The real price of mobile phones and tablets
In search of fair electronics

A mobile phone, smartphone, PC, laptop or tablet: few of us can do without them. But who considers the genuine cost of a phone conversation or an e-mail sent? Who thinks about the raw materials, the working conditions and the ecological impact behind modern electronics? Let us take the time to look at the issues and consider consumer actions and (future) alternatives.

Conflict minerals

In addition to various plastics and synthetic materials, modern electronic devices are composed of tens of known and less known metals. The story of tin, cobalt, copper, coltan, tantal or tungsten differs only little from the story of coffee or bananas. Exploitation happens mostly in the South, trade is in the hands of large multinationals and only a tiny little percentage of profits returns to the local communities. Moreover, exploitation is rarely 'clean'. For instance, cobalt mines in Zambia have polluted large areas of land and vast expanses of water and tin mines in Indonesia threaten forests and coral reefs. But the best known and most harrowing story comes from the DR Congo. It is a huge country with a wealth of raw materials, but it remains one of the poorest countries in the world. The lasting conflict in the east is closely linked to the lucrative fight for raw materials for our smartphones and laptops.

In 2010, the American Congress adopted legislation requiring American companies to disclose and prevent the import of 'conflict minerals' from Congo or neighbouring countries, in an effort to financially drain rebel movement. Also the European Union is currently considering taking such steps.

Comparisons with the Kimberley process are obvious. Since 2002, this initiative has tried to ban illegal 'blood diamonds' from eastern Congo and other areas of conflict via certificates of origin. But practice shows it is very hard to close all loopholes.

Copper of Congo photo FairPhone

From Congo with (no) blood

In December 2012, the **MakeITfair** campaign published the 'From Congo with (no) blood' report. Thirty major players in electronics were given a questionnaire about the use of the so-called 3 Ts (tin, tantal and tungsten) from Congo in their production process. Thirteen of these players recognised their responsibility and some seemed to have actually taken steps to look for 'conflict-free' raw materials. But the majority refused to cooperate even after being repeatedly asked. This shows there is still a long way to go.

Copper mine in Congo photo FairPhone

Unpaid overtime

After mining for minerals, the next step in the electronics business is the production process. Obviously, we have to mainly look at the Far East in this matter. More than half of mobile phones and three out of four tablets come from Chinese factories. Foxconn is the leader. It is known as a Chinese company but it is actually based in Taiwan. In 2011, it had one million employees. Its customer portfolio includes technology giants such as Apple, Microsoft, Sony and Nokia. In 2010, Foxconn made the news with a series of suicides among its Chinese employees. Work load appeared to be huge, many hours of overtime remained unpaid and the working conditions were tough and unsafe. Apple reacted to the public outcry by becoming a member of the Fair Labour Association (FLA), an American organisation that offers large companies an inspection system based on a code of conduct. The FLA reports confirm what everybody has known for a long time. They contain a long list of recommendations, on which Foxconn and Apple claim to be working.

Meanwhile NGOs such as China Labour Watch and SACOM (Students and Scholars Against Corporate Misbehavior) regularly challenge the working conditions at Foxconn and other companies with new reports and findings. They closely follow up on the wave of strikes that have lately forced Chinese companies to close down.

Also in India, home to the main supplier of Nokia, or South Korea, home to Samsung, not only the apps of Apple but also its production conditions are being diligently copied: low wages, long working days, too much and unpaid overtime,

discrimination of older employees and temporary contracts that entitle to even less rights.

Whoever thinks this is a strictly Asian issue is wrong. A MakeITfair report describes the *Flexe Syndrome* in Hungary, which has become the leading Eastern and Central European electronics producer. In Hungary, strong flexibility in employment legislation turns a blind eye on conditions that are similar to those in Asia. The result: "Heavy 12-hour day and night shifts, short-running contracts, no job security and one case of strong opposition to the establishment of a labour union. Elsewhere, ambulances were noticed outside factories to carry away workers who fainted."

Jean-Marc Caudron of achAct (Actions Consommateurs Travailleurs) closely follows up on this matter: "Last year, two major players, Samsung and Apple, held a race for not keeping promises. Samsung only sparsely allowed audits and resolutely opposed the establishment of trade unions. In addition, in one production unit of electric conductors a remarkable rate of cancer cases was found. Samsung refused to take on its responsibility. As for Apple, its FLA membership has hardly changed the situation on the workfloor. FLA hardly wants to talk to local trade unions. So, I have major questions about the controls they conduct."

"Profit margins in the electronics sector are huge", continues Jean-Marc Caudron. "According to calculations of Isupply, a company that analyses the technology markets, the production cost of an iPad makes up a maximum of 40% of the actual sales price. In concrete terms, an iPad of $499 contains $219 in parts, while assembly only costs $10. When having heard these figures, who can still claim that impro-

Shenzen, China photo gp314

Time to act

MakeITfair is a campaign of Dutch, German, Scandinavian and Hungarian NGOs that want to show to consumers and young people in particular what a conversation on your mobile phone or sending an e-mail really costs. In cooperation with research institutes and NGOs in DRCongo, South Africa, India and the Philippines they publish reports about raw materials, working conditions and environmental impacts. In 2010, they launched the campaign 'Time to bite into a fair Apple'.

These same NGOs are also leading the efforts of a broader group, **the GoodElectronics network**. It consists of more than 150 organisations and individuals, mainly trade unions, human rights organisations, environmental groups, scientists and universities. They target both companies and governments and advocate the application of ILO (International Labour Organization) conventions for decent work.

One of the active members of the network is **achAct** (Actions Consommateurs Travailleurs). This is a network of 25 NGOs and trade unions and consumer organisations from French-speaking Belgium that elaborates on the ideas behind the Clean Clothes Campaign. The network bases itself on MakeITFair for its actions.

Gold on the waste dump

If we look at the whole life cycle of an electronic device, there is more misery still. A mobile phone contains many harmful materials, such as arsenic and lead. In the European Union an estimated 25% of all *e-waste* is recycled in a responsible way. Most of e-waste is still dumped illegally in Africa though. The European Parliament wants to change this by imposing rules on exporters, because all these discarded phones and computers still hold a wealth of rare and valuable metals. Companies like Umicore focus more and more on *urban mining*, the mining of used appliances. In comparison to primary mining, raw materials are more directly available in urban mining and extraction demands less energy.

Gold: fair?

Catapa is an organisation that has campaigned for many years in Flanders about the negative impacts of mining. Along with Ecolife and the Network for Responsible Consumption they started the Gold: fair? campaign, through which they ask consumers to hand in their old mobile phones, chargers and computers at recycling sites. After all, one ton of mobile phones (6,000 to 10,000 phones) contains 340 gram of pure gold, whereas one gram of pure gold from mining produces no less than five tons of toxic waste, requires 10,000 litres of water and emits 17 tons of CO_2 .

Green electronics

In November 2012, **Greenpeace International** published the 18th edition of its 'Guide to Greener Electronics'. The environmental organisation does not only look at the absence of harmful materials in production processes as it did in the first editions of the guide. Also the energy and climate policy of companies is investigated as well as the product's life cycle. Is it easy to repair the product? Is there a recycling system set up? Are raw materials reused?

The result is a rating of companies according to their environmental efforts. Acer, for instance, moved up nine places in comparison with the previous edition, because it avoided toxic materials and reduced the emission of greenhouse gases. Apple, HP and Dell did a little better because they took steps to identify and reduce conflict minerals. As in the previous editions, Blackberry manufacturer RIM is a lonely last in the ranking. According to Greenpeace, RIM has understood nothing about sustainability.

The first place in the Greenpeace ranking is for rather unknown **Wipro**. This Indian electronics producer uses sustainable energy in its production processes, intensely lobbies the Indian government for a greener energy policy, does well with collecting *e-waste* and gradually reduces harmful materials from its products.
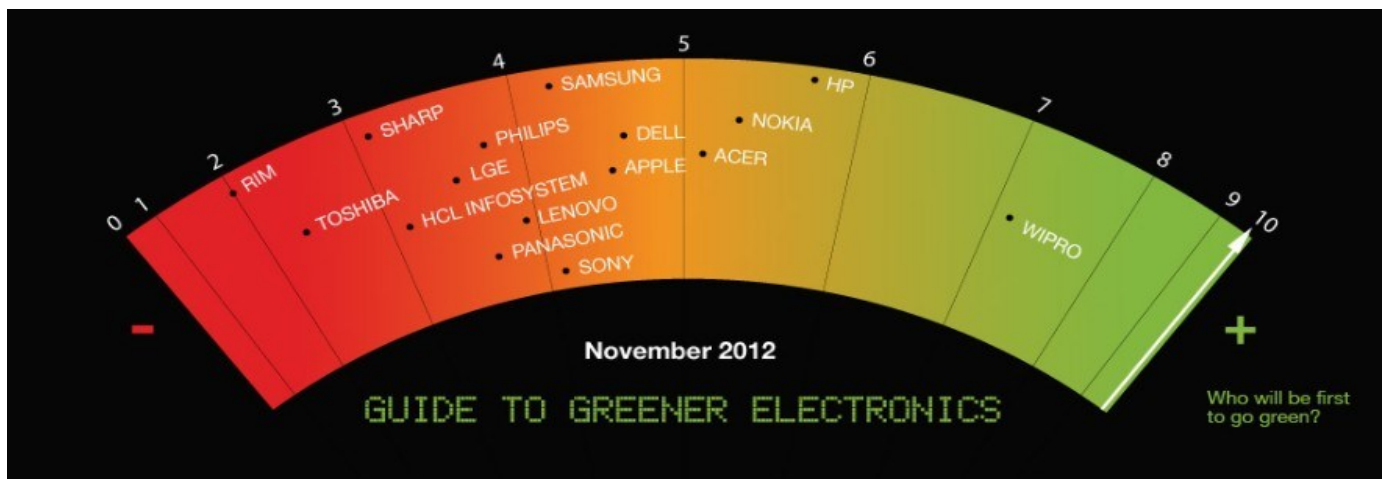
Source Greenpeace International

Beside the big players, there are also smaller electronics producers that want to reduce the ecological footprint of their products. One of these is **United Pepper**, a Belgian startup that put a small webcam on the market that is made of kapok, cotton and Mekong sand. These are natural materials that can be easily recycled. This also applies for the electronics components. The production process itself requires only a small energy input

Fair electronics?

One further step after the green mobile phone is a fair mobile phone. That is exactly what **FairPhone**, a Dutch initiative that operates from Amsterdam and London, wants to achieve. Bas Van Abel, coordinator of FairPhone: "We are convinced it is possible to develop a smartphone with parts that are produced without any harm to the environment. We consider this a voyage of discovery and step by step we look for partners and solutions for the various issues in the long chain from raw material to end product."

An important condition is the supply of guaranteed 'conflict free' raw materials. To achieve this, FairPhone wants to work with the Conflict-Free Tin Initiative (CFTI), which officially started at the end of October 2012 with a first load of tin from a mine in South Kivu. For better working conditions, FairPhone hopes to find solutions via the Sustainable Trade Initiative (IDH), a Dutch body in which NGOs start targeted projects with multinationals and governments. The electronics project of IDH runs in 100 production companies in the Chinese province of Guangdong and involves the Chinese government, Philips, HP, Dell and recently Apple. In addition, the aim is to have the FairPhone use *open source software*, in particular Firefox OS of Geeksphone, and to have it repaired and recycled easily.

Bas Van Abel about the strategy of the project: "Even though we mainly aim to inspire the sector and not so much to be a competitor, the best way to change the whole system is to offer an alternative. That is why we hope to put a first *fairphone* on the market by the end of 2013. It will not be fully fair yet, but it will definitely be the fairest around. At the same time, it should become a political object that urges consumers, producers and policy makers to join in the action."

A similar voice – even though it is more philosophical and in an early stage still – can be heard from the French **Fairtrade Electronic** initiative. Their goal is to develop a *smartphone apaisé* by 2015. Such an appliance is environment and people friendly and lasts for a lifetime. The main idea is that technology is made subordinate to the human again. That is why they aim at text and speech as means of communication and less at imagery. With this device, the project promotes fair mining and certification of raw materials and it foster repairs and reuse and recycling of electronic appliances.

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Urban mining photo FairPhone

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Fair electronics

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