibition was shown already in Berlin, Leipzig, Munich.

Funding: EEH

Advocacy Work



Content: WECF raises awareness about emerging environmental health issues, and signals concerns and problems from society to policy makers. WECF monitors policy developments in the area of nanotechnology, biocides, endocrine disruptors, asbestos, chemicals in products e.g. toys.

Examples:

...at national level: Multi-stakeholder Roundtable, Berlin, 2012

...at EU level: Toys testing at European Parliament, January 2012

Participation to NGOs coalition actions, Participation to EC/FA Stakeholders meeting, 2013

...at global level: ICCM3 conference result - EDCs became an emerging issue, Nairobi, 2013, Rotterdam and Stockholm Conventions, May 2013

Target group: Policy makers

Funding: French Ministry of Environment, EEH, EU Core, German Federal Ministry for the Environment

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Women in Europe for a Common Future | WECF



Safe Chemicals for All



WECF | Women in Europe for a Common Future
Women International for a Common Future | WICF



Literature Study

Gender and Plastic Management

Authors:

Helen Lynn,
Occupational and Environmental Health Research Group, University of Stirling, UK.
Facilitator for the Alliance for Cancer Prevention

Sabine Rech,
MSc in Biosciences, Westfälische Wilhelmsuniversität Münster, Germany

Margriet Samwel,
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WECE - The Netherlands, January 2016

Commissioned by:

UNEP- UNEP/SSFA/DEWA/SAB/NEA/BAC 2015-GPL-5060-2L17-1151-220300

Title of the approved PRC project: Project 'Global Partnership on Marine Litter/ Changing the state of marine litter globally' and Project 'Managing Wastewater through Global Partnership'

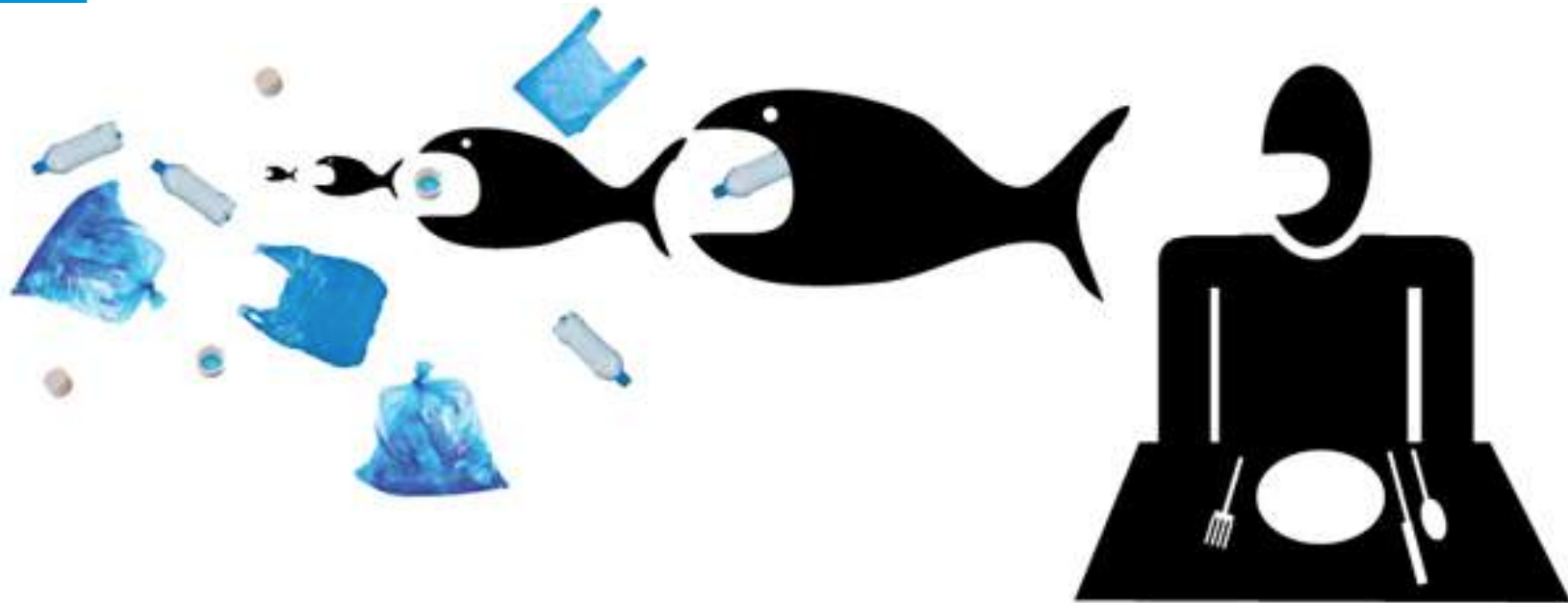
Marine litter pollution



- Soon more plastic than fish..



Micro plastics in food chain



Sources of pollution of water bodies with Microplastics



- In EU fragmentation of plastic debris is the main source for micro plastics – incl. lack of wastewater treatment

| | Proportion of plastic found in litter | Probable identified source of found plastics | | | |
|-----------------------|---------------------------------------|--|--|-------------------|----------------------|
| | | Coastal / beach tourists | Household activities, incl. sanitary sources | Marine activities | Other divers sources |
| North Sea-Ostende | 70% | 40% | 10% | 40% | 10% |
| Black Sea (Constanza) | 61% | 59% | 28% | 8% | 4% |
| Baltic Sea (Riga) | 15% | 25% | 48% | 12% | 15% |

Oceans plastic pollution from Asia (incl. EU waste)



80% of the Oceans plastic debris originates from land-based litter
– due to lack of safe waste management; 20% from fishing.

The EU collectively exports almost 50% of the plastics collected for recycling, at least 87% of which goes to Asia

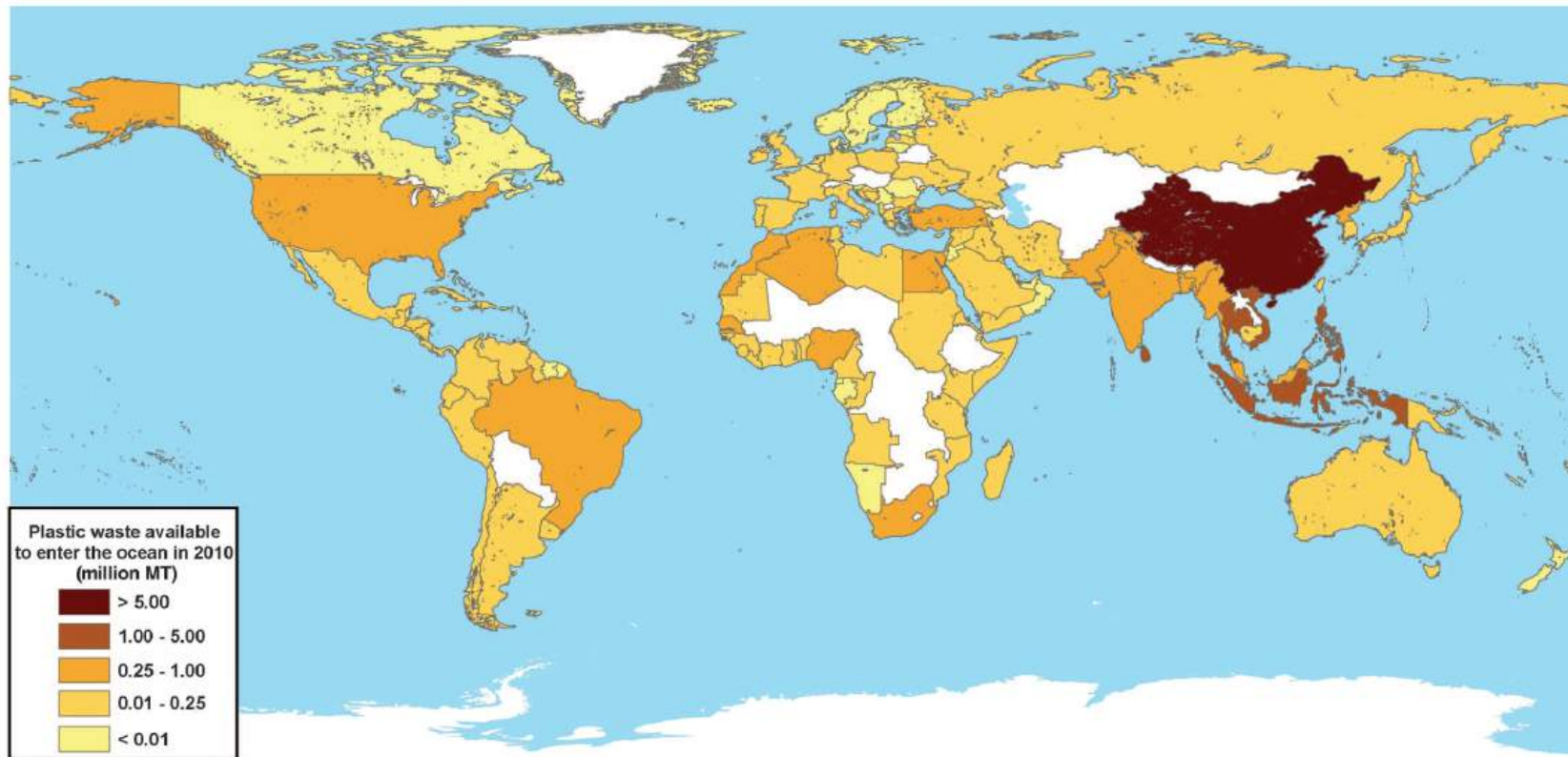


Fig. 1. Global map with each country shaded according to the estimated mass of mismanaged plastic waste [millions of metric tons (MT)] generated in 2010 by populations living within 50 km of the coast. We considered 192 countries. Countries not included in the study are shaded white.

Plastic “recycling” is a source of water & air pollution



How your clothes are poisoning our oceans and food supply

New studies show that alarming numbers of tiny fibers from synthetic fabrics are making their way from your washing machine into aquatic animals

In California, a main source of micro plastics in the ocean is from washing clothes made from recycled plastics ...



In this plastic „recycling“ plant in Jakarta most goes into the air as toxic air pollution

Hazardous chemicals found in most common plastics



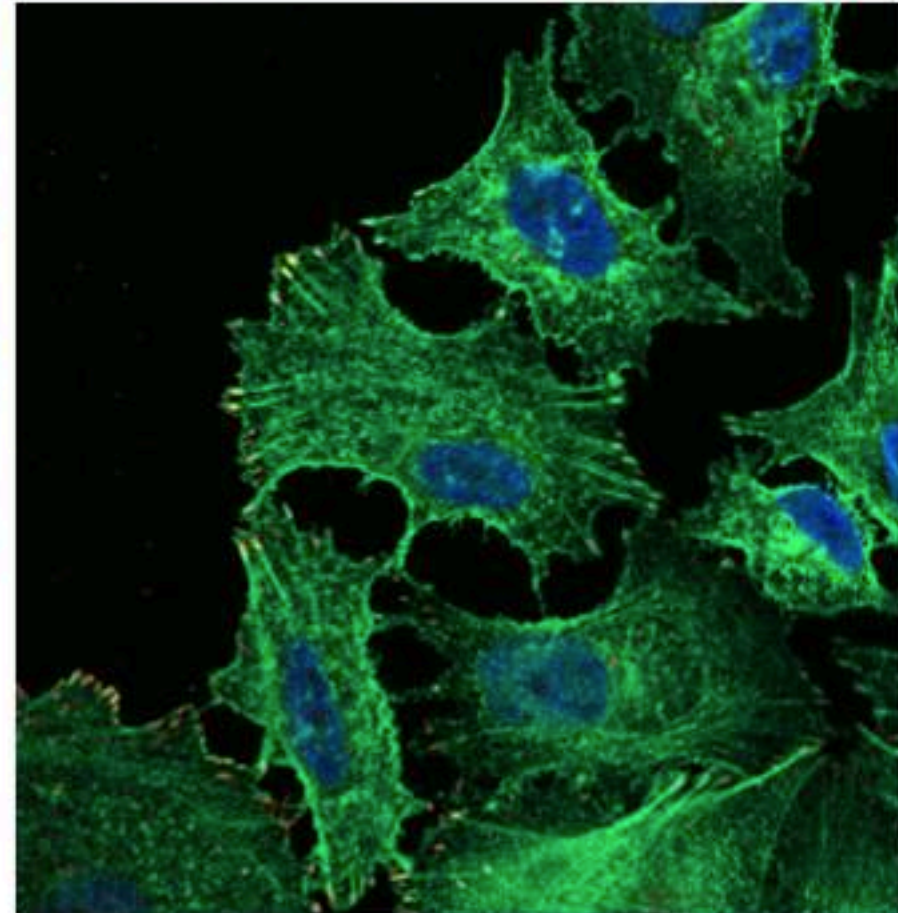
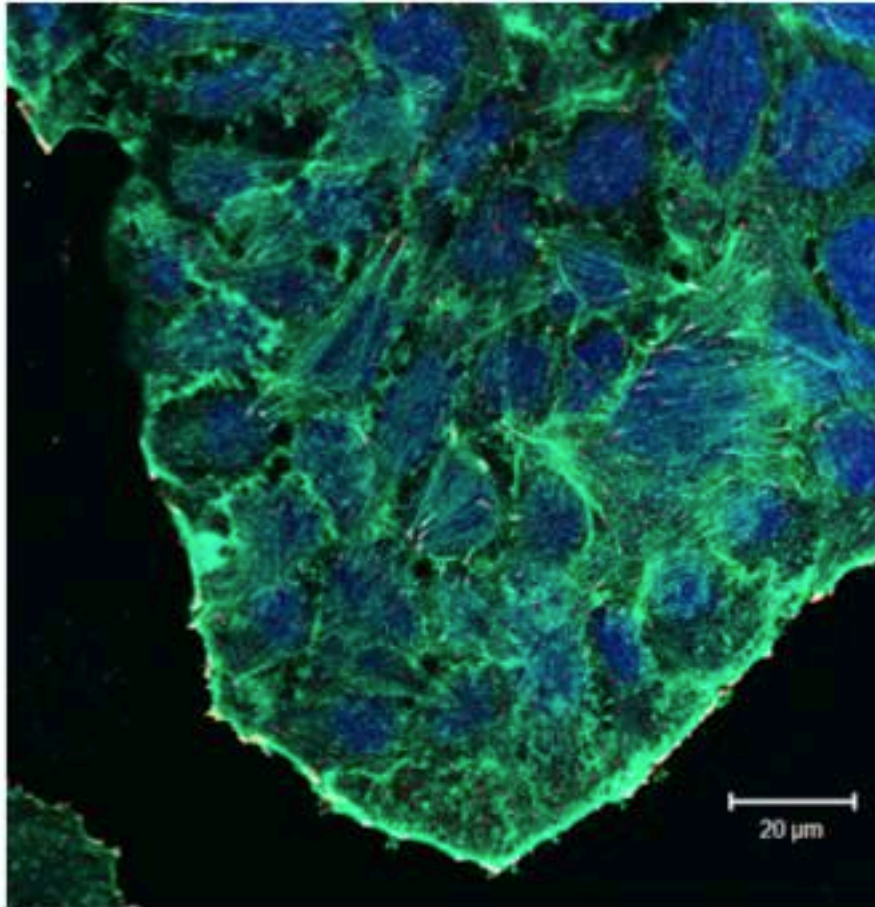
- Bisphenol A (BPA)
- Phthalates
- Polybrominated Diphenyl Ethers



A Canadian study found that women working in the plastics industry had a 5x elevated risk for breast cancer and reproductive disorders



POPs and Breast cancer growth



Lignée humaine d'adénocarcinome mammaire MCF7 traitées ou non par la TCDD 25nM pendant 48h –
marquage Actine /paxilline/noyau

.. Banned chemicals come straight back to us in e.g. recycled plastics...

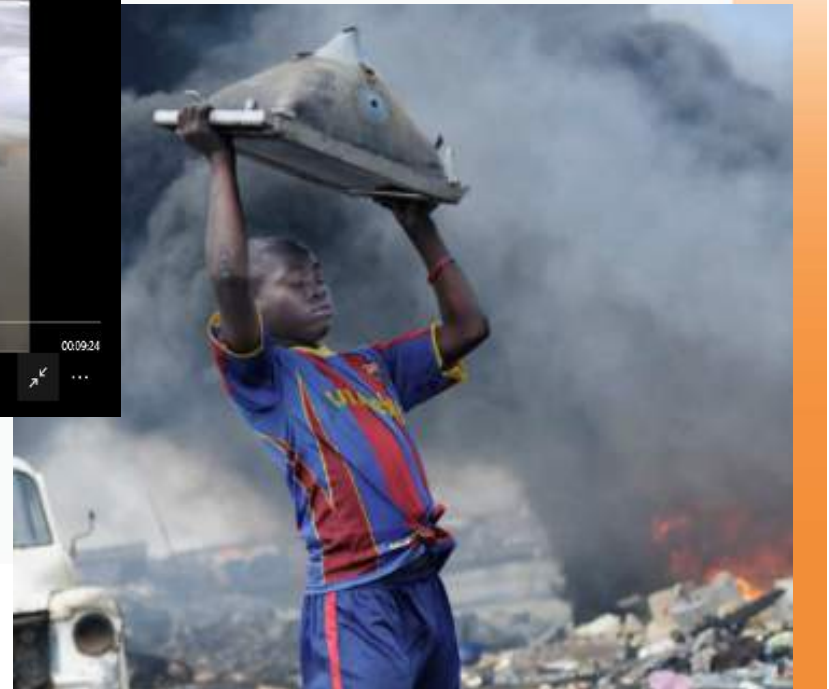


- http://ipen.org/sites/default/files/documents/toxic_toy_report_2017_update_v1_5-final_en.pdf
- EDCs such as phthalates which are found in soft plastic toys, and brominated flame retardants used as plastic additives in electronics – can be recycled into plastic used for children's toys in China; China makes 86% of world exports of toys.

..we have exported harm .. and are not taking our responsibilities



400 tons of PCB oil being sold as food frying oil...



Felten over bestrijdingsmiddelen in het oppervlaktewater in Drenthe

Drenthe

Veel bestrijdingsmiddelen in beken en kanalen



Felten over bestrijdingsmiddelen in het oppervlaktewater in
Drenthe



50% pesticides surface water in Netherlands (Drenthe) are HHP's !!

99% death from pesticides in global South



- Pesticides: “disastrous and unnecessary”
- Lifelong health effects children
- 900.000 death each year
- 2 million diseased



WHO PAYS THE BILL ?



Cost of Asbestos related diseases in Germany (\$20 billion)



Costs for asbestos related occupational diseases in Germany 1987 – 2008

all costs: 5,840,000,000 US-\$

costs for pensions: 4,840,000,000 US-\$ (83 % of all costs)

Predicted total costs for asbestos related occup. diseases in Germany (based on assumption that peak is reached in 2010)

all costs: 20,000,000,000 US-\$

costs for pensions: 17,000,000,000 US-\$

Economic cost estimate Pesticides



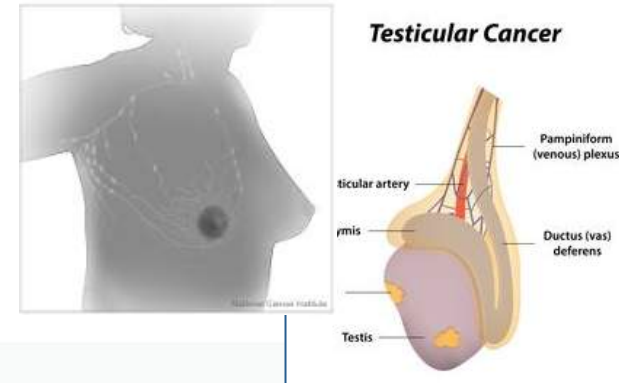
Table 2.3 Economic costs due to regulations governing pesticide use

| Reference | Country | Year | Fully independent dataset ^a | Overall costs (million US\$ 2013 per year) |
|---|----------------|------|--|--|
| Houndekon and De Groote (1998); Houndekon et al. (2006) | Niger | 1996 | A | 0.15 |
| Ajayi et al. (2002) | Mali | 1999 | B | 1.58 |
| Khan et al. (2002) | Pakistan | 2002 | C | 9.71 |
| Fleischer (1999); Waibel and Fleischer (1998); Waibel et al. (1999) | Germany | 1996 | D | 168.26 |
| Pretty et al. (2000, 2001) | United Kingdom | 1996 | E | 318.51 |
| Praneetvatakul et al. (2013) | Thailand | 2010 | F | 357.28 |
| Pimentel et al. (1980a, b) | United States | 1980 | G | 491.96 |
| Jungbluth (1996) | Thailand | 1995 | F | 558.33 |
| Pimentel et al. (1991a, b) | United States | 1991 | G | 2372.34 |
| Steiner et al. (1995) | United States | 1991 | H | 3203.00 |
| Pimentel and Hart (2001) | United States | 2001 | G | 3451.19 |
| Pimentel and Greiner (1997) | United States | 1997 | G | 3751.06 |
| Pimentel (2005, 2009); Pimentel and Burgess (2014) | United States | 2005 | G | 4229.13 |
| Pimentel et al. (1992, 1993a, b) | United States | 1992 | G | 4319.01 |
| Tegtmeier and Duffy (2004) | United States | 2002 | I | 4988.69 |

^aThe same letter indicates a partial dependence of cost estimates

Range from 160 million (DE) to 5+ billion (USA) per yr.

Cost of pesticides cont.

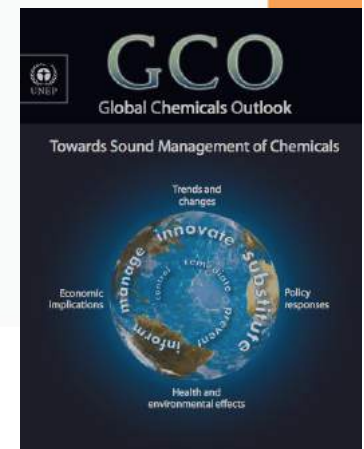


UNEP: accumulated **cost of illness** and **injury linked to pesticides**

- in small scale farming in sub-Saharan Africa
- could reach **USD \$90 billion** (2005 – 2020)
- This is more than is paid by international aid donors on basic health services in the region

* UNEP Global Chemicals Outlook 2012

http://www.unep.org/chemicalsandwaste/Portals/9/Mainstreaming/GCO/Rapport_GCO_calibri_greendot_20131211_web.pdf



Economic costs of EDCs – Endocrine Disrupting Chemicals



- Some estimates up to € 200 - 300 billion for EU ...



Key element 1



- MOU to agree on principles of SC such as:

| Principles Sustainable Chemistry | Agreed in MOU |
|--|---------------|
| 1. Precautionary Principle in case of indication of potential harm substitute and phase-out | Yes |
| 2. Transparency – no Data , no Market full declaration of substances incl. labelling | Yes |
| 3. Polluter Pays principle including health costs, lost productivity, pensions, clean-up, destruction | Yes |
| 4. Promote non-hazardous and non-chemical safer alternatives ... | Yes |

Ensure transparency and social & environmental responsibility

Key element 2

- Is current use an essential use? Are there safer alternatives

| Current use | Use Essential ? | Safer chemical or non-chemical Alternatives ? |
|------------------------------|-----------------|---|
| Synthetic Herbicides | No | Yes |
| Plastic packaging | No | Yes |
| Dental fillings | Yes | Yes (<i>alternatives to amalgam</i>) |
| Blood bags & tubes hospitals | Yes | Yes (<i>alternatives to plastics with phthalates</i>) |

Precautionary principle: prioritise and speed up alternatives

Key element 3



- No picking and choosing between different “Sustainability” dimensions

| SC goal | |
|---|-------------|
| No negative Health effects (intrinsic hazard) | Mandatory |
| No negative Environmental impacts | Mandatory |
| Circular economy proof: can be sustainably sourced and safely reused | Mandatory |
| Climate benefits Social benefits ... etc. | Co-benefits |

Hazard reduction should be fully incorporated in SC

Key element 4



- Facilitate **divestment** from fossil-based sources, apply sector-wide ‘polluter-pays’

| Global threat | Sector responsible | Should contribute to costs? |
|--|--|---|
| Plastic (marine) litter | Petro-chemistry, Plastics | Waste clean-up: Yes |
| Persistent Organic Pollutants | Petro-chemistry, Electronics, Pesticides | Waste clean-up, health costs, pensions: Yes |
| Asbestos diseases | Asbestos mining and products | Waste clean-up, health costs, pensions: Yes |
| Air pollution particles from transportation and industry | Automotive, Manufacturing | Health costs, pensions: Yes |

Internalize costs and pay for elimination of legacy toxic chemicals

Margaret Chan on the growing influence of vested interests

“The influence of stakeholders, especially the private sector, in multiple sectors is growing very rapidly at a time when the institutional and regulatory capacity of many countries remains weak.

In the absence of adequate legislation, human and regulatory capacity, the private sector takes on an enlarged role, with little control by the government over the quality and costs of the services being provided. The vital role of government in protecting the public interest is diminished.

In one especially alarming trend, provisions for the settlement of investor-state disputes are being used to handcuff governments and restrict their policy space. For example, tobacco companies are suing governments for lost profits when national legislation, aimed at protecting health, interferes with their business interests.

When private economic operators have more say over domestic affairs than the policies of a sovereign government, we need to be concerned.

If multisectoral collaboration and multi-stakeholder engagement are the reality for sustainable development in the post-2015 era, we need to debate what type of mechanisms are required to allow all stakeholders to make contributions and to protect against the influence of vested interest. We also need to consider the UN’s role as an honest broker that promotes fair play.”³⁰²

Halt the undermining of UN Conventions that aim to protect humanity



chm.pops.int

Apple Amazon News FlightCO2

The 12 Initial POPs NIP Workshop - Indonesia Dec 2015 Organizations, Advocacy List - Google

Basel Convention Rotterdam Convention Stockholm Convention Synergies

STOCKHOLM CONVENTION
Protecting human health and the environment from persistent organic pollutants

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The POPs

- What are POPs
- The 12 Initial POPs**
- The New POPs
- Listing of POPs in the Stockholm Convention
- Chemicals proposed for listing under the Convention

The 12 initial POPs under the Stockholm Convention

Initially, twelve POPs have been recognized as causing adverse effects on humans and the ecosystem and these can be placed in 3 categories:

- **Pesticides:** aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene;
- **Industrial chemicals:** hexachlorobenzene, polychlorinated biphenyls (PCBs); and
- **By-products:** hexachlorobenzene; polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans (PCDD/PCDF), and PCBs.

Key element 5



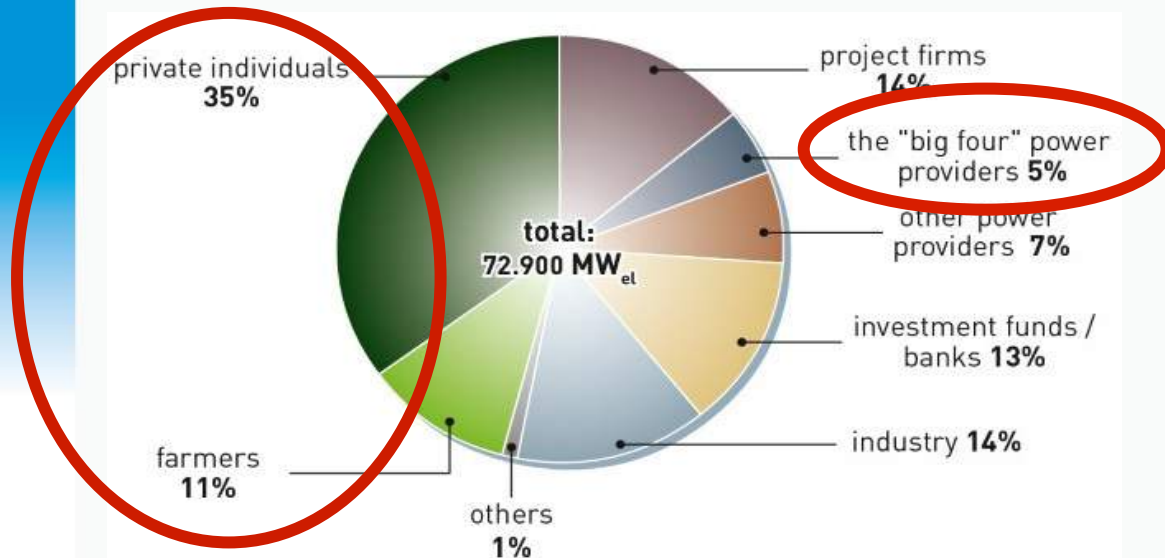
- Promote the champions and avoid potential conflict of interest

| Q: ISC3 potential partner | Yes/No | Next step |
|---|-------------------|--|
| 1. Core products based on petro-chemistry, mining ? | No Yes | = OK partner ISC3 = continue to Q2 |
| 2. Has exist-strategy and developing alternatives? | Yes No | = OK cont. to Q3 = not fit to be ISC3 partner |
| 3. Is paying for clean-up, environmental, health costs? | Yes/Partial No | = OK cont. to Q4 = not fit to be ISC3 partner |
| Etc. | | |

Avoid green-washing and undue lobbying / influencing

Focus on SMEs and Civil Society !

An example: the German *Energiewende*:



Ownership distribution of installed renewable electricity generation capacity in Germany (2012).

Source: Blog "German Energy Transition"

In 2014:

- More than 30% of electricity from renewable sources (3% in 1990).
- More than 1000 energy cooperatives.
- More than 50 % of the currently installed capacity (73 GW) are civic energy installations.

Source: Lutz Ribbe, EESC, 2015

Other products: Neem-tree based 'pesticides'



- UNIDO pilots in Nigeria, locally produced, generates employment, reduces costs



Neem trees
© A.M.Varela

- *In Vitro* evaluation of Neem derived biopesticides and synthetic pesticides against fungus isolated from diseased cowpea leaf

Rethink agricultural waste: No more Paraquat on Pineapples



- Use the left over pineapple plant for fibre production, instead of treating it as waste and burning it with paraquat (Costa Rica)



From products to systems



- Old model



Air pollution kills 7 million p/yr

- New model



Mobility for all without car-ownership nor diesel fumes

Key element 6



- Priority for combination of non-chemical, non-hazardous plus co-benefit SC solutions

| New SC system | |
|--|-----------|
| 1. Intrinsically non hazardous? | Mandatory |
| 2. Additional social and gender benefits | Plus |
| 3. Additional environmental benefits | Plus |
| ... | |

No time to waste - Lets get to work !

Questions and discussion

