



**CHILD  
MINED  
GOLD IN  
YOUR  
GADGETS?**

DanWatch

**Child labour in Ghana  
and Mali and sourcing  
policies of IT brands**

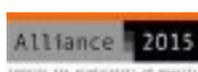
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## A DanWatch investigation — 2013

### DanWatch

DanWatch is an ethical watchdog and center of analysis that investigates and documents the consequences of the global activities of corporations. The aim of DanWatch is to further responsible production, investment and services throughout corporate value chains, and creating motivation for respecting international standards for corporate social responsibility.



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# Introduction

The gold producing countries of Africa are currently benefiting from a global rise of gold prices. With the increasing gold demand, major gold producing West African countries such as Ghana and Mali are experiencing a gold rush, and in both countries, employment and revenues are on the rise in the respective gold sectors.

The increasing gold demand is among other industries coming from the booming electronics sector, which now sources more than 6 per cent of global gold consumption<sup>1</sup>.

However, the benefits of the rise in gold demand and prices are not necessarily felt by the artisanal small scale miners, which often live in secluded and poor areas. Here, the work to uncover gold is hard, dangerous and the pay is low and unreliable.

In West Africa, child labour is not uncommon in small scale mining: They take on hard and dangerous tasks just like adults. For children engaged in small scale mining, gold digging can be a luring profession to sustain their own and their families' livelihoods, and can outcompete unattractive and unpromising schools. However, for miners, and especially children, gold has a high price: Workers die in accidents in mines, expose themselves to dangerous mercury and children are locked in unskilled work for the rest of their lives.

With an increasing public attention to the consequences of the production and trade of conflict minerals in DR Congo, the IT industries sourcing these minerals are increasingly engaging in initiatives that are meant to trace and source minerals from conflict areas more ethically. But the IT industries have yet to take serious interest in the origin of the gold that is a key component in most consumer electronics, and none of the questioned IT companies in the report could declare the origin of the gold that is used in their products. Even without being in a conflict setting, gold can still have a high, and sometimes deadly price in the unregulated mining communities in Africa, as in Ghana and Mali. In addition, consumers, either of jewellery or of IT products cannot tell which price the workers have paid for the gold that ends up in their products.

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<sup>1</sup> World Gold Council (2012): Gold Demand Trends, Q4 2012

## Methodology

This report investigates conditions under which children work in informal gold mines in Ghana and Mali, attempts to map gold value chains from mines to electronics, and has engaged with major electronics companies to assess their policies on responsible value chain management.

This report has been conducted as a combination of desk study and field research in Ghana's Ashanti region and Mali's Sikasso region in the spring of 2013.

On both field studies, small scale mining operations were visited, and stakeholders such as child labourers, parents, adult miners, mining operation supervisors, local chiefs and school headmasters, gold dealers, and local NGOs and other experts were interviewed. It was not possible to arrange an interview with Ghana's Mining Commission or Precious Mineral Marketing Company, who both have been sent questions by mail afterwards, to which they have not responded. In Mali, regional chiefs, local chiefs, and mayors were interviewed.

The sources for the desk research are academic articles, reports from major human rights and labour organisations, such as Human Rights Watch, ILO and Makeltfair. The report uses Data from the World Bank, market analysis companies, and industry organisations.

The report chooses to focus on the 5 largest computer brands and the 5 largest phone brands on the European market, to which a survey on gold sourcing practices were sent. Acer, Lenovo, Asus and Dell did not respond, though they were contacted several times over a period of more than two months. For those companies who did not respond, company policies available on websites were used.

A list of initiatives for responsible production and sourcing of minerals has also been compiled. Some of them have direct relevance for the issue of child labour in gold value chains; some have relevance in terms of value chain management of other minerals, to show what is done on industry level.

## Summary

- **Gold is a component in nearly all consumer electronic products, such as cellphones and computers**
- **In Ghana and Mali child labour takes place in the small scale production of gold, a practice categorised as one of the worst forms of child labour**
- **The gold produced by children in the small scale sector of Mali and Ghana is mixed with the rest of the national small scale mining output, making it impossible to trace gold at the stage of export**
- **The five biggest smartphone producers on the European market (Samsung, Apple, Research in Motion, Nokia and HTC) cannot tell if the gold in their products is from Ghana or Mali, and thus cannot guarantee that they are not using gold produced by children**
- **The five biggest computer producers on the European market (HP, Acer, Lenovo, Asus and Dell) cannot tell if the gold in their products is from Ghana or Mali, and thus cannot guarantee that they are not using gold that was produced by child labour**
- **The IT sector has increasingly engaged in initiatives to refrain from sourcing conflict minerals, but few have addressed the issue of child labour in their gold supply chain**
- **Of the major electronic brands in the world, only Hewlett Packard has disclosed its supply chain gold smelters.**

## Gold in your gadgets

### Gold in PCs and cellphones

- One gram of gold supplies the production of 17 cellphones<sup>2</sup>
- A phone consists of 0.035 % gold
- One gram of gold supplies the production of 8 computers<sup>3</sup>
- A computer consists of 0.0084% of gold<sup>4</sup>.

### Gold demand from the electronics industry in 2012

- 302,7 tons
- 12,5 billion EUR
- 6,8 per cent of global gold consumption<sup>5</sup>
- Personal computers and mobile phones together are demanding 3% of the worlds mine supply of silver and gold<sup>6</sup>

You may not know it, but you carry around gold in your computer and cellphone. In fact, almost all consumer electronic products contain gold. Gold is important and widely used in the electronics industry because of its quality as a conductor.

Gold is used in printed circuit boards, component lead frames, or contacts, including connectors, brass parts, bonding wires, finishing, sputters and solders<sup>7</sup>. Although the amount of gold in each PC and cellphone is not much, the electronic industry accounted for 6.8 per cent of the global demand for gold, corresponding to 302,7 tons worth 12,5 billion EUR in 2012<sup>8</sup>.

The electronics industry is the third largest consumer of gold globally, after the financial sector and the jewellery industry.

<sup>2</sup> 0,0591 gram of gold goes in one cell phone, Chancerel and Rotter (2009): Recycling-oriented characterization of small waste electrical and electronic equipment, & Oguchi et al. (2012): Toxic metals in WEEE: Characterization and substance flow analysis in waste treatment processes. Calculations made by Marianne Bigum, PhD, cand. polyt

<sup>3</sup> 0,12 gram of gold goes in one large laptop, Andrae and Andersen (2009): Life cycle assessments of consumer electronics - are they consistent? & Chancerel et al. (2009). Calculations made by Marianne Bigum, PhD, cand. polyt

<sup>4</sup> EICC (2008): Social and Environmental Responsibility in Metals Supply to the Electronic Industry, 9-10 <http://www.eicc.info/documents/SER-MetalsSupplyreport.pdf>

<sup>5</sup> World Gold Council (2012): Gold Demand Trends, Q4 2012

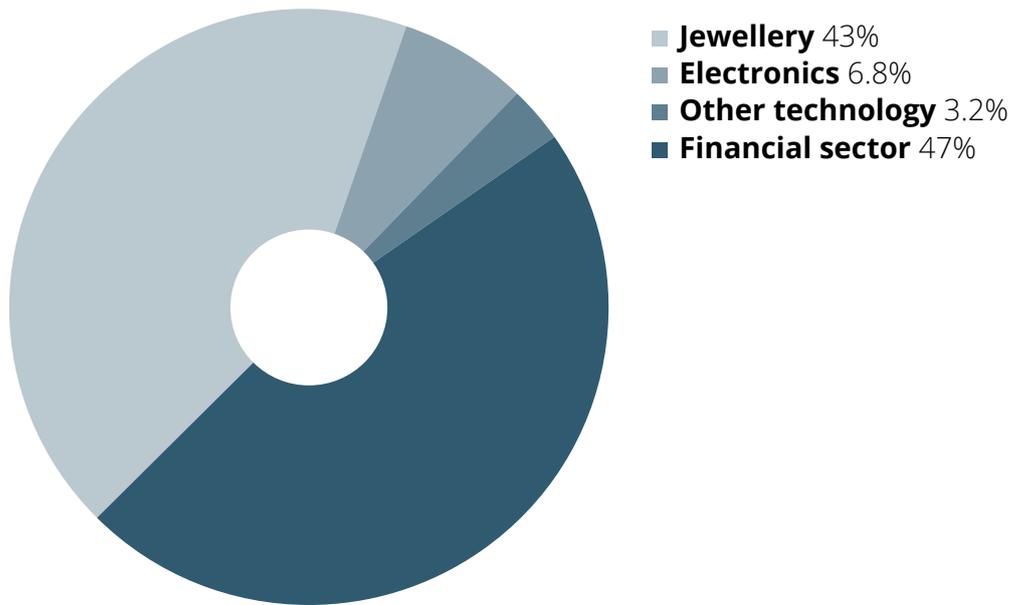
<sup>6</sup> TMS (2009): Green Recycling of EEE, p. 1131 [http://www.preciousmetals.umicore.com/PMR/Media/e-scrap/show\\_greenRecyclingOfEEE.pdf](http://www.preciousmetals.umicore.com/PMR/Media/e-scrap/show_greenRecyclingOfEEE.pdf)

<sup>7</sup> EICC (2008): Social and Environmental Responsibility in Metals Supply to the Electronic Industry, 9 &13 <http://www.eicc.info/documents/SERMetalsSupplyreport.pdf>

<sup>8</sup> World Gold Council (2012): Gold Demand Trends, Q4 2012

In 2012, global gold demand reached 4405,5 tonnes, or, in terms of value, 183,8 billion EUR. Of this, almost half was purchased as investment assets (gold bars, coins, etc.); two fifths went into jewellery, while a tenth was used in technology, mainly electronics<sup>9</sup>.

## Global gold demand, 2012, in tonnes<sup>10</sup>



- 5.9 billion cellphone users worldwide<sup>11</sup>
  - 1 billion smartphones in use<sup>12</sup>
- 1.6 billion PCs in use<sup>13</sup>

<sup>9</sup> World Gold Council (2012): Gold Demand Trends, Q4 2012

<sup>10</sup> World Gold Council (2012): Gold Demand Trends, Q4 2012

<sup>11</sup> International Telecommunication Union (2013): Key ICT indicators for developed and developing countries and the world [http://www.itu.int/ITU-D/ict/statistics/at\\_glance/KeyTelecom.html](http://www.itu.int/ITU-D/ict/statistics/at_glance/KeyTelecom.html)

<sup>12</sup> Strategy Analysis (2012): Global Smartphone Installed Base Forecast by Operating System for 88 Countries: 2007 to 2017 <https://www.strategyanalytics.com/default.aspx?mod=reportabstractviewer&a0=7834>

<sup>13</sup> ETForecast (2012): PCs In-Use Reached Over 1.6B in 2011 <http://www.etforecasts.com/pr/pr020112.htm>

## Gold mining, one of the worst forms of child labour

Children make up a large part of the workforce of the world's small scale mining sector: Of the 13 million people employed in small scale mining globally, 1 to 1.5 million are children - and the figure is on the rise due to the increasing gold prices<sup>14</sup>.

Small scale mining is often, especially in Africa, part of the informal sector and, accordingly, unregulated and unregistered. This means that small scale mining typically fails to comply with legislation and regulation, including laws prohibiting the use of child labour<sup>15</sup>. The use of child labour in small scale mining is mainly caused by poverty and the fact that this type of mining, because of its capital -and technology light nature, is easy to engage in. This is also, why child labour is mostly frequent in gold mining compared to the exploitation of other minerals.

Child labour in small scale mining is deemed by the ILO as one of the worst forms of child labour. Children are exposed to flying rocks from smashing ore, inhalation of rock dust, handle highly toxic mercury, are carrying heavy loads, and are risking death from collapsing or flooded mine pits<sup>16</sup>. Some children working in mining are trafficked or are trapped in debt bondage<sup>17</sup>.

Children work either full time or alongside attending school. Some children are working in small groups with other children, while others work together with their parents. The mining sometimes involves a 'sponsor', who will organise the labour, buy the gold and may supply mercury or equipment, give out small loans, or collect rent for the land being worked on. The children either work on their own initiative or are sent by their parents<sup>18 19</sup>.

Children working full time in mining seldom re-enter the schooling system because of the early exposure to earning money, and the unattractive prospects of joining classes with younger children. Thus, children engaged in full-time mining are often kept from improving their situation by taking an education and will continue a life of low-paid, unskilled labour<sup>20 21</sup>.

<sup>14</sup> World Bank(2008): Communities and Small Scale mining Issue Brief <http://siteresources.worldbank.org/INTOGMC/Resources/CASMFACTSHEET.pdf>

<sup>15</sup> HRW (2011): A Poisonous Mix [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>16</sup> United States Department of Labor (2011): Ghana <http://www.dol.gov/ilab/programs/ocft/2011TDA/Ghana.pdf>

<sup>17</sup> United States Department of Labor (2011): Ghana <http://www.dol.gov/ilab/programs/ocft/2011TDA/Ghana.pdf>

<sup>18</sup> DanWatch field research in informal mining communities in Obuasi, Ghana, February 2013

<sup>19</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>20</sup> DanWatch interview with Emmanuel Kwame Mensah, ILO Project Officer, February 2013

<sup>21</sup> DanWatch interview with Andrei Sinamiy and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

**Primary international legal tools are the ILO standards on child labour:**

- **Minimum Age Convention, 1973 (No. 138)**  
sets the general minimum age for admission to employment or work at 15 years and the minimum age for hazardous work at 18. It provides for the possibility of initially setting the general minimum age at 14 where the economy and educational facilities are insufficiently developed and is ratified by both Ghana and Mali.
- **Worst Forms of Child Labour Convention, 1999 (No. 182)**  
defines a child as a person under 18 years of age. It requires ratifying states to eliminate the worst forms of child labour, including all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; child prostitution and pornography; using children for illicit activities, in particular for the production and trafficking of drugs; and work which is likely to harm the health, safety or morals of children. Ratified by both Ghana and Mali<sup>22</sup>.

UN Convention on the Rights of the Child (193 except somalia, sudan and US)

<sup>22</sup> ILO:<http://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/child-labour/lang--en/index.htm>

## 5.1

## Child labour in Ghana's gold mines

- 43 % of children in the age of 5 to 14 years are estimated to be engaged in fulltime work in Ghana, the equivalent of 2,7 million children. Around 40% are both attending school and working, while only 17% are solely attending school<sup>23</sup>
- Of 11,8 million rural population, 4,5 million are defined as poor<sup>24</sup>
- Ghana is ranked as number 135 out of 186 countries on the Human Development Index<sup>25</sup>

Children are engaged in various types of work in Ghana, some from the age of 5, including mining. Assessing the number of children working with small scale mining is difficult due to the informal nature of the sector. According to the Ghana Ministry of Employment and Social Welfare, large numbers of children are engaged in worst forms of child labour, including mining<sup>26</sup>.

Children are engaged in mining processes such as digging and carrying dirt or rocks, digging tunnels, washing dirt, crushing ore or processing gold dust with mercury. Some children are engaged in other work at mining sites such as selling food and water, or prostitution.

The children report to earn between 3 to 30 Ghana Cedis (1,2 to 11,7 EUR) per day<sup>27</sup>, depending on the gold findings of the day. When sharing the day's findings, children working with their parents are entitled their own share, though sometimes smaller than adults' and paid directly to the parents.

The primary reasons for children taking part in the mining sector in Ghana are related to poverty: Issues such as high school fees, lack of access to schools, and most often the need to contribute to the family household<sup>28</sup>. The lack of trust in the educational system and ideas of work available afterwards also affect parents' unwillingness to take children out of the household workforce and place them in schools. In 2006, pass rates of basic education were 49% in deprived districts of Ghana, meaning half of the students never graduated their basic education and thereby benefited from their time invested in the schools<sup>29</sup>.

<sup>23</sup> United States Department of Labor (2011): Ghana <http://www.dol.gov/ilab/programs/ocft/2011TDA/Ghana.pdf>

<sup>24</sup> 2010. International Fund for Agricultural Development: <http://www.ruralpovertyportal.org/country/home/tags/ghana> (Accessed May 4, 2013)

<sup>25</sup> UNDP's Human Development Index is a composite of healthy life, knowledge and a decent standard of living. Mali is number 182 of 187 registered countries: <http://hdrstats.undp.org/en/indicators/103106.html> (Accessed May 4, 2013)

<sup>26</sup> Ghana Ministry of Employment and Social Welfare (2009): National Plan of Action, p. 15

<sup>27</sup> DanWatch field research in informal mining communities in Obuasi, Ghana, February 2013

<sup>28</sup> G. Hilson (2010): Child Labour in African Artisanal Mining Communities: Experiences from Northern Ghana, p. 451

<sup>29</sup> ILO (2008): Review of Transitional Education

### 5.1.1

## Small scale mining in Ghana

- Ghana is the world's 9th largest producer of gold and the second largest producer in Africa<sup>30</sup>.
- According to the Ghanaian Minerals Commission, the medium and small scale sector produce 23% of Ghana's gold, or 22,2 tonnes in 2011<sup>31</sup>.
- Estimations of labourers in unlicensed small scale mining range from 200.000 to one million, of which an undefined percentage is children<sup>32 33 34</sup>.

Gold mining has played a pivotal role in Ghana, historically, as well as now: Ghana is benefiting from an increase in both gold production and the increase of gold prices. The mining sector currently accounts for 41 percent of Ghana's total exports earnings, 14 percent of total tax revenues, and 5.5 percent of Ghana's gross domestic product<sup>35</sup>.

The Ghanaian gold mining sector consists of 21 licensed large scale mining companies, more than 300 licensed medium and small scale mining companies, as well as an unknown number of unlicensed small scale miners<sup>36</sup>.

Large scale mining operations use sophisticated mining methods and use high quantities of toxic chemicals to extract the gold. Medium scale mining uses large equipment such as excavators, often in the form of surface mining, and it is often licensed. Small scale mining is artisanal, labour-intensive, and often unlicensed.

It is in the unlicensed small scale mining sites that children work, characterised by the lack of formal structures and authorities in the often secluded communities. Due to the informal nature of the small scale sector, and in particular the unregistered part of the sector, it is difficult to assess the total number of workers, as well as child labourers. The small scale mining sector in Ghana plays an important role in small communities as a source of income and employment, producing 22,2 tonnes of gold in 2011<sup>37</sup>.

<sup>30</sup> USGS (2012): Commodity: Gold <http://minerals.usgs.gov/minerals/pubs/commodity/gold/mcs-2012-gold.pdf>

<sup>31</sup> Total output in 2011: 96.388 kg. World Bank (2012): Investing Mineral Wealth in Development Assets, p.10 [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349\\_20120614165615/Rendered/PDF/WPS6089.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349_20120614165615/Rendered/PDF/WPS6089.pdf)

<sup>32</sup> Mining, Minerals, and Sustainable Development (2002): Breaking New Ground <http://pubs.iied.org/pdfs/9084IIED.pdf>

<sup>33</sup> S.M. Banchirigah (2008): Challenges with Eradicating Illegal Mining in Ghana: A Perspective from the Grassroots, Resources Policy 33(1): 29–38.

<sup>34</sup> World Bank (2012): Investing Mineral Wealth in Development Assets, [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349\\_20120614165615/Rendered/PDF/WPS6089.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349_20120614165615/Rendered/PDF/WPS6089.pdf)

<sup>35</sup> World Bank (2011): Political Economy of the Mining Sector in Ghana, [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/07/21/000158349\\_20110721153754/Rendered/PDF/WPS5730.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/07/21/000158349_20110721153754/Rendered/PDF/WPS5730.pdf)

<sup>36</sup> World Bank (2011): Political Economy of the Mining Sector in Ghana, p.13 [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/07/21/000158349\\_20110721153754/Rendered/PDF/WPS5730.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/07/21/000158349_20110721153754/Rendered/PDF/WPS5730.pdf)

<sup>37</sup> Total output in 2011: 96.388 kg. World Bank (2012): Investing Mineral Wealth in Development Assets, p.10 [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349\\_20120614165615/Rendered/PDF/WPS6089.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349_20120614165615/Rendered/PDF/WPS6089.pdf)

## 5.1.2

# Unlicensed but widespread gold mining

Small scale mining in Ghana requires a license. In order for small scale miners to operate legally, they have to obtain a permit from the mining authorities for the plot they wish to mine. But many small scale miners have not acquired permits, for several reasons: Acquiring the permit takes time, is costly and is criticised for being overly bureaucratic, and the registered miners are taxed<sup>38 39 40</sup>. In some cases, small scale miners cannot obtain a permit as the plots are within large scale mining concessions, near river bodies or protected habitats<sup>41</sup>. In 2009, 66 small scale licenses were given<sup>42</sup>.

## 5.1.3

# Small scale surface mining in Ashanti, south central Ghana

WB map: [http://maps.worldbank.org/extractives/afr/ghana#&location=6.731598,-0.401032,7&sectors=&indicator=Population\\_Density](http://maps.worldbank.org/extractives/afr/ghana#&location=6.731598,-0.401032,7&sectors=&indicator=Population_Density)



<sup>38</sup> DanWatch field research in informal mining communities in Obuasi, Ghana, February 2013

<sup>39</sup> World Bank (2012): Investing Mineral Wealth in Development Assets, p.11 [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349\\_20120614165615/Rendered/PDF/WPS6089.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/06/14/000158349_20120614165615/Rendered/PDF/WPS6089.pdf)

<sup>40</sup> License holders have to pay a royalty no less than 3 percent and no more than 6 percent of their gross revenues. World Bank (2011): Political Economy of the Mining Sector in Ghana, p.23 [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/07/21/000158349\\_20110721153754/Rendered/PDF/WPS5730.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/07/21/000158349_20110721153754/Rendered/PDF/WPS5730.pdf)

<sup>41</sup> G. Hilson and C. Potter (2005): Structural Adjustment and Subsistence Industry: Artisanal Gold Mining in Ghana, p. 116-118.

<sup>42</sup> Bloch and Owusu (2011): Linkages in Ghana's Gold Mining Industry: Challenging the Enclave Thesis, p. 16

- 4,780,380 people live in Ashanti region<sup>43</sup>
- 31.2 % of children in the age of 5-14 are engaged in child labour in the Ashanti region
- 92 % of children in the age of 5-14 that are engaged in child labour are attending school at the same time in the Ashanti region<sup>44 45</sup>

The Ashanti region in south central Ghana is the third largest and most populated region in Ghana. The region is one of the major gold deposits in Ghana, hosting one large scale mining operation, AngloGold Ashanti, and an unknown amount of smaller Ghanaian licensed medium and small scale operations as well as unlicensed small scale miners called galamsey. The Ashanti region is experiencing a gold rush due to increasing gold prices, attracting locals, Ghanaian entrepreneurs and foreigners.

In the region, gold is found close to the surface, making it possible for adults or children to easily set up small mining operations on their own or with their families. With just a shovel, a wooden bowl, and access to water, gold mining can be done. This makes it possible and easy for children to engage in mining, sometimes in the backyard of their village.

Unlicensed small scale mining can occur on licensed medium scale and large scale sites, with or without the consent from the licensed operators<sup>46</sup>. At some sites, poor local families are allowed to mine in the pits exploited already by licensed medium scale operators, working dangerously close to heavy equipment such as excavators, in mud pits with depths ranging from 1 to 6 meters.

The working conditions for children working in this kind of surface mining involves carrying heavy loads, digging, working days of 6 to 8 hours with few breaks and little food or water, standing in mud or water for several hours, exposure of mercury to skin and risk of inhalation of mercury fumes. At the sites, there are risks of accidents with sharp tools such as shovels or pickets and deadly risks of collapsing pits, mudslides or accidents connected to working in the close vicinity of excavators.

<sup>43</sup> Ghana Statistical Service (2010): Population by region, district, age groups and sex [http://www.statsghana.gov.gh/docfiles/pop\\_by\\_region\\_district\\_age\\_groups\\_and\\_sex\\_2010.pdf](http://www.statsghana.gov.gh/docfiles/pop_by_region_district_age_groups_and_sex_2010.pdf)

<sup>44</sup> Definitions of child labour used: Ages 5-11: at least one hour of economic work or 28 hours of domestic work per week. Ages 12-14: at least 14 hours of economic work or 28 hours of domestic work per week. (Article 32 of the Convention on the Rights of the Child)

<sup>45</sup> ICF(2006): Multiple Indicator Cluster Survey, p.90 [http://www.measuredhs.com/pubs/pdf/FR226/FR226\[MICS\].pdf](http://www.measuredhs.com/pubs/pdf/FR226/FR226[MICS].pdf)

<sup>46</sup> DanWatch field research in informal mining communities in Obuasi, Ghana, February 2013

Mercury is used to amalgamate gold dust, making the process of gathering mined gold into one piece for selling off easy. The gold dust is mixed with water and mercury and rubbed into a ball with bare hands. Excess mercury is then squeezed out through a handkerchief, leaving a single ball of gold. The piece of gold is then heated to remove the rest of the mercury, which will leave the gold as highly toxic fumes.

The procedure results in mercury being released into the nature through the water, mercury exposure to skin and hands that later will be used for eating, and inhalation of toxic mercury fumes.

Mercury is a highly toxic substance that will accumulate in the body, and attacks the central nervous system. Children down to the age of 11 has been seen handling the toxic process of amalgamating gold with mercury.

The unlicensed gold miners sell their gold on a daily basis, with the payment depending on their findings and on the gold price offered by their buyer. Around most mining sites, there is a patchwork of smaller buyers, with different buying power and mobility. Gold will often be smelted together with other pieces before being sold off. Most gold in the Ashanti region will end in the regional capital Kumasi, where larger buyers with licenses will smelt gold to larger pieces and sell to jewellers, exporters or the Precious Minerals Marketing Company Limited (PMMC) office itself, which in turn sells it off to jewellers or export it. PMMC is a company with the Government of Ghana as the sole shareholder that handles the export of small scale gold and issues licenses for gold traders and exporters in Ghana.



### **Dauda, 14, Ashanti region**

Dauda works together with two boys at the same age, in a large mining area run by a medium scale licensed mining operation that allows the local community to work independently in the pits they have exploited. Often the local small scale miners, including Dauda, work dangerously close to heavy equipment such as excavators.

*“I work here everyday, with the exception of Tuesday. Sometimes I work here after school and sometimes I don’t go to school at all. My mom asked me to work here.*

*I give my daily savings to my mom, sometimes my mom use part of the money to buy new clothes for me. Apart from this, the money is also spent on other members of the family. My nine siblings and my mom all benefit from my money.*

*Sometimes business is good. However, at times there is no gold. I believe this is not sustainable. So those who are in school should concentrate on their education so in the event there is no gold, then you have a better future.”*



### **Immanuel Okoku, 11, Ashanti region**

Immanuel works with 5 other children at his age in a self-organised team, which works together each weekend. The mining pit is located in the forest 200 meters from their village. In the area around the village, there are several small pits with children working together in groups of six.

*“The work is difficult, everything about it is difficult. It is difficult to dig, in fact everything is difficult.*

*We always fall sick because of this work. We get persistent headaches and chest pains. I always complain to my mom that the sickness is a result of the mining. But she doesn’t say anything about it. I have no intention to quit just because I get sick, because I don’t have money. I earn around 10 Cedis (3,97 Euro) a day, our mothers ask us to go here.”*

## 5.2

## Under ground in Mali's gold mines

- Between 20.000 and 40.000 children from the age of 6 work in Mali's small scale mines<sup>47</sup>
- 55,4% of Mali's children complete primary school (5th grade)<sup>48</sup>
- 30,6% of Mali's children start in secondary school<sup>49</sup>
- 83 % of Mali's children age 7-14 are working<sup>50 51</sup>

In Mali, child labour is widespread: With immense poverty and poor quality of schooling in rural areas, many families have no choice but to take their children along when they seek for means of survival at the informal mining sites.

An estimated 20.000 to 40.000 children are engaged in gold mining in Mali. Some are travelling to mining sites by themselves while most are taken along by their family when moving to live at a mining site. At the sites, the children down to 7 are either working in the mines, digging tunnels, washing sand or crushing ore, or are selling food or water. The younger children will sometimes tend to the babies. Child prostitution is also a growing problem in the informal mining communities<sup>52 53 54</sup>. Many of the children are taken out of school to work in the mines, while others never went to school in the first place<sup>55</sup>.

Small scale mining in Mali is extremely tough and dangerous work, for both children and adults. Mine pits sometimes collapse, the hours are long, the labour is physically demanding, and use of mercury is unregulated, with no local knowledge of its dangers<sup>56 57</sup>.

The income from working in gold mining is entirely dependent on what is found and thus the daily wage can vary a lot: Children earn from 500 – 2500 CFA (0,76€ - 3,8€) per day. The daily income is most likely to be about 1000 cfa (1,5€)<sup>58</sup>. The children work from 8 to 16 or 18, with a break at midday. The mines are closed on either Mondays or Fridays<sup>59</sup>.

<sup>47</sup> ILO(2010): Etude transfrontalière sur le travail des enfants, p. 9. & UNEP(2009): Atelier sous-régional d'information des pays de l'Afrique de l'Ouest francophones sur les problèmes liés à l'orpaillage. Rapport de synthèse

<sup>48</sup> (2011) Millennium Development Goals: <http://mdgs.un.org/unsd/mdg/data.aspx> (Accessed May 4 2013)

<sup>49</sup> (2011) WB country Data – Mali. (Accessed May 4, 2013)

<sup>50</sup> (2007) WB country Data – Mali. (Accessed May 4, 2013). "Children in employment, unpaid family workers (% of children in employment, ages 7-14)"

<sup>51</sup> HRW (2011): A Poisonous Mix, p. 20: Quoting Mali's Work Ministry's report from 2010, saying it is 'only' 2/3 of Mali's children. [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>52</sup> DanWatch interview with Yaya Konatè. Chief of Social Development in Bougouni, April 2013.

<sup>53</sup> DanWatch interview with Andreï Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>54</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>55</sup> DanWatch interview with Andreï Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>56</sup> DanWatch interview with Yaya Konatè. Chief of Social Development in Bougouni, April 2013.

<sup>57</sup> DanWatch interview with Andreï Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>58</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>59</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

Most children give their earnings to their parents. The money is much needed e.g. for food, basic necessities, and kitchen tools that girls' need when getting married. Only half of Mali's children finish primary school<sup>60</sup>. For many parents in poor rural areas in Mali, investing in children's education is not an option, due to school fees, lack of access to schools, and the need to have the children contribute to the household<sup>61 62</sup>.

During the weekends, school children will come to the mines to dig gold. Attracted by the goods that the mining children can afford and perhaps pressured by their parents they come from surrounding villages and even Bamako, Mali's capital<sup>63</sup>. Others will go to the mines after school. It is, however, reported to be a slippery slope. Concentration fail due to fatigue, and the children often start including the weekdays one at a time, until some flunk the exams and start working full time<sup>64 65</sup>. Children who have dropped out are not accepted back into school by the system<sup>66</sup>.

### 5.2.1

## The small scale gold mining sector in Mali

Mali is the third largest producer of gold in Africa.

In 2012, Mali's gold production rose with 15% to 50,3 tonnes in total, of which between 4,000 and 5,000 kilograms are produced by the informal gold mining sector<sup>67 68</sup>. However, the informal hoist of gold is likely much higher<sup>69</sup>.

There are between 100.000 and 200.000 miners working in the small scale gold mining sector<sup>70</sup>

<sup>60</sup> UN (2011): Millennium Development Goals <http://mdgs.un.org/unsd/mdg/data.aspx> (accessed May 4, 2013)

<sup>61</sup> DanWatch interview with Inzan Sanogo, Headmaster of community school of Soumaya, April 2013

<sup>62</sup> DanWatch interview with Yacouba Bagayoko, President of tomboloma and father, mining community of Kemogola, April 2013.

<sup>63</sup> DanWatch field research in small scale mining communities in the Sikasso region of Mali. April 2013.

<sup>64</sup> DanWatch interview with Inzan Sanogo, Headmaster of community school of Soumaya, April 2013.

<sup>65</sup> DanWatch interview with Mamadou Bakayoko, Mayor of the commune of Ouroun, circle of Bougouni, April, 2013.

<sup>66</sup> DanWatch interview with Andreí Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013.

<sup>67</sup> Reuters, <http://www.lefigaro.fr/flash-eco/2013/02/28/97002-20130228FILWWW00539-mali-la-production-d-or-a-bondi-en-2012.php>

<sup>68</sup> USGS (2011): Minerals Handbook: Mali and Niger, p. 1 <http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-ml-ng.pdf>

<sup>69</sup> E.g. Human Rights Watch (2011) quoted Morike Sissoko President of the Malian federation of artisanal gold miners on estimating the total artisanal production to be as high as 20 tons per year. Mamadou Lamine Traoré, Economist and finance inspector at the Danish embassy of Mali said that on top of the "4 tons from Artisanal Gold mining ... much is undeclared. In reality it might be 6 or even 10 tons" and illegal "Malian gold has been known to end up on Burkina Faso, Senegal etc"

<sup>70</sup> HRW (2011): A Poisonous Mix, p.18 [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

Like in Ghana, gold production has historically been of major importance to Mali and it still is, in the form of large scale and small scale operations. Gold is Mali's largest export income, accounting for 75% of all exports in 2011<sup>71</sup>.

Gold mining in Mali is performed by 18 international mining companies, an unknown number of national mining companies, and the informal small scale sector, which employs between 100.000 to 200.000 people at more than 350 mining sites<sup>72 73</sup>.

## Informal sector

Mali's artisanal mining sites are structured with Tombolomas (village chiefs) as authorities in the mining sites. Societies are built around the mining sites with houses of plastic and pieces of wood with thousands of inhabitants and stores selling necessities for living and mining<sup>74</sup>. Still there is no real and responsible authority and social workers in nearby towns are often left with the responsibility when problems like epidemics occur and people without identity die in mining accidents<sup>75</sup>.

In Mali, small scale mining is only legal in the so called gold corridors, which are mining sites designated by local chiefs and mayors. However, if gold is found outside the corridors, the area will likely attract small scale miners rapidly<sup>76</sup>.

## Gold rush

Small scale gold mining in Mali can be described as a gold rush culture, further nourished by recent years' rise in global gold prices and increased local commodity prices due to the current conflicts in the country<sup>77</sup>: Families and individuals from Mali and neighbouring countries migrate according to latest rumours of gold<sup>78</sup>. The mining societies can be left just as fast as they were built if the inhabitants realize the ground did not deliver as expected<sup>79</sup>. Lack of rain caused by climate changes, affecting the traditional labour like fishing, cattle herding and agriculture also causes more people to turn to mining<sup>80 81 82 83</sup>.

<sup>71</sup> Claire Mainguy, "Natural resources and development: The gold sector in Mali," Resources Policy, vol. 36 (2011), pp. 123-131 & HRW (2011): A Poisonous Mix, p. 16 [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>72</sup> HRW (2011): A Poisonous Mix, p. 18 [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>73</sup> USGS (2011): Minerals Handbook: Mali and Niger, p. 1 <http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-ml-ng.pdf>

<sup>74</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>75</sup> DanWatch interview with Yaya Konatè. Chief of Social Development in Bougouni, April 2013

<sup>76</sup> DanWatch interview with Andréi Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>77</sup> DanWatch interview with Yaya Konatè. Chief of Social Development in Bougouni, April 2013.

<sup>78</sup> DanWatch interview with Andréi Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>79</sup> Even Moussa Uatara – Chief office of plan and statistics in Bougouni had to give up on explaining how many mines there were in his area as new ones appeared all the time. A quote from Bornefondens Yacouba Dena explains it like this "*Farmers notice if gold appears in their field and then people start digging*".

<sup>80</sup> DanWatch interview with Andréi Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>81</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>82</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>83</sup> DanWatch interview with Yaya Konatè. Chief of Social Development in Bougouni, April 2013.

The gold rush in the small scale sector has in the recent years started affecting the agriculture in Sikasso. People stay at the mining sites during the rainy (harvest) season threatening food-sustainability and increasing the food price<sup>84</sup>.

The governor of the Sikasso region in Mali has found it necessary to decree shutting gold mining down for the rainy season to make sure that fields are tended to, however with little success<sup>85 86</sup>.

## The conflict

In the recent times of conflict in Mali, the economy was hit hard. Since early 2012, Islamist groups fought the Malian army in the north of Mali, and after the coup in March 2012 civil unrest and clashes between army fractions broke out. After Islamist factions further expanded, France was requested to intervene with a military offense in the north<sup>87</sup>.

The conflict left the industries and infrastructure of the north of Mali shut down, weakening an economic fragile Mali even further. However, the gold production was able to continue due to the location of the gold depots in south west and south of Mali, and the gold production increased with 15% in 2012<sup>88</sup>.

## Severe poverty

In spite of many years of rapid development in almost any aspect, Mali is still one of the world's poorest countries ranking as 182nd of 187 in UNDP's Human Development Index<sup>89</sup>. More than half of the population live on less than 1\$US a day<sup>90</sup>. And only around 1/3 of the adult population is able to read<sup>91</sup>.

<sup>84</sup> DanWatch interview with Moussa Diarra, Chief Executive in Bougouni, April 23, 2013.

<sup>85</sup> DanWatch interview with Moussa Diarra, Chief Executive in Bougouni, April 23, 2012.

<sup>86</sup> DanWatch interview with Andrei Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013

<sup>87</sup> <http://www.i-m-s.dk/wp-content/uploads/2013/02/media-in-mali-divided-by-conflict-2013-ims2.pdf> p 30

<sup>88</sup> Reuters, <http://www.lefigaro.fr/flash-eco/2013/02/28/97002-20130228FILWWW00539-mali-la-production-d-or-a-bondi-en-2012.php>

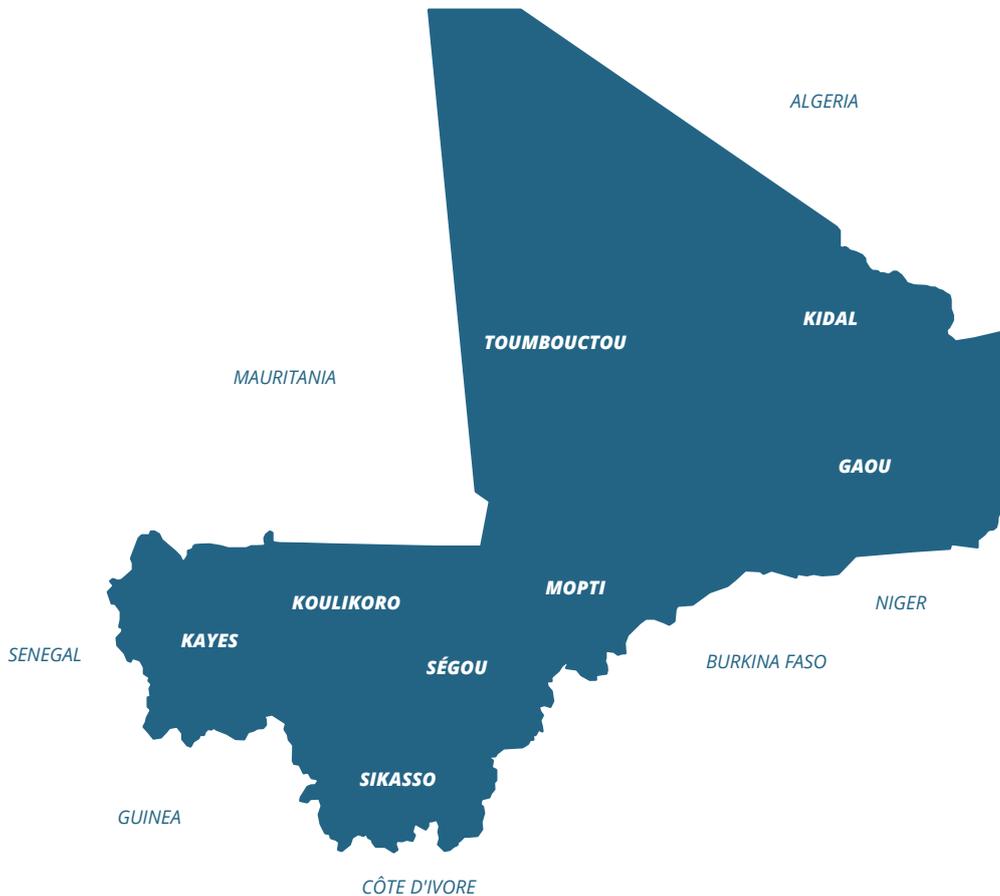
<sup>89</sup> UNDP's Human Development Index is a composite of healthy life, knowledge and a decent standard of living. Mali is number 182 of 187 registered countries: <http://hdrstats.undp.org/en/indicators/103106.html> (Accessed May 4, 2013)

<sup>90</sup> 50,4% (2010) Millennium Development Goals: <http://mdgs.un.org/unsd/mdg/data.aspx> (Accessed May 4 2013)

<sup>91</sup> Literacy of population above 15 is 31,1% (2011) - WB Country Data - Mali

## 5.2.2

# Small scale mining in the Sikasso region in Mali



- 2,625,919 people live in Sikasso region<sup>92</sup>
- Though Mali's Sikasso region is the 3rd smallest of the country's 9 regions, it has the highest population<sup>93</sup>
- Along with Koulikoro and Kayes, Sikasso is one of only three regions in the country where gold can be found<sup>94</sup>

<sup>92</sup> <http://instat.gov.ml/documentation/sikasso.pdf> (accessed May 20, 2013)

<sup>93</sup> (2009) [http://en.wikipedia.org/wiki/Regions\\_of\\_Mali](http://en.wikipedia.org/wiki/Regions_of_Mali) (accessed May 20, 2013)

<sup>94</sup> UNEP <http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/PartnershipsAreas/Conference%20de%20Bamako%20sur%20l'orpaillage.pdf> (French - kombi af google translate og egne skills)

The region is host to several big scale mining sites, not to mention an ever increasing, but highly uncertain, number of small scale miners. Increasing gold price, failed harvests due to climate changes, a rise in prices of commodities, and a continuous discovering of new sites containing gold are all factors contributing to the increase in number of small scale miners<sup>95 96 97</sup>.

Though gold is said to be found in the upper layers of the soil the miners will dig shafts (holes) of 3-50 meters depth to get to the more lucrative layers of gold. As electricity and machinery is but a wish, it is all done by hand<sup>98</sup>. The work is often done by children of age 7 and up<sup>99 100</sup>: The shafts are dug with nothing but primitive pickaxes that are made at the spot and are known to break with injuries to follow<sup>101</sup>. The children risk chronic sinusitis<sup>102</sup> from inhaling the fine dust<sup>103</sup>. Steps are cut into the mud-wall to enable a 25 meter climb into the mine. Children use their bare hands and a rope to pull up the 6-10 kg buckets of dirt and ore from the mine, which causes severe back pains<sup>104 105</sup>. As does the panning of the gold which is done in mud up to the knees.

Temperatures are often 35-40 degrees and shade is for the few, all depending on the area. Usually there are no safety rules or equipment and reports of deaths due to mine collapse in the region are not uncommon<sup>106 107</sup>. At the sites, there are no water or sewage treatment facilities, and polluted water is reported to be a problem<sup>108</sup>.

## Mercury use in Mali

Though mercury use was not witnessed at any of the visited mining sites, the use is reportedly widespread. At the Soumaya site, miners explained that the person who works with mercury had just left. BORNEfonden's research in May 2012 at the mines of Soumaya and Kemogola documented the use of mercury at both sites. BORNEfondens report furthermore confirms that children are still working with the mercury without protection<sup>109</sup>.

<sup>95</sup> DanWatch interview with Andreí Sinamiény and Yacouba Dena, BORNEfonden Mali, Bamako, May 2013.

<sup>96</sup> DanWatch interview with Mamadou Lamine Traoré, Economist and finance inspector, Danish embassy, April 2013.

<sup>97</sup> DanWatch interview with Yaya Konatè, Chief of Social Development in Bougouni, April 2013.

<sup>98</sup> At the three mines we visited we only saw one power driven mining-tool. A generator-driven pump to pump up the water from the 50 meters deep shafts. This could be done as it was relatively close to the city.

<sup>99</sup> HRW (2011): A Poisonous Mix [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>100</sup> DanWatch field research in small scale mining communities in the Sikasso region of Mali, April 2013.

<sup>101</sup> DanWatch interview with Mamoutou Traorè, age 14, mining community of Kemogola, April 2013.

<sup>102</sup> Chronic inflammation of the paranasal sinuses

<sup>103</sup> DanWatch interview with Yaya Konatè, Chief of Social Development in Bougouni, April 2013.

<sup>104</sup> DanWatch interview with Yaya Konatè, Chief of Social Development in Bougouni, April 2013.

<sup>105</sup> At the three mines we visited we only saw one power driven mining-tool. A generator-driven pump to pump up the water from the 50 meters deep shafts. This could be done as it was relatively close to the city

<sup>106</sup> DanWatch interview w. Tombolomas/Village Chiefs, at mining community of Soumaya, April 2013.

<sup>107</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>108</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>109</sup> DanWatch interview with Andreí Sinamiény and Yacouba Dena, BORNEfonden, Bamako, Mali, May 2013



**Korotoumou, 11 years old,  
Mining site of Soumaya**

*“My name is Korotoumou Diakite and I am around 11 years old. I Work pulling the sands from the holes and washing the sand. It is painful for the back. I like washing the sand. It is easier. It hurts the back but not as much as pulling the sand up from the holes. I work everyday except Friday. On Fridays I wash clothes and fetch water. I never went to school. There was no money for it.”*



**Mariam Bagayoko, girl,  
age 14, Site of Kemogola**

*“I wash the mud-stone to get the gold – it is difficult because you wash it with water and there is a lot of dirt in it. It is hard for the chest because you use it when you squash the stones with your hand. I stopped school two years ago. They beat me at the school and I left. But now I would like to go to school because I like it better than working at the mine. I will stay here (with my aunt) until my father calls me home. I hope it happens soon.”*

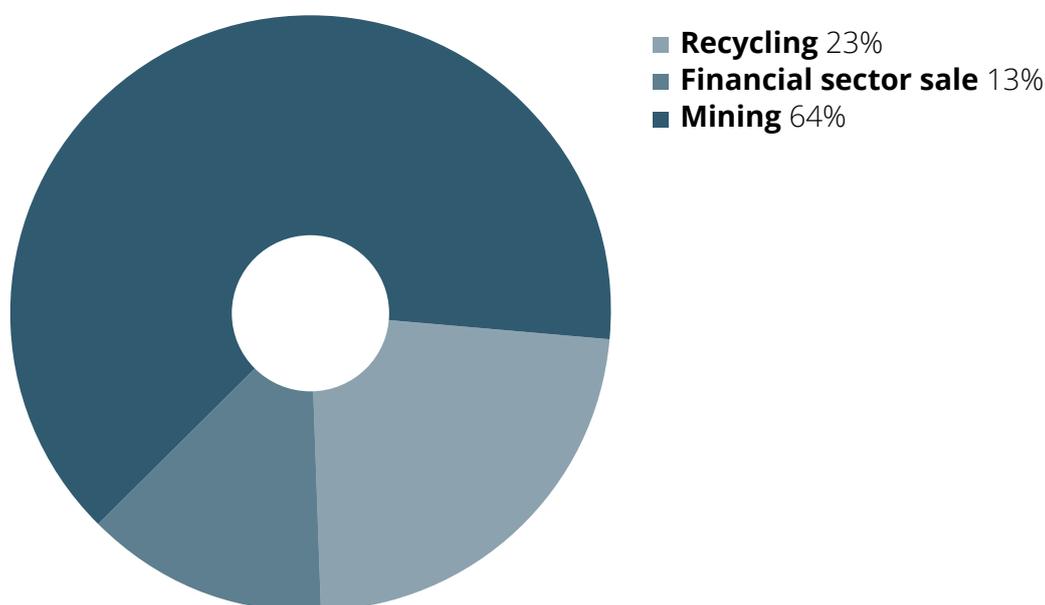
## 6

## From mine to gadget

### Gold supply chains: From small scale mine to consumer electronics

The global trade of gold is extremely complex, because both new as well as old/re-used gold is circulating. The supply of gold has three origins: Mining, recycling and sales by the financial sector (central banks, the IMF etc.)<sup>110</sup>. Gold is unique in the way that it is easily re-melted, making it easy to combine gold from different origins along the steps of the gold supply chain from mines to consumer electronics. Likewise, there is no global traceability scheme in place that could allow tracing the origin of gold.

### Global gold supply<sup>111</sup>



Generally, the journey of the small scale gold from mines to consumer electronics can be mapped on five or six stages as listed on next page<sup>112</sup>.

<sup>110</sup> World Gold Council (2011): Gold Demand Trends, Q4 2011, p. 23

<sup>111</sup> Bloch and Owusu (2011): Linkages in Ghana's Gold Mining Industry: Challenging the Enclave Thesis, p. 13 (figures from 2007)

<sup>112</sup> Enough, From Mine to Mobile: 1

<sup>113</sup> Bloch & Owusu (2011): 26 & <http://pmmcghana.com/gold> (accessed May 20, 2013)

<sup>114</sup> <http://pmmcghana.com/gold> (accessed May 20, 2013)

<sup>115</sup> DanWatch field research in informal mining communities in Sikasso, Mali, April 2013

<sup>116</sup> DanWatch interview with Tombolomas/Village Chiefs at mining community of Soumaya, April 2013

<sup>117</sup> <http://pmmcghana.com/foreignbuyers> (accessed May 20, 2013)

<sup>118</sup> DanWatch email interview with PMMC Press Officer, 31/1 2013

<sup>119</sup> HRW (2011): A Poisonous Mix, p. 6 [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>120</sup> G. Hilson and C. Potter (2003): Why Is Illegal Gold Mining Activity so Ubiquitous in Rural Ghana? p. 250

<sup>121</sup> Aboagye et al (2004): 72

<sup>122</sup> PMMC "Gold" <http://pmmcghana.com/gold> (accessed May 20, 2013)

<sup>123</sup> HRW (2011): A Poisonous Mix, p. 73 [http://www.hrw.org/sites/default/files/reports/mali1211\\_forinsertWebUpload\\_0.pdf](http://www.hrw.org/sites/default/files/reports/mali1211_forinsertWebUpload_0.pdf)

<sup>124</sup> DanWatch interview with Mamadou Lamine Traoré, Economist and finance inspector, Danish embassy, Mali, April 2013.

<sup>125</sup> For instance the indigenously owned ASAP-VASA, Sahara Group's Gold Secure Ltd and the Chinese-funded Modern Gold Refinery, operated by Chyanchua.

<sup>126</sup> Bloch and Owusu (2011): Linkages in Ghana's Gold Mining Industry: Challenging the Enclave Thesis, p. 25

<sup>127</sup> Switzerland is home to the refineries Argor-Heraeus, Metalor, PAMP and Valcambi, while the UAE hosts the Emirates Gold DMCC, the largest gold refiner and bar manufacturer in the Middle East.

<sup>128</sup> Enough, From Mine to Mobile: 7

## Ghana

## Mali

**1. Mines** Gold mining in Ghana and Mali ranges from large-scale mining to labour-intensive small-scale mining. This supply chain focuses on the small scale gold produced by children.

**2. Retailers** After extraction, small scale miners sell their gold to domestic buyers. While large-scale miners often export directly.

Under license from the official marketing board, PMMC: Precious Minerals Marketing Company, small-scale miners usually deal with the around 750 PMMC-licensed buyers, who operate in the local mining communities, including unlicensed mining where child labour takes place<sup>113</sup>. These buyers then sell the gold to the PMMC at its head office in Accra or any of its seven regional branches<sup>114</sup>.

At every small scale mining site a number of minor buyers will buy up gold, including child-mined gold<sup>115</sup>. They are working for retailers based in larger cities like Bougouni. The retailers smelt gold from different sources together and sell it to major retailers in the capital Bamako<sup>116</sup>.

### 3a. Exporters

All exports of small scale gold from Ghana are controlled by the PMMC, either by the corporation itself on behalf of third-parties or by PMMC-license holders<sup>117</sup>. While it is not possible to obtain figures on the export of small scale gold only, according to the PMMC, its main destinations of exported small scale gold are Switzerland and the United Arab Emirates<sup>118</sup>.

Major trade houses in the capital Bamako export abroad, primarily to Switzerland, United Arab Emirates, and Belgium<sup>119</sup>.

**3b. Smuggling** In countries where informal mineral trade is widespread, neighbouring countries are often used for transit via smuggling.

In Ghana, however, there is little smuggling. Because the PMMC doesn't evaluate the legal status of the gold it purchases, unlicensed miners can export their minerals through the official export authority - this reduces the need for smuggling gold into transit countries<sup>120 121 122</sup>.

In Mali, gold is smuggled into the country from Guinea and Burkina Faso, and smuggling of small scale gold from Mali into neighbouring countries does occur, but due to its informal nature, the extent, and final destination is unknown<sup>123 124</sup>.

**4. Refineries** Before gold can be used in electronics, jewellery or gold bars, it has to be refined.

While Ghana hosts at least a few gold refining facilities<sup>125</sup>, some sources suggest that only little actual refining takes place inside Ghana<sup>126</sup>. The two major importing countries of Ghanaian small scale gold (Switzerland and United Arab Emirates), however, have huge smelting and refining facilities<sup>127</sup>.

Sometimes retailers will sell off the gold to refiners, and sometimes larger refiners will themselves buy directly from Mali. According to information obtained by Human Rights Watch in 2011, Swiss, United Arab Emirate and Belgian companies imported small scale gold from Mali. The importing companies will refine the gold further before selling it off.

**5. Electronics companies** Finally, the refineries sell a part of the gold to electronics suppliers. Manufacturers of consumer electronics often source components from independent suppliers, subsidiaries, or subcontractors, and therefore, this stage typically consists of a number of sub-stages<sup>128</sup>. While the exact chain is difficult to map, the gold-containing components, some with gold produced by children, ultimately find their way into smartphones and PCs as key element in any consumer electronic item. Only one major electronics company, HP, has disclosed its smelters.

With gold from different sources smelted together in larger and larger batches at each stage, the child-mined gold unnoticed makes its way through the value chain. Due to the informal patchwork of small scale retailers and many small suppliers, traceability is lost after just a couple of change of hands.

## 7

## Hollow policies

### Smartphone and PC companies' sourcing policies

Below the top brands are interviewed on policies and practice of responsible sourcing of minerals, in the question of child laboured gold from Ghana and Mali.

All of the responding companies have policies against child labour. All responding companies address the issue of conflict minerals. None of the companies contacted could guarantee that they do not source small scale gold from Mali or Ghana.

Acer, Lenovo, Asus and Dell did not respond, though they were contacted several times over a period of more than two months. For those companies who did not respond, company policies available on websites were used.

- Samsung, Apple, Research in Motion, Nokia and HTC are the largest smartphone brands on the Western European market<sup>129</sup>
- HP, Acer, Lenovo, Asus and Dell are the largest PC brands on the Western European market<sup>130</sup>

<sup>129</sup> Statista "Market share of smartphone vendors in Western Europe from 1st quarter 2011 to 1st quarter 2012" <http://www.statista.com/statistics/235330/market-share-of-smartphone-shipments-in-western-europe-by-vendor/> (accessed May 20, 2013)

<sup>130</sup> Gartner "Gartner Says PC Market in Western Europe Declined 11.7 Percent in the Fourth Quarter of 2012" <http://www.gartner.com/newsroom/id/2337015> (accessed May 20, 2013)

<sup>131</sup> Based on company websites and mail interviews (intern note: korrespondencer ligger på serveren)

<sup>132</sup> Apple "FAQ" <http://investor.apple.com/faq.cfm?FaqSetID=1> (accessed May 20, 2013)

<sup>133</sup> Ycharts "Market cap" [http://ycharts.com/rankings/market\\_cap](http://ycharts.com/rankings/market_cap) (accessed May 20, 2013)

<sup>134</sup> Apple "Supplier Responsibility" <http://www.apple.com/supplierresponsibility/> (accessed May 20, 2013)

<sup>135</sup> Apple (2012): Apple Supplier Responsibility, p 11 [http://images.apple.com/supplierresponsibility/pdf/Apple\\_SR\\_2012\\_Progress\\_Report.pdf](http://images.apple.com/supplierresponsibility/pdf/Apple_SR_2012_Progress_Report.pdf)

## 7.1

Smartphone brands<sup>131</sup>

 <b>Samsung</b> Seoul, South Korea	EICC	▼
	GeSI	×
	UN Global Compact	×
<p>Established in 1938 as a noodle producer, South Korean Samsung is the biggest player in the European market for smartphones. Unlike the other companies reviewed in this report, the majority of the components in Samsung's products are sourced from its intra-group network of affiliates.</p>		
What is your policy on child labour?	<p><i>"We abide by all labor and human right laws in each region we operate and strictly enforce a ban on child labor, forced labor and workplace discrimination"</i></p>	
What is your policy on sustainable supplier management?	<p><i>"Samsung is committed to upholding the highest standards of corporate responsibility, and we continue to proactively evaluate our sourcing policies to ensure they are addressing existing and emerging issues associated with our industry"</i></p>	
What is your policy on minerals?	<p><i>"We are working to identify and eliminate the use of conflict minerals, including tin, tantalum/coltan, tungsten, and gold, in all of our products even though we are not obligated by the S.E.C. enforcement ordinance. We also required our first-tier suppliers to sign a compliance agreement stating they will not use these minerals."</i></p>	
Do you source gold from Ghana or Mali?	<p><b>Cannot tell</b></p>	
 <b>Apple Inc.</b> Cupertino, California, USA	EICC	▼
	GeSI	×
	UN Global Compact	×
<p>The American developer and producer of consumer electronics, Apple, was established in 1976. Its Chinese-made iPhone ranks second in the European market for smartphones. The company is listed on NASDAQ<sup>132</sup> and is the largest publicly traded company in the world (in terms of market capitalization)<sup>133</sup>.</p>		
What is your policy on child labour?	<p><i>"Apple does not tolerate the use of underage labor. When we discover suppliers with underage workers or find out about historical cases - where workers had either left or reached legal working age by the time of the audit - we demand immediate corrective action. We require suppliers to return underage workers to school and pay educational expenses, living stipends, and lost wages for six months or until the worker reaches the age of 16, whichever is longer"</i></p>	
What is your policy on sustainable supplier management?	<p><i>"Apple is committed to the highest standards of social responsibility across our worldwide supply chain. We insist that all of our suppliers provide safe working conditions, treat workers with dignity and respect, and use environmentally responsible manufacturing processes"</i><sup>134</sup></p>	
What is your policy on minerals?	<p><i>"In 2010, Apple was one of the first companies to map the use of potential conflict minerals across its supply chain, identifying 218 Apple suppliers that use tantalum (also known as coltan), tin, tungsten, or gold to manufacture components for Apple products and the 175 smelters they source from... We are continuing our efforts with the EICC to complete smelter audits to ensure that our suppliers use only metals that have been procured through conflict-free sources that adhere to our standards of human rights and environmental protection"</i><sup>135</sup></p>	
Do you source gold from Ghana or Mali?	<p><b>Cannot tell</b></p>	

	<b>Research In Motion (RIM)</b> Waterloo, Ontario, Canada	EICC	✓
		GeSI	✓
		UN Global Compact	✗
<p>The Canadian manufacturer of wireless communication equipment Research In Motion (RIM) was established in 1984.<sup>136</sup> RIM produces the popular BlackBerry smartphone and is number three in the European market. RIM is listed on Toronto Stock Exchange and NASDAQ.</p>			
What is your policy on child labour?	<i>"RIM supports the principle of freely chosen employment and does not support the use of slave labour in any of its forms, including forced labour and child labour" (From website)</i>		
What is your policy on sustainable supplier management?	<i>"Supplier compliance with the RIM Supplier Code of Conduct and Responsible Minerals Policy is an expectation for doing business and is fundamental to our supplier engagement activities".</i>		
What is your policy on minerals?	<i>"RIM does not directly purchase these metals from any source. Nonetheless, our concern extends to our supply chain for parts and components used in RIM products. RIM will work with our suppliers... to continually improve the due diligence processes exercised regarding the source and chain of custody of the metals used in the parts and components they supply to us".</i>		
Do you source gold from Ghana or Mali?	<b>Cannot tell</b>		

	<b>Nokia</b> Espoo, Finland	EICC	✗
		GeSI	✓
		UN Global Compact	✓
<p>Founded in 1871 as a paper manufacturer, the Finnish company Nokia is today number four in the European market for smartphones<sup>137</sup>. Nokia's smartphones are mainly produced in its factories in Beijing, China and Masan, South Korea<sup>138</sup>. The company is listed on the stock exchanges in Helsinki and New York<sup>139</sup>.</p>			
What is your policy on child labour?	<i>"Our suppliers must meet Nokia Supplier Requirements which include a clause on child labour, and apply similar requirements on their suppliers".</i>		
What is your policy on sustainable supplier management?	<i>"Our comprehensive Nokia Supplier Requirements define strict environmental, social, ethical and health and safety requirements for our suppliers and are enforced through contractual agreements".</i>		
What is your policy on minerals?	<i>"Nokia does not purchase metals directly, but we take continuous action to ensure that conflict metals do not enter our supply chain. We are involved in industry initiatives to implement a smelter audit and validation process to improve the traceability of minerals and validate conflict-free sources".</i>		
Do you source gold from Ghana or Mali?	<b>Cannot tell</b>		

<sup>136</sup> RIM "Blackberry" <http://www.rim.com/company/> (accessed May 20, 2013)

<sup>137</sup> Statista "Market share of smartphone vendors in Western Europe from 1st quarter 2011 to 1st quarter 2012"

<http://www.statista.com/statistics/235330/market-share-of-smartphone-shipments-in-western-europe-by-vendor/> (accessed May 20, 2013)

<sup>138</sup> Nokia "Production facilities"

<http://www.nokia.com/global/about-nokia/about-us/production-facilities/production-facilities/> (accessed May 20, 2013)

<sup>139</sup> Nokia "Stock information"

<http://www.nokia.com/global/about-nokia/investors/stock-information/stock-information/> (accessed May 20, 2013)

 <b>HTC</b> Taoyuan, Taiwan	EICC	▼
	GeSI	×
	UN Global Compact	×
<p>The Taiwanese smartphone and tablet producer HTC was founded in 1997. It is the fifth-largest player in the European smartphone market. HTC's main production facilities are located in Taiwan and Shanghai<sup>140</sup>. The company is listed on the Taiwan Stock Exchange<sup>141</sup>.</p>		
What is your policy on child labour?	<p><i>"Our labour policy restricts using child labour and clearly articulates our expectation that all factory workers are of the legal working age"</i></p>	
What is your policy on sustainable supplier management?	<p><i>"As a condition of doing business with HTC, we require our suppliers, as well as their own suppliers, to comply with all applicable international and local employment laws. Our quality audit team makes regular inspections of our suppliers to ensure full compliance"</i></p>	
What is your policy on minerals?	<p><i>"As a member of the Electronic Industry Citizenship Coalition (EICC), we subscribe to the EICC Code of Conduct, which includes certification and policy criteria on mineral sourcing and labour practices"</i></p>	
Do you source gold from Ghana or Mali?	<p><b>Cannot tell</b></p>	

## 7.2

### PC brands

 <b>Hewlett Packard (HP)</b> USA	EICC	▼
	GeSI	▼
	UN Global Compact	▼
<p>HP was founded in 1939 in USA, originally producing audio instruments. HP is the market leader of PCs in Europe.</p>		
What is your policy on child labour?	<p><i>"Child labour is not to be used in any stage of manufacturing."</i></p>	
What is your policy on sustainable supplier management?	<p><i>HP has established a policy, management systems and a due diligence framework consistent with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.</i></p>	
What is your policy on minerals?	<p><i>While most of the metals are purchased at several tiers of suppliers removed from HP, we do conduct due diligence on the procurement of 3T and gold in our supply chain. In 2007, following continued concern about the origins of metals used in electronic products, we surveyed suppliers of manufactured notebook products and specific suppliers of hard disk drives, optical disk drives, batteries, liquid crystal displays and printed circuit boards for notebook products as to the origins of a number of metals contained in those products, including gold and tin.</i></p>	
Do you source gold from Ghana or Mali?	<p><i>It is possible that a supplier many layers removed from HP sources from this country, but it is unlikely given the high levels of purity required for electronics manufacturing.</i></p>	

<sup>140</sup> China Tech News "Taiwan's HTC To Invest USD45 Million In Mainland's HTC Electronics" <http://www.chinatechnews.com/2010/06/03/12160-taiwans-htc-to-invest-usd45-million-in-mainlands-htc-electronics> (accessed May 20, 2013)

<sup>141</sup> HTC "HTC investors" <http://www.htc.com/www/investor/> (accessed May 20, 2013)

 <b>Acer</b> New Taipei City, Taiwan	EICC	▼
	GeSI	×
	UN Global Compact	×
Acer was founded in 1976 as Multitech. Acer shares the second place on the European PC market with Lenovo.		
<b>What is your policy on child labour?</b>	<i>We fully comply with laws related to working hours, minimum age (no child labour or forced labour) and benefits, and we ensure that all our suppliers comply with these requirements<sup>142</sup></i>	
<b>What is your policy on sustainable supplier management?</b>	<i>We adopted EICC/GeSI Due Diligence Template tool to investigate which companies refine our supply of tantalum, tin, tungsten, and gold in 2011. However, we also encountered problems during our survey, particularly related to the uncertainty about the accuracy of received information, for example the names, locations and products of smelting plants<sup>143</sup></i>	
<b>What is your policy on minerals?</b>	<i>Since 2009, Acer has engaged its suppliers to educate them on the issue and begin tracing its supply chain back to the source of cobalt, gold, palladium, tantalum, tin, and tungsten. The survey indicated gold was sourced mainly from China, South Africa, Australia and Japan<sup>144</sup> Recently, Acer began participating on the EICC/GeSI Conflict-Free Smelter (CFS) assessment program working group<sup>145</sup></i>	
<b>Do you source gold from Ghana or Mali?</b>	<b>Has not responded</b>	

 <b>Lenovo</b> Beijing, China and Morrisville, North Carolina	EICC	▼
	GeSI	×
	UN Global Compact	▼
Lenovo is a Chinese-based computer manufacturer, founded in 1984. Lenovo shares the second place on the European PC market with Acer.		
<b>What is your policy on child labour?</b>	<i>Lenovo addresses the effective abolition of child labour through the principles of UN Global Compact<sup>146</sup></i>	
<b>What is your policy on sustainable supplier management?</b>	<i>Lenovo recognizes the challenges in solving a complex issue like conflict-free sourcing and is working to drive supply chain transparency through participation in multi-industry, multi-level collaborative efforts to address this topic. Lenovo is a member of the EICC's Extractives Working Group which is working to develop joint industry solutions<sup>147</sup></i>	
<b>What is your policy on minerals?</b>	<i>Lenovo will not willingly purchase materials containing tantalum, tin, tungsten or gold from a conflict region<sup>148</sup></i>	
<b>Do you source gold from Ghana or Mali?</b>	<b>Has not responded</b>	

<sup>142</sup> Acer (2011): Acer Group Standards of Business Conduct, p. 8

[http://www.acer-group.com/public/Sustainability/pdf/ACER\\_conduct-%202011%20New.pdf](http://www.acer-group.com/public/Sustainability/pdf/ACER_conduct-%202011%20New.pdf)

<sup>143</sup> Acer "Responsible Sourcing of Minerals" <http://www.acer-group.com/public/Sustainability/supply/supply-3.htm> (accessed May 20, 2013)

<sup>144</sup> Acer "Responsible Sourcing of Minerals" <http://www.acer-group.com/public/Sustainability/supply/supply-3.htm> (accessed May 20, 2013)

<sup>145</sup> Acer "Responsible Sourcing of Minerals" <http://www.acer-group.com/public/Sustainability/supply/supply-3.htm> (accessed May 20, 2013)

<sup>146</sup> Lenovo (2012): Sustainability for the PC+ Era, p. 92

[http://www.lenovo.com/social\\_responsibility/us/en/FY2012\\_Lenovo\\_Sustainability\\_Report.pdf](http://www.lenovo.com/social_responsibility/us/en/FY2012_Lenovo_Sustainability_Report.pdf)

<sup>147</sup> Lenovo "Lenovo's Actions to Address Conflict Minerals"

[http://www.lenovo.com/social\\_responsibility/us/en/Conflict\\_minerals\\_statement.pdf](http://www.lenovo.com/social_responsibility/us/en/Conflict_minerals_statement.pdf) (accessed May 20, 2013)

<sup>148</sup> Lenovo "Lenovo's Actions to Address Conflict Minerals"

[http://www.lenovo.com/social\\_responsibility/us/en/Conflict\\_minerals\\_statement.pdf](http://www.lenovo.com/social_responsibility/us/en/Conflict_minerals_statement.pdf) (accessed May 20, 2013)

 <b>Asus</b> Taipei, Taiwan	EICC	X
	GeSI	X
	UN Global Compact	X
Taiwanese Asus was founded in 1990 and is producing computers and electronic components. Asus is the fourth largest PC vendor in the European market.		
<b>What is your policy on child labour?</b>	<i>ASUSTeK Declaration on Human Rights policy is as follows: No child labour. Comply with local minimum age laws and requirements and do not employ child labour<sup>149</sup></i>	
<b>What is your policy on sustainable supplier management?</b>	<i>For supplier and outsourcer management, ASUS consolidates the information and requirements related to suppliers and outsourcers through an electronic platform - Supply Relationship Management (SRM) website<sup>150</sup></i>	
<b>What is your policy on minerals?</b>	<i>ASUS is willing to cooperate with the Electronic Industry Code of Conduct (EICC) and Global e-Sustainability Initiative (GeSI) to investigate on the mineral sources for the electronics industry as well as to communicate with other relevant groups and organizations that have concerns on this issue.</i>	
<b>Do you source gold from Ghana or Mali?</b>	<b>Has not responded</b>	

 <b>Dell</b> Round Rock, USA	EICC	✓
	GeSI	X
	UN Global Compact	X
The American computer company Dell was founded in 1984 by Michael Dell. It is one of the largest technology producing corporations in the world, and the fifth largest PC vendor in the European market.		
<b>What is your policy on child labour?</b>	<i>Child labour is not to be used under any circumstances. All employees must meet the minimum age requirement set by local laws<sup>151</sup></i>	
<b>What is your policy on sustainable supplier management?</b>	<i>Dell and Dell's suppliers are required to comply with all applicable laws and regulations where business is conducted. In addition, they are to embrace high standards of ethical behaviour and treat their employees fairly, and with dignity and respect, consistent with local law and the Electronics Industry Citizenship Coalition (EICC) Code of Conduct<sup>152</sup></i>	
<b>What is your policy on minerals?</b>	<i>Once the CFS program and certification programs have matured to a point that Dell is confident in its ability to deliver conflict-free materials, we will begin to require suppliers to use certified sources for procurement in Dell products<sup>153</sup></i>	
<b>Do you source gold from Ghana or Mali?</b>	<b>Has not responded</b>	

<sup>149</sup> Asus "Human Rights/Employee Welfare" <http://csr.asus.com/english/#28> (accessed May 20, 2013)

<sup>150</sup> Asus "Supplier Conduct Principles" <http://csr.asus.com/english/index.aspx#143> (accessed May 20, 2013)

<sup>151</sup> Dell "Dell Human Rights and Labor Policy Statement" <http://www.dell.com/Learn/us/en/uscorp1/corp-comm/cr-report-human-rights-labor-policy?c=us&l=en&s=corp> (accessed May 20, 2013)

<sup>152</sup> Dell "Supplier Global Citizenship Commitment" <http://www.dell.com/Learn/us/en/uscorp1/corp-comm/cr-supplier-global-citizen-commit?c=us&l=en&s=corp&cs=uscorp1&delphi:gr=true> (accessed May 20, 2013)

<sup>153</sup> Dell "Addressing Conflict Minerals: Leading Collective Action Across Our Industry" <http://www.dell.com/Learn/my/en/myhea1/corp-comm/conflict-minerals?c=my&l=en&s=hea&cs=myhea1&delphi:gr=true> (accessed May 20, 2013)

## Legal frameworks and Initiatives to increase responsible production and sourcing of minerals

There are currently no implemented systems where electronic companies can determine the origin of minerals, but initiatives to increase responsibility in production of electronics and in the sourcing of minerals do exist. Many, however, only address responsible business behaviour in relation to conflict minerals, the most known example being the mineral exploitation in DR Congo (DRC). This is the case for legislation such as The Dodd Frank act and initiatives such as Conflict-Free Standard, The Conflict Free Smelter Programme and the GeSI and EICC Extractives Work Group, while initiatives such as the Fairtrade and Fairmined gold focus on general labour conditions beyond conflict areas.

The Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI) are industry roundtable initiatives that do engage in work to increase responsibility and traceability in the entire electronics value chain, but only demand members to adopt their code of conduct for the first-tier of their value chain.

### Dodd-Frank Act

The Dodd Frank Wall Street Reform and Consumer Protection Act was passed by the US Congress in July 2010. Section 1502 of the act is aimed at stopping funding conflicts in DRC by trading conflict minerals with armed groups. The act calls on American companies to assess if minerals come from DRC or adjoining countries and to conduct a due diligence on their supply chain if they do source from DRC, and report to the American Securities and Exchange Commission<sup>154</sup>.

The Dodd Frank Act does not mean a ban on conflict minerals, but has been interpreted as such by some industries sourcing minerals, including gold, halting trade with the informal mining sector in DRC. This has had unwanted impacts on the informal mining sector<sup>155 156 157</sup>. However, some companies have been reported to acknowledge that stopping trade with risk areas might not be the best way to improve the situation of the local communities involved<sup>158</sup>.

<sup>154</sup> GPO (2010): DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT

<http://www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf> (accessed May 20, 2013)

<sup>155</sup> Judith Sargentini MEP & makeITfair European Parliament, Brussels, 26 May 2011: ROUNDTABLE ON CONFLICT MINERALS LEGISLATION, p 8

<sup>156</sup> Global Witness, "The Dodd Frank Act's Section 1502 on conflict minerals"

<http://www.globalwitness.org/library/dodd-frank-acts-section-1502-conflict-minerals> (accessed May 20, 2013)

<sup>157</sup> DanWatch interview with Wilbert Petty Brentum, Solidaridad project manager, Ghana, February 2, 2013

<sup>158</sup> Make It Fair (2012): From Congo with no Blood, p. 22

## The Minamata Convention on Mercury

In January 2013, the first treaty on mercury was agreed upon by more than 140 countries<sup>159</sup>. The treaty will address mercury use and emissions, and strategies to control, reduce and treat mercury exposure. Thus, the treaty is expected to have an impact on the mercury use in small scale mining, though how and when it is too soon to say. When 50 countries have ratified the treaty, it will come into effect<sup>160</sup>.

## The Global e-Sustainability Initiative (GeSI)

GeSI is an industry association created in 2001 to increase sustainability in the ICT sector<sup>161</sup>. The initiative is made to support members' workgroups, initiatives and practices regarding environmental and human rights issues.

## Electronic Industry Citizenship Coalition (EICC)

EICC is a coalition of companies working with electronics, with the purpose of working towards supply chains that are socially and environmentally responsible<sup>162</sup>. Its principles cover labour (including child labour), health, and safety, environmental, ethics and management system issues<sup>163</sup>.

As a minimum, the EICC demands of its members that the next tier of suppliers implement the principles<sup>164</sup>.

In 2004 the GeSI and EICC created the Extractives Work Group that is working to increase the transparency and traceability of materials in the supply chain with the focus of conflict minerals<sup>165 166</sup>.

## Conflict Free Smelter programme

The Conflict Free Smelter programme is started by EICC and GeSI as a tool for companies wishing to ensure the sourcing of conflict-free minerals<sup>167</sup>. The programme is supposed to simplify the supply chain management. The minerals covered are tantalum, tin, tungsten, and gold, being conflict minerals according to the Dodd-Frank Act<sup>168</sup>. There are no smelters in Africa participating in the programme, according to the website of the Conflict Free Smelter programme<sup>169</sup>.

<sup>159</sup> UNEP (2013): Minamata Convention Agreed by Nations <http://www.unep.org/newscentre/default.aspx?DocumentID=2702&ArticleID=9373>

<sup>160</sup> HRW (2013): Mercury Treaty Designed to Save Lives <http://www.hrw.org/news/2013/03/14/mercury-treaty-designed-save-lives>

<sup>161</sup> GeSI, "About GeSI" <http://gesi.org> (accessed May 20, 2013)

<sup>162</sup> EICC, "About us" [http://www.eicc.info/about\\_us.shtml](http://www.eicc.info/about_us.shtml) (accessed May 20, 2013)

<sup>163</sup> EICC, "Code of Conduct" <http://www.eicc.info/documents/EICCCodeofConductEnglish.pdf> (accessed May 20, 2013)

<sup>164</sup> EICC, "Code of Conduct" <http://www.eicc.info/documents/EICCCodeofConductEnglish.pdf> (accessed May 20, 2013)

<sup>165</sup> GeSI, "About GeSI" <http://gesi.org/portfolio/project/15> (accessed May 20, 2013)

<sup>166</sup> EICC, "Extractives Workgroup" <http://www.eicc.info/documents/ExtractivesWorkgroupWhitepaper.pdf> (accessed May 20, 2013)

<sup>167</sup> EICC & GeSI, "Conflict-free Smelter Programme" <http://www.conflictreesmelter.org/> (accessed May 20, 2013)

<sup>168</sup> EICC & GeSI, "Conflict-free Smelter FAQ"

<http://www.conflictreesmelter.org/documents/Conflict-FreeSmelterFAQ.pdf> (accessed May 20, 2013)

<sup>169</sup> EICC & GeSI, "Conflict-free Gold Refiners"

<http://www.conflictreesmelter.org/Conflict%20Free%20Gold%20Refiners.htm> (accessed May 20, 2013)

HP was the first and only electronics company to have ambitions of achieving conflict-free supply chains by having its suppliers use the Conflict Free Smelter certification, announced in the spring of 2013<sup>170</sup>.

## World Gold Council: Conflict-Free Gold Standard

The World Gold Council is a trade organisation representing the world's largest gold mining companies<sup>171</sup>. The Conflict free gold standard is a set of 8 principles for formal sector gold mining companies that operate in armed conflict areas<sup>172 173</sup>. As a part of the commitment to Human Rights, companies commit to not tolerating 'exploitative child labour'<sup>174</sup>. The standard is to be implemented over the course of year 2013, and does not engage with issues of sourcing from small scale mining<sup>175</sup>.

## Fairtrade and Fairmined gold

Fairtrade and Fairmined gold was made available by the Fairtrade Foundation that implemented certification schemes for the mining of gold, as it has done with well-known consumer products like coffee<sup>176</sup>. The Dutch organisation Solidaridad has a programme that is assisting farmers getting Fairtrade and Fairmined certification in Colombia, Bolivia, Peru, Ghana, Uganda, Tanzania and Kenya<sup>177</sup>. In order to control the supply chain, Fairtrade establishes entirely new 'closed piped' supply chains when making own links between miners and jewellery producers. By guaranteeing small scale miners a higher price for their gold, the Fairtrade and Fairmined gold scheme aspires to be an attractive alternative to galamsey, assisting a process of formalisation of the small scale gold mine sector, where issues such as child labour can be addressed<sup>178</sup>. Fairtrade and Fairmined gold will exclusively be available for the jewellery industry because of the relatively few other components than gold. A phone for example, can first be called a FairTrade phone when all of the components are Fairtrade certified, making Fairtrade consumer electronics virtually impossible<sup>179</sup>.

<sup>170</sup> Triple Pundit (2013): HP's Conflict-Free Supply Chain Initiative is an Industry First [www.triplepundit.com/2013/04/hps-conflict-free-supply-chain-initiative-industry-first/](http://www.triplepundit.com/2013/04/hps-conflict-free-supply-chain-initiative-industry-first/)

<sup>171</sup> World Gold Council, "Members" [http://www.gold.org/about\\_us/members/](http://www.gold.org/about_us/members/) (accessed May 20, 2013)

<sup>172</sup> World Gold Council, "Conflict-free Standard" [http://www.gold.org/about\\_gold/sustainability/conflict\\_free\\_standard/](http://www.gold.org/about_gold/sustainability/conflict_free_standard/) (accessed May 20, 2013)

<sup>173</sup> Definition of conflict area: Exposure Draft of the Conflict-Free Gold Standard p. 13

<sup>174</sup> World Gold Council (2012): Conflict-Free Gold Standard, p. 17

<sup>175</sup> Mining Weekly (2013): Implementation of conflict-free gold standard is under way <http://miningweekly.com/article/implementation-of-conflict-free-gold-standard-is-under-way-2013-03-08>

<sup>176</sup> Fairtrade Foundation, "Gold" <http://www.fairtrade.org.uk/gold/> (accessed May 20, 2013)

<sup>177</sup> Solidaridad, "Sustainable gold" <http://solidaridadnetwork.org/gold> (accessed May 20, 2013)

<sup>178</sup> DanWatch interview with Wilbert Petty Brentum, Solidaridad project manager, Ghana, February 2, 2013

<sup>179</sup> DanWatch interview with Wilbert Petty Brentum, Solidaridad project manager, Ghana, February 2, 2013

## Fairphone

Fairphone is an Amsterdam-based privately-owned enterprise (Waag Products) that has partnered with a number of organizations to produce a fairer mobile phone, planning production in the course of 2013<sup>180</sup>.

While details and Fairphone's position on e.g. unions remain unclear, the company's ambition is to produce a phone containing conflict-free tin and the intention is to (at some point) improve working conditions in the entire supply chain, pay fairer prices/wages and make the supply chain transparent<sup>181</sup>.

## UN Global Compact

The UN Global Compact is a voluntary initiative promoted by United Nations. Signatories commit to report on their human rights impact, and to respect 10 principles within their sphere of influence. The principles cover human rights, labour rights, environmental considerations, and anticorruption based on texts such as the Universal Declaration of Human Rights. Principle 5 demands commitment to "the effective abolition of child labour"<sup>182</sup>.

## Conflict-Free Tin Initiative

In October 2012, the Dutch government initiated a conflict-free tin sourcing program in DRC, including industry partners. The program is an implementation of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. So far, 200 tonnes of material has been produced through the programme, which will be supplied to buyers committed to the programme<sup>183</sup>.

## Gold Supplement to the OECD Due Diligence Guidance

The Gold Supplement is a specific supplement to the OECD Due Diligence Guidance (a part of the OECD Guidelines for multinational enterprises). The Guidance has specific recommendations for increasing traceability in value chain sourcing from small scale artisanal mining, small scale enterprises, and large scale mines<sup>184</sup>.

<sup>180</sup> Fairphone, "Fairphone" <http://www.fairphone.com/> (accessed May 20, 2013)

<sup>181</sup> Fairphone, "action areas" <http://www.fairphone.com/action-areas/index.html> (accessed May 20, 2013)

<sup>182</sup> UNGC, "The Ten Principles" <http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples/index.html> (accessed May 20, 2013)

<sup>183</sup> CFTI, "Conflict-Free Tin Initiative" <http://solutions-network.org/site-cfti/> (accessed May 20, 2013)

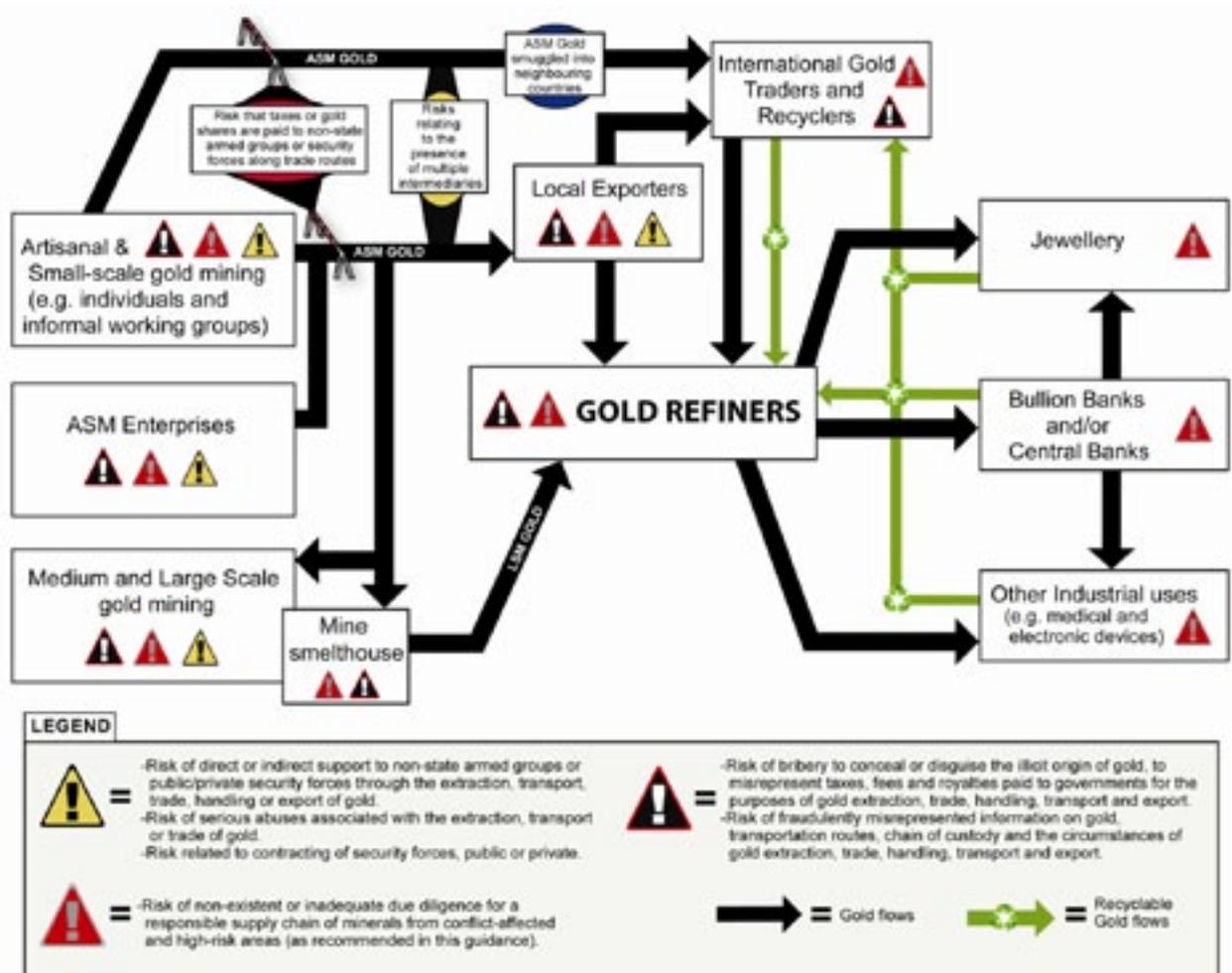
<sup>184</sup> OECD (2012): Supplement on Gold <http://www.oecd.org/daf/inv/mne/GoldSupplement.pdf>

## From conflict free to child labour free?

The attention to the sourcing of conflict minerals from DR Congo has put some pressure on the mining industry and the industries sourcing minerals to acknowledge responsibility and engage in initiatives to address these issues. While the initiatives listed above, mostly addressing issues surrounding conflict minerals, are not functioning yet, they show that it is not impossible for the sourcing industries to work to control complicated supply chains and increase transparency. However, being conflict-free does not necessarily mean that gold is responsibly produced, as environmental issues and child labour remain.

## Appendix A

### Risks in the supply chain of gold from conflict-affected and high-risk areas<sup>185</sup>



<sup>185</sup> OECD (2012): Supplement on Gold <http://www.oecd.org/daf/inv/mne/GoldSupplement.pdf>