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# Girls in Mining

Research Findings  
from **Ghana, Niger, Peru,** and  
**United Republic of Tanzania**



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**Girls in mining:  
Research findings from Ghana, Niger, Peru and the United  
Republic of Tanzania**

Working papers are preliminary documents circulated  
to stimulate discussion and obtain comments

**Bureau for Gender Equality  
International Programme on the Elimination of Child Labour**

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## 1. Underground – Out of sight

Research carried out by the International Labour Organization's International Programme on the Elimination of Child Labour (ILO-IPEC) between April and December 2006 has produced evidence that girls as well as boys are involved in hazardous work in the small-scale mining industry.

Due to the fact that boys are statistically more likely to be involved in hazardous child labour than girls,<sup>1</sup> the appalling work of girls is often overlooked. In the small-scale mining industry especially, little is understood about the roles and activities of girls and the effect that this has on their lives and livelihoods. Not much is known of the dynamics that brought them into this type of employment and consequently what could lead them out of it. The issue of girl child labour in mining is largely unknown, it is often not fully recognized by the law, and missed by the intervention services and the media.

New evidence presented in this paper challenges the general understanding of gender roles in small-scale mining communities. It forces us to acknowledge a more intricate reality for boys and girls as the evidence shows that the involvement of girl child labour in mining is much more frequent and far-reaching than was previously recognized. The assumption that girls are only involved in prostitution and domestic work is incorrect; girls are involved in tasks related to the extraction, transportation and processing stages of mining as well as in other mining-related jobs such as selling food and supplies to the miners.

The gender balance appears to be shifting. Girls are involved in more and more hazardous occupations deeper into the interiors of the mine, but at the same time they are also upheld to their traditional female responsibilities in the home. The result is that girls in mining communities are forced to juggle their domestic tasks with other paid or non-paid work. Often, girls are performing just as hazardous tasks as boys, working longer hours, with a greater workload and often have a lesser chance of schooling, withdrawal or rehabilitation.

### Poor understanding: Poor intervention

According to leaders and community members in the Mirerani mining zone of the United Republic of Tanzania, girls are often overlooked when child labour projects are designed. Action programmes that target children working in the mines – supporting their withdrawal and facilitating their participation in education and institutions to protect their rights – have ignored girls in the past, not taking into account the hazardous activities in and around the mine apart from excavation that they engage in. Consequently they miss out on the benefits and social support mechanisms that the programmes provide.

### 1.1. The research

The findings presented here are the result of a series of ILO field studies in Ghana, Niger, Peru and the United Republic of Tanzania.<sup>2</sup> The studies were carried out with the

<sup>1</sup> Between 5–11 years, 49.3 per cent of child labourers in hazardous work are girls; between 12–14 years, it is 45.2 per cent; and between 15–17 it is 37.9 per cent (ILO (2006), p. 11).

<sup>2</sup> To access full reports, please see: <http://www.ilo.org/ipec/related/Gendermainstreaming/lang-en/index.htm> or <http://www.ilo.org/ipec/areas/Miningandquarrying/MoreaboutCLinmining/lang-en/index.htm>.



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objective of gathering quality information on the lives of girls who work in small-scale mining zones.<sup>3</sup> This paper is a synthesis of those research findings. It is designed to bring to public and academic attention the compelling evidence of the hazardous work of girls in small-scale mining.

A flexible methodology was used in data collection in order to expose the unique characteristics of each site. A total of 12 mining communities and processing zones were targeted, employing a variety of techniques including community observations (living conditions, behaviour, work habits), one-on-one interviews, pre-developed questionnaires and focus group discussions. Nevertheless, the studies were synchronized and used shared criteria in order to gather comparable data. There were over 400 girls and boys interviewed, plus heads of households, community leaders and local authorities wherever possible, in order to gather a broad perspective.

Such sensitive research was possible because ILO–IPEC had gained access to the mining areas and the confidence of the population through its action programmes. The research sites were selected in order to achieve some geographical spread and different types of mining. The study zones relate to the mining and processing of gold, diamonds and gemstones.

<sup>3</sup> For a description of the small-scale mining study zones, please see Chapter 3, p. 12.

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## 2. The role of women and girls

It is important to note that child labour in mining, in this paper, refers to informal, small-scale mining; there is no known child labour in the formal sector. Small-scale mining is defined as the low output, non-mechanized, highly labour intensive extraction of minerals for economic gain.<sup>4</sup> It refers specifically to “family-based mining” using small pits or artisanal methods.<sup>5</sup>

The family orientation of small-scale mining is key to understanding the causes of girl child labour. In these communities, mining is often a family activity. From extraction to processing to retail, plus the support services in between, the whole family is involved in the daily survival of the household amidst very harsh conditions.

Although some women are self-employed, running a stall or panning their own section of a river bank, for example, the work of women and girls has generally been perceived as family help, perhaps supportive to the productivity or income of their male counterparts.

Nevertheless, evidence from Peru suggests that the role of the woman is changing. Although still excluded from underground extraction, women are involved in tasks deeper and deeper into the interior of the mine, transporting materials, removing rubble and rocks from the mines, sorting mineralized rocks, breaking stones and processing the minerals.

Women are also found to be exclusively responsible for domestic tasks such as preparing food, caring for children, cleaning, washing and fetching firewood and water. The modern woman in small-scale mining upholds a double presence in the household, obliged to work in order to supplement the unsteady and sometimes desperate family income, and locked into the chores of the home.

Naturally girls and boys inherit the gender roles of adult women and men. From a young age, girls are suffering from the double burden of an increasingly hazardous and arduous workload and the domestic responsibilities in the home. Trapped between these twin pressures, girls in small-scale mining communities are especially vulnerable as their schooling inevitably suffers and their physical and emotional well-being is under threat.

### 2.1. Girls' work

The involvement of girl child labour in the small-scale mining industry exists both as a part of the mining process and of the commerce that surrounds the mining settlements.

#### 2.1.1. Mining gemstones and precious stones

In the mining of gemstones and precious stones, girls are carrying out wet and dry panning for stones, transporting rubble from the pits, sorting mineralized rocks and stone crushing.

<sup>4</sup> The definition of small-scale mining varies across different countries; this study employs a general definition.

<sup>5</sup> Artisanal methods extract minerals from alluvial deposits (mineral sediment deposited by flowing water), colluvial deposits (rock fall) and eluvial deposits (constituting windfall, dust and soil).

Gemstones and precious stones are most commonly mined using alluvial methods or excavation pits. Alluvial mining is a process of searching for stone fragments in water that flows through the sections of earth containing the desired mineral. The tiny stones are often dispersed in river beds and banks, and labourers sift through either the soil or shallow water to locate them in a time-consuming process named “panning”.

The stones can also be found by extracting mineralized rocks from under the ground. The large excavation industries extract large amounts of diamonds and precious stones every year whereas the small-scale mining communities will search around the outskirts of the privatized zones in the less profitable pockets and fringes of the deposit, or in the sections that are impossible for large-scale miners to access.

The small-scale miner is likely to use picks and shovels for digging and moving rocks and rubble. In the small-scale pits, the excavated rocks and rubble are transported to the surface using ropes and pulleys, or carried on the backs or heads of a labourer – a job often assumed by boys and girls. Some pits are only very shallow, simply excavating the surface of the earth. Workers then crush the extracted rocks with hammers in order to locate and separate the precious stones that may be contained within.

The haulage of rubble and the crushing of stones are hazardous jobs practised by girls. They are very labour intensive and rely on basic tools with no safety facilities. Stone crushing can lead to injuries due to flying rock shards, accidents with the tools that are too big for the girls to handle, and exposure to constant vibrations and noise.

### **2.1.2. Gold mining**

Girls carry out wet and dry panning for gold, removing rubble and ore from the pits and mine interiors, sorting through the mineralized rocks and the amalgamation of the mineral with mercury.

Gold is also extracted using alluvial methods and small-scale excavation. In “dry” excavation, pits are dug at a depth of 1 to 2 metres until they strike ore. Labourers transport the ore from the pits to the washing and processing sites, in the same way as with precious stones and the gold ore is separated from the coarse and unwanted material.\* Dry excavation is seasonal and dependent on certain weather conditions.

Alternatively, gold nuggets and sediment are extracted alluvially from river banks and shallow water near the mine. Girls are once again involved in the panning, which involves standing or crouching in river beds and shallow water in a position that is harmful to their posture and exposes them to sun and water borne ailments.

Once the ore is extracted, it is transported to a processing site to be washed and amalgamated in order to separate the gold. The ore is crushed and ground by labourers, including girls, with hammers and heavy tools to reduce it to small fragments. The crushed mineral is mixed with small quantities of mercury and water and the solution is further ground. The grinding frees the gold particles from the ore, and a chemical reaction causes them to merge with the mercury particles, forming an amalgam.

A two-stage process then separates the mercury and gold amalgam. Firstly, the solution is passed through a cloth or fabric, which retains the gold amalgam by means of filtration. Secondly, the remaining solution is heated over a fire until the mercury burns off, leaving the gold in liquid form, which cools solid. During this process, the hazardous mercury both runs off into the river and is released into the atmosphere through burning, thus polluting the ground, water and air.

\* MMSD (2001), p. 39.

Once again, girls are at risk of serious injury and accidents related to hauling heavy loads and panning – even more so for the girls involved in the amalgamation stage, as the mercury constitutes a great health risk if it comes into contact with the skin or is inhaled.

### **2.1.3. Other mining-related tasks**

Girls are also used for other non-skilled jobs in and around the mines, such as transporting and hauling food, supplies, water and rocks. Girls as young as 9 years old assist their mothers with the preparation of food and drink. In order to reach their fathers or other customers on site in the mines, they must traverse dangerous terrain which may be

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subject to cave-ins (Niger), mercury contamination, or sharp rock shards; many girls actually enter the interior of the mines themselves.

The studies showed that girls were carrying up to 20–25 litres of water or 20 kilograms of weight, three to four times a day.<sup>6</sup>

In general, boys do the same jobs as girls in the mining and processing stages, plus extraction and transporting minerals from the mines. They are more commonly found working underground and in hazardous tasks than girls.

#### **2.1.4. Gem trading**

The Tanzanian study found that girls between the ages of 12 and 17 were working between 42 and 70 hours per week in gemstone brokering. Boys also work in this activity but tended to be older (upwards of 15 years) and to work fewer hours per week (between 28 and 52 hours). Girls are evidently more subject to control by their male relatives or partners who engage them in the brokering business and dictate to them the hours they work, as opposed to boys who are free to choose their own hours.

There is evidence that the girls who are used as gemstone brokers are also subject to sexual exploitation by the owners of the gemstones. They are paid very little for their work and are expected to earn money through sexual favours.

#### **2.1.5. Commerce and other jobs**

Parallel to each discovery of new mineral deposits and each surge of migration towards new mining settlements, a boom in commerce surrounds the zone. In mining and processing areas, businesses such as food stalls, bars, canteens, restaurants, amusement arcades and pool halls spring up.

These industries too are major employers of girls under the legal age of work, and can also lead to cases of the worst forms of child labour. Girls have been found to be working full time and part time in small retail business, radio communications, transport and haulage, taking care of donkeys and serving in bars and restaurants.

In business enterprises, girls were selling second hand clothes, food and mining supplies. They generally work for relatives, friends of the family or their guardians in the mining settlement and are given some financial remuneration for their help.

In the Peruvian study, girls over 15 years were employed in radio communications, which serve as the channel between the mining settlements and the outside world. It is almost exclusively girls who operate the radios, apparently at the preference of male employers who expect sexual favours.

It is common for girls to be employed serving in bars and restaurants which service the mining community. Some girls were reported to be working upwards of 12 hours a day and from as young as 10–12 years old.<sup>7</sup> This is often an environment of physical and sexual abuse due especially to alcohol consumption and the vulnerability of the girls. In

<sup>6</sup> ILO–IPEC 2006. (United Republic of Tanzania), p. 6.

<sup>7</sup> ILO–IPEC 2006 (Peru).

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some cases, bar work can lead to sex work or sexual abuse by the customers and the employers.

Girls also take care of domestic animals, including the donkeys that are used for haulage, providing them with food, water and upkeep.

### **2.1.6. Domestic labour**

Girls are heavily involved in domestic work, either in their own homes or someone else's. The domestic responsibilities include cooking, washing, cleaning, fetching firewood and water, and childcare. Especially between the ages of 5–9 years, girls often look after their siblings and other young children as a full-time job.

The Peru study showed that most girls had responsibilities to work in the home. Girls from the age of 5 were expected to rise early with their mothers to help prepare food for the day. They would then spend a full day at school or accompany their mothers (or sometimes their fathers) to work, before returning home to assist with food preparation, washing and cleaning in the evenings. Similarly, most girls in the Ghana sample carried out heavy domestic chores in the home. Thirty out of the 150 sampled in the United Republic of Tanzania work between 12–16 hours a day in domestic labour.

The domestic responsibilities of girls in the study zones ranged from basic family support around the home to combining a full-time job with the running of a household. It is these girls under pressure to go to work, often in hazardous environments, then return to heavy domestic labour that are particularly vulnerable; denied their right to recreation and rest, hindered in progressing at school, these girls are in need of special attention in the small-scale mining communities.

### **2.1.7. Commercial sexual exploitation**

The research shows that a certain amount of sexual harassment, abuse and commercial sexual exploitation of girls and women is evident across all the study zones. Most alarmingly, in the Mirerani mining zone of the United Republic of Tanzania, 85 out of the 130 girls interviewed revealed that they were engaged in commercial sex work, 25 of whom practise it full time, which demonstrates the high level of demand for sex with young girls in the masculine mining environments. Many of these girls were employed in other occupations but engaged in commercial sex as well.

Girls report working in environments of sexual intimidation and exploitation; some are paid so little that they seek money through offers of sex with their male customers, employers or other associates. It was reported in the United Republic of Tanzania that in such desperate environments, girls normally do not refuse sex, even at a young age, because they think it is the way to secure funds or small payments or potentially find a husband. The mining zone creates an influx of men who can offer rural women and school girls food and clothing in exchange for sexual favours. The pressures of poverty and the lack of sexual health education push women to see sex as their only option.<sup>8</sup>

In Peru, a similar scenario is represented as girls are often awarded jobs in the *quimbalete* (stone crushing) and in radio communications by men given the expectation of achieving intimate relations with them.

<sup>8</sup> TAMWA (2004), p. 9.

## 2.2. The dangers associated with girls' work

All activities related to small-scale mining are characterized by danger, especially those in and around the excavation zone. Girls in mining are exposed to long working days, contact with fine dust and toxic substances without any protective equipment, high risks of accidents and intense physical exertion. This environment can lead to serious illness and injury with lifelong consequences, or even death.

In Ghana, 50 per cent of girls interviewed in the mining zones reported a certain level of exhaustion following a day's work, over 30 per cent complained of general body pains or abdominal pains, cuts and coughs. In Niger, all girls involved in gold mining (above 15 years of age) stated that it was "hard work", and referred to arm pains, headaches, dizziness, breathing difficulties through the night, irritation and burns on the skin.

These ailments are characteristic of all the small-scale mining zones analysed in the study, as workers operate without the necessary protective equipment, such as gloves, glasses, masks and boots. In one study, more than one in five of the respondents claimed to have suffered accidents first hand in the workplace.<sup>9</sup>

In addition to the physical harm is the psychological damage that girl child labourers in mining communities are exposed to. Girls are often living and working in the shadow of a heavily masculine environment, repeatedly under attack from sexual innuendo and harassment. The mining zones can be a very hostile climate for women and girls, in one study 90 per cent of the girls interviewed felt threatened by abuse, neglect or domestic violence.<sup>10</sup> The following table displays the hazards related to the tasks that girls perform in mining.

Extraction tasks		
Task	Hazards	Physical harm
<ul style="list-style-type: none"> <li>■ Transporting (food/mining inputs/supplies)</li> <li>■ Loading</li> <li>■ Selecting high-grade and low-grade mineralized rocks</li> </ul>	<ul style="list-style-type: none"> <li>■ Handling heavy loads</li> <li>■ Entering interior of the mine</li> <li>■ Passing through hazardous environments (including rock falls)</li> <li>■ Exposure to high intensity noise (explosions)</li> <li>■ Long-term exposure to the sun and water</li> </ul>	<ul style="list-style-type: none"> <li>■ Injuries to tendons and muscles, mostly in the back and neck</li> <li>■ Lifelong damage to posture</li> <li>■ Spinal problems</li> <li>■ Bruises/lesions</li> <li>■ Sprained muscles</li> <li>■ Ear pain, ruptured ear drums, deafness</li> <li>■ Solar radiation leading to sunburn and skin cancer</li> <li>■ Water borne infections</li> </ul>
Dry and wet panning	<ul style="list-style-type: none"> <li>■ Repetitive movements, working in awkward positions</li> </ul>	<ul style="list-style-type: none"> <li>■ Damage to posture</li> </ul>

<sup>9</sup> In the Ghana study (ILO, 2006), from a sample of 165 girls, 15 had suffered cuts from implements and 23 had suffered other accidents in the workplace.

<sup>10</sup> ILO-IPEC 2006 (United Republic of Tanzania), p. 8.

<b>Processing tasks</b>		
<b>Task</b>	<b>Hazards</b>	<b>Physical harm</b>
<ul style="list-style-type: none"> <li>■ Stone crushing</li>   <li>■ Amalgamation and treating the mineral (gold)</li> </ul>	<ul style="list-style-type: none"> <li>■ Exposure to vibration and repetitive movements</li> <li>■ Using harmful tools</li> <li>■ Long-term exposure to stone crushing noise</li> <li>■ Dust inhalation</li> <li>■ Long-term exposure to sun</li>   <li>■ Skin contact with liquid mercury when amalgamating, cleaning the gold, changing contaminated water</li> <li>■ Inhalation or ingestion of liquid mercury</li> <li>■ Inhalation of fine dust</li> <li>■ Also handling heavy loads, and exposure to sun</li> </ul>	<ul style="list-style-type: none"> <li>■ Damage to wrists, hands, fingertips</li> <li>■ Indirect damage to the nervous system and circulation <sup>1</sup></li> <li>■ Wearing down bones, leading to intense pain and joint trouble in later life</li> <li>■ Injury from shrapnel (inc. blindness)</li> <li>■ Cuts, bruises, lesions</li> <li>■ Damage to ears including deafness</li> <li>■ Leads to respiratory tract infections <sup>2</sup></li> <li>■ Solar radiation leading to sunburn and skin cancer</li>   <li>■ Chemical burns, irritations and lesions on the skin</li> <li>■ Can lead to gastroenteritis, inflammation of the tongue, gums and colon, loss of teeth, irritation of the lungs</li> <li>■ Can lead to shock or death</li> <li>■ Pneumonia and respiratory tract infections</li> <li>■ As above</li> </ul>
<b>Non-mining tasks</b>		
<b>Task</b>	<b>Hazards</b>	<b>Harm</b>
<ul style="list-style-type: none"> <li>■ Commercial sexual exploitation of children</li> <li>■ Serving in bars and restaurants</li> <li>■ Domestic labour in other people's homes</li> <li>■ Radio communications</li> <li>■ Caring for donkeys</li> </ul>	<ul style="list-style-type: none"> <li>■ Vulnerability to sexual and physical abuse from men, especially in the case of alcohol consumption</li> <li>■ The stigma attached to rape that exists in the community can lead to sexual violence going unreported</li> </ul>	<p><b>Physical harm</b></p> <ul style="list-style-type: none"> <li>■ Contraction of sexually transmitted infections, including HIV</li> <li>■ Early pregnancy</li> <li>■ Injuries due to physical violence</li> </ul> <p><b>Psychological harm</b></p> <ul style="list-style-type: none"> <li>■ Low self esteem</li> <li>■ Low assertiveness</li> <li>■ Tendency to be violent</li> </ul>
<b>Public health hazards</b>		
<ul style="list-style-type: none"> <li>■ Lack of water and sewerage heightens the risk of diarrhetic problems, which can be fatal without appropriate medical treatment</li> <li>■ Lack of electricity makes the refrigeration of food impossible and can lead to gastro-intestinal problems</li> <li>■ The large amount of flies attracted by the open waste and garbage on the streets cause outbreaks of disease, digestive complaints and diarrhoea</li> <li>■ Donkeys living and excreting in confined spaces, shared with humans, attracts flies, which can transmit a variety of diseases</li> <li>■ Due to the extreme changes in climate at different altitudes (specifically in the Peruvian mining zones), viral illnesses are common</li> <li>■ Some mining environments vulnerable to dangerous insects and reptile bites (scorpions, spiders, snakes)</li> </ul> <p>Notes: <sup>1</sup> Including the risk of Raynaud Phenomenon: drowsiness, paleness in the fingertips, reduction in the sense of touch and pain. <sup>2</sup> Three-quarters of the Komabangou sample and two-thirds of the Mbanga sample of girls working in mining had breathing problems due to dust (Niger).</p>		

The physical injuries incurred through mining activities can be extreme. Working in and around the extraction zone, a boy or girl is at high risk of lesions or sprains from falls or accidents. Many jobs relating to carrying heavy loads can damage the neck and spine and lead to painful posture problems in later life. The tasks involved in stone crushing and

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moving rubble put workers at risk of severe cuts, bruises, deafness and blindness, and even respiratory tract infections and permanent damage to the nervous system.

Perhaps the most alarming hazard related with the mining activity is the exposure of girls who work in the amalgamation stage of gold mining to liquid and airborne mercury. This substance can burn the skin and cause life-threatening damage to internal organs; it is highly dangerous.

One major problem for girl and boy child labourers involved in these worst forms of child labour is the lack of understanding of the risks they face at work. In Peru, girls under the age of 18 are commonly employed in the amalgamation process. The girls are generally uneducated about the health risks of mercury and the need for avoiding skin contact and inhalation of the substance, as are they unaware of the simple protective measures such as gloves, masks and safe disposal of the substance.

Evidence from Niger demonstrated that sensitization campaigns aimed at children, parents and community leaders regarding the dangers and laws involved with child labour in mining can effectively limit the extent of child work on the sites. Even girls who were above the legal working age (14 years) in Komabangou and Mbanga are excluded from performing the more hazardous tasks until the age of 18, following effective sensitization and enforcement campaigns.

## **2.3. The terms of employment**

### **2.3.1. Working hours**

A major cause for concern and a source of great vulnerability for girl child labourers in mining zones is the number of hours that they are expected to work. The girl child labourer in mining communities is almost always forced to combine schooling, job and domestic work, which can lead to working days of more than 14 hours.

In the United Republic of Tanzania, the study found girls who prepared and sold food to the miners working between ten and 12 hours a day, seven days a week. Girls in gemstone brokering reported working six to ten hours daily, whilst those in petty business characteristically worked 84 to 90 hours per week. Ghana showed a similar pattern. Over half of girl child labourers worked over six hours per day and over half worked five or more days per week. This means that girls under the legal minimum age are clearly working full time or trying to combine schooling with long hours of work.

### **2.3.2. Forms of payment**

The forms of remuneration for work vary across the range of occupations and mining sites. Evidence from the diamond and gold mining towns of Ghana suggests that the payment for girl child labourers comes from the owner(s) of the mine or land, the buyers of the diamond or gold product, or from the adult workers. The general payment agreement per mineral discovery appears to be divided as follows:<sup>11</sup> 50 per cent of the payment goes to the mine or land owner, 40 per cent to the miner (always male) who excavated the mineral, 10 per cent is shared amongst those who head-load to a wash site and pan.

<sup>11</sup> ILO-IPEC, Ghana (2006), p. 12.



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Over a third of girls were paid per working day, 30 per cent once a week, 15 per cent once a month and a small proportion on a contract basis. Those girls working in panning or brokering are often paid by the buyer, upon delivery, per weight or volume of the product. No delivery, no payment.

In Peru, the forms of payment differed according to the task. Girls who are helping their parents in excavation or panning for gold are generally not paid. Their work is regarded as part of their contribution to the running of the household. Girls who work in the processing centres (stone crushing, amalgamation) tend to receive a payment for their work and are not subject to sexual discrimination in pay. However, there is usually a distinction according to the age of the worker, girls under 9 will usually not receive a “wage” but their parents will be given a “bonus” to compensate their contribution.

### **2.3.3. Work and schooling**

Across the board it is evident that girls in mining communities face harsh barriers to their education. The demand for them to work combined with their responsibilities in the home impinge on their performance at school.

It is not only the direct demand for girls to work in mining tasks that is the problem. In environments where women generally work, and in the absence of all social care and extended family (which is sacrificed in migration), girls are often left to look after themselves and their siblings. This can rule out the chance of regular school attendance for girls, more so than for boys.

It was found in the Tanzanian mining community that girls frequently drop out of school due to pregnancy, early marriage, domestic work responsibilities, or job offers. In the Ghanaian study, only 53 per cent of girls questioned were in school and of those who did attend, the majority did not attend daily. The main reason given for this poor attendance was the need to make a living in the face of poverty. Other explanations were lack of interest, illness and the desire to start a business.

In the Peruvian sample, the majority of school age girls who work do so outside of school term time, although there is a proportion who drop out of school entirely in order to work. In the Canta mining settlements, the majority of girls and boys tend to return to their villages of origin to attend school. It was found that the number of children in the settlements decreases significantly in this period.

There are generally no educational or social facilities in new mining settlements. In the longer established settlements some schools have been established, and in these cases families tend to send their children to school on the site, rather than sending them far away.

School attendance is strongly linked to the time of year. In seasons not favourable to mining activity (such as the rainy season or high winter) attendance is high, but when the conditions allow for viable excavation, school attendance has been shown to fall.<sup>12</sup> This suggests that children and families do appreciate the chance of schooling and make efforts to attend if it is possible, but work can take precedence. In Peru, it appeared that whether school was in session dictated the use of the child’s time, whereas in the United Republic of Tanzania it appeared that the seasonal climate was the overruling factor.

Given the remoteness of the mining zones, the schools provided are often of a poor quality and are under-resourced. The poor perception of the value of schooling, on the part

<sup>12</sup> Adapted from TAMWA (2005), p. 5.

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of the parents and the child, is another factor that leads to the involvement of girls and boys in child labour.

**Street smarts?**

In Peru, it was noted that girls who work are brighter, more outgoing and assertive compared to other girls their age. For some the difficult environment had strengthened their ability to get what they want, and delivered them a range of survival and life skills. However, this also often translates into a tendency to be more violent than other girls their age and to exhibit a certain level of moral abandonment – which is evident in their performance level and school attendance. The girls undergo their socialization in the midst of an adult working environment, surrounded by hazards, often given responsibilities and business decisions to make but also constantly faced with danger and the stress of poverty. This affects their social development.

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### 3. A description of the small-scale mining zones

Small-scale mining is big business as it taps into the lucrative global trade in gemstones and precious metals. The major extractors, processors and vendors of these high value materials are large-scale multinational companies, but alongside them operate millions of self-employed and salaried individuals and families. Small-scale mining provides income, although insecure, for these workers, who collectively constitute an important part of their domestic economies.

The production of high-value metals and gemstones from small-scale mines makes a major contribution to foreign exchange earnings and government revenue.<sup>13</sup> Consequently the industry finances the building of roads, schools and clinics in communities and has the potential to expand economic and social infrastructure, if the funds are directed well.<sup>14</sup>

The four countries targeted in this study are representative of mineral rich but less developed countries, with a strong propensity for mining. The characteristics of the four sample countries are as follows:

#### 3.1. Study zone profiles

##### 3.1.1. Ghana<sup>15</sup>



In Ghana the study focused on young female residents (aged 10–18 years) in two distinct mining towns in the eastern and western regions of Ghana, namely Akwatia and

<sup>13</sup> Map from wikipedia.

<sup>14</sup> Map from wikipedia.

<sup>15</sup> Map from wikipedia.

Tarkwa. A total of 165 girls were interviewed. The first study zone is a diamond mining town (accounting for 26.7 per cent of the sample) and the second zone is most well known for gold excavation (accounting for 73.3 per cent of the sample). Small-scale mining is a major source of income for the permanent and temporary residents of both Akwatia and Tarkwa.

### 3.1.2. Niger



The study was located in the towns of Komabangou and Mbanga, which are situated in the west of the country in the department of Téra. Both towns are estimated to have around 50,000 inhabitants. The area is characterized by a harsh, desert landscape with very little vegetation. Human settlements are made from straw or sheets in this harsh living environment, distributed in disorganized, compartmentalized bunches. The dominant mineral being extracted is gold.

### 3.1.3. Peru<sup>16</sup>



<sup>16</sup> Map from wikipedia.

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The study targeted girls, women and authorities in four mining communities and two processing zones in the province of Canta, which is situated in the department of Lima between the coast and the Andean mountains. There are an estimated 1,500 children involved in the mining industry in this province, and 48 girls were interviewed. The mining sites are at high altitude, but the processing centres are generally located in the more hospitable lower altitude towns of Pucára and Molino in the districts of Santa Rosa and Rio Seco respectively. These processing zones are situated approximately two and a half hours from the mining sites.

### 3.1.4. United Republic of Tanzania<sup>17</sup>



The investigation targeted the Tanzanite mining zone of Simanjiro where 150 girls and 50 boys (aged 10–18 years) were interviewed across two wards, Mirerani and Shambarai. This is one of the very few sites in the country, and hence the world, where the gemstone, Tanzanite, can be found, amongst other precious stones.

These mining zones are characterized by economic migration, primarily men who move into mining zones in the hundreds and thousands and construct temporary homes out of scavenged materials in sites with no running water, electricity or sewage, nor education or health infrastructure. Once the men have established a job and a shelter, they may invite their wives and children along to join them, if they have not already.

Mining settlements are typically transient, growing and shrinking according to the mineral potential or perceived mineral potential of the site. Small-scale miners move with the new discoveries of high potential deposits, but know that they do not have the capacity to reap the potential fully. By the time a formal mining enterprise has bid for the contract and arrived to exploit the site, small-scale miners will be looking for their next potential deposit.<sup>18</sup>

<sup>17</sup> Map from wikipedia.

<sup>18</sup> ILO–IPEC, Peru (2006), p. 17.

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In these districts children are often sought after to work in the mines for a number of reasons.<sup>19</sup> Firstly, the work is generally labour intensive, poorly paid, unproductive and unskilled which encourages the recruitment of cheap, exploitable child labourers. Secondly, the dry excavation and alluvial mining of marginal or very small deposits are not economically viable by mechanized means. These operations may use children as they are able to slip through the small tunnels and gaps.<sup>20</sup>

The seasonal nature of small-scale mining (depending on levels of rain/frost) plus the fluctuation in market price and demand for the minerals encourages families to combine work with schooling throughout the year, which can mean withdrawing the children from school in order to work. It also instigates the constant migration of families in search of work, which severely damages the children's chance of schooling and leaves them with no choice but to work. Families who migrate to become involved in small-scale mining can be subject to such unpredictable and low incomes that the children must work in order to supplement family income.<sup>21</sup>

For the children involved in mining in these zones, there are low levels of occupational safety and health protection and a poor understanding of environmental and health hazards. Children are exposed to extreme risks both at work and at home in the mining settlements. The adults are subject to the same hazardous conditions with no form of social protection and if they fall ill or are injured, the responsibility of care and feeding the family falls on the shoulders of their children.<sup>22</sup>

### **3.2. Feeding the family or looking for a way out: The participant's perspective**

The girl participants of the study were asked for their thoughts about their work in mining communities. They identified the principle reasons for their involvement in the work to be a sense of responsibility to support the impoverished household and to fulfil their basic needs. Their contribution is vital to their families' survival, as their parents do not have adequate means to feed them and their siblings. In Ghana, girls also stated a desire to become economically independent as a reason for working, although in Niger, the girls (all aged over 15) stated that they worked to make sure that their brothers and sisters had enough to eat. Girls in Peru and Niger felt a sense of obligation or duty to provide for their families, but also showed signs of a desire for economic independence. Some responses in the United Republic of Tanzania revealed that girls felt coerced into work by their parents or guardians.

In the United Republic of Tanzania, girls claimed to spend their earnings on basic needs, such as food and shelter, and were unable to spend money on personal items (clothing, etc.). In Peru, the majority of girls in the sample contributed their earnings directly to the family income, if indeed their work was remunerated. Their money was used to pay for their education, food and the school fees of their siblings. However, girls aged 5–9 who worked with their parents sometimes used their “bonuses” to buy sweets and toys.

<sup>19</sup> Adapted from ILO–IPEC (2005), pp. 5–6.

<sup>20</sup> ILO–IPEC, 2005, p. 3.

<sup>21</sup> Adapted from ILO–IPEC (2005), pp. 5–6.

<sup>22</sup> *ibid.*, pp. 5–6.

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The reason for the families' migration to mining settlements is the pursuit of a better life. Ghanaian girls reported that they and their parents migrated with the promise of more employment opportunities open to them, compared with their places of origin. However the majority of girls were not happy in their environments and wanted to leave to find better opportunities, to benefit from school or training and to promote their self-esteem and self-respect.

In Peru, there were some positive sentiments expressed by the girls, despite their living and working conditions. Working "gave them a say" in the household; ironically linking their child labour to an increased access to rights. If they contributed to the family income, they earned the right to a voice in family affairs. The current trades that the girls were practising, however hazardous or mundane, were also often seen as at least a pathway to future employment. Once they became adults with their own families, they would have relevant work experience. This is perhaps a reflection of the lack of alternative opportunities, particularly those linked to education, rather than a "benefit" of child labour.

We cannot dismiss the attraction of mining as a career prospect for poor citizens of mineral rich societies, even girls and boys. In spite of its association with extreme poverty, indecent working and living conditions, labour exploitation and rights abuse, the industry continues to attract a steady flow of economic migrants year upon year, seeking a way out of poverty. Whether they are well informed or not, these migrants view small-scale mining as a better alternative to the lives they already lead. Whilst the work can be seen by external observers as dirty, dangerous and disruptive, thousands of new migrants every year see it as a potentially profitable escape from poverty<sup>23</sup> and even as a valuable career path for their children.

However, many of the girl participants currently in the mining communities see their futures not in the mining zones but working in commerce in central cities that offer better jobs or other activities. These girls are clearly searching for their way out, not a prolonged career, and the general opinion of the girls across the study was that their current predicament of under-appreciated labour, exploitation and family poverty was a temporary condition until they were able to climb out of economic difficulty.

<sup>23</sup> ILO (1999b), p. 85.

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## **4. Addressing the issues**

### **4.1. International labour standards**

The ILO Worst Forms of Child Labour Convention, 1999 (No. 182) defines the worst forms of child labour as all types of work, which by their nature or by the circumstances in which they are carried out, are likely to harm the health, safety and morals of children. As of 2007, 165 of the ILO's 181 member States had ratified this Convention, committing themselves to take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour for children under 18 years of age as a matter of urgency.

Each of the four countries involved in this study have ratified Convention No. 182. In Niger, the United Republic of Tanzania and Peru, the minimum age for employment of boys and girls is 14 years and in Ghana it is 16 years. However, boys and girls are not permitted to work in hazardous occupations, including mining, below the age of 18 years.

The issue of child labour in mining has a long tradition within international labour standards and was already a matter of discussion at the first International Labour Conference, which included a reference to mining in the Minimum Age (Industry) Convention, 1919 (No. 5). Recognizing that mining was an occupation that would normally not be suitable for underage employment, the ILO specifically addressed this issue in the 1960s through the adoption of the Minimum Age (Underground Work) Convention, 1965 (No. 123). It is thus not surprising that "mining and quarrying" was included in the catalogue of sectors that are excluded from the discretion given to member States under Article V of the Minimum Age Convention, 1973 (No. 138).

Almost all work performed by boys and girls in mining could be considered a worst form of child labour. Other tasks not directly performed in the mine but related to mining, might fall into this category too. It therefore seems particularly important that the necessary steps to withdraw children from mines and their immediate surroundings be taken, as advocated in the 2005 ILO call for action against child labour in small-scale mining.

### **4.2. Eliminating child labour from mining in Peru**

From 2000 to 2004, IPEC supported three prevention initiatives in mining communities in the departments of Arequipa, Puno and Ayacucho in Peru, as well as a combined effort to raise awareness at the national level. These pilot initiatives demonstrated that the elimination of child labour from small-scale mining is possible.

The initiatives showed that for the progressive elimination of child labour from mining, it is firstly important to improve the mining industry through changes in technology, income generation, social protection, improvements in basic services, organizational strengthening and sensitization at the national and regional level. In one example, a modern processing plant was established in Santa Filomena which completely eliminated child labour. At the same time, national and local studies were carried out to raise awareness about the situation of boys and girls in small-scale mining. The initiative also achieved a political commitment from the State to address the problem of child labour in small-scale mining through a tripartite agreement with employers, government, and trade unions.



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### **4.3. Progress in Niger**

The sites of Komabangou and Mbanga in Niger are examples of the positive progress that can be made against child labour in mining. In 2006, the authorities made it illegal for girls under the age of 15 years to work in gold extraction and processing. Thanks to close collaboration between ILO–IPEC, the police, administrative authorities and schools, education alternatives have been provided and parents and employers have been sensitized to the dangers of employing children. The approach appears to be working as not a single girl under the age of 15 amongst the population of 50,000 in each town appeared to be working in mining activities.

Once above the age of 15, girls are allowed to work but not in hazardous activities until they become adults. This success is made possible by the close police and school monitoring, comprehensive sensitization and the provision of schooling alternatives. The school teachers supervise and monitor absences and since the schools also serve as infirmaries for the mining settlements the teachers are also aware of whether school absences are due to illnesses or accidents relating to child labour.

However, despite the progress of placing former and potential child labourers into school, the supply and quality of schooling in the zone still stands out as a major problem in the medium term. The limited and precarious nature of the family incomes and the tendency for them to mobilize midway through the school term negatively impacts a child's education. Also, due to the costs of schooling (maintenance and operating costs of under-resourced schools) and the limited opportunities upon graduation, many parents still fail to see the value in education. This sentiment is common and influential in small-scale mining communities.

### **4.4. The threat of sliding backwards**

These projects have demonstrated that it is possible to tackle child labour in mining successfully. Widespread sensitization of children's rights and the dangers of child labour, collaboration between the State, the police and the civil society to enforce child labour laws, measures to improve the conditions of labour in the mining industry and the living conditions within the mining community, the provision of a free and quality education and the close monitoring of children at risk, are all necessary.

However, there always remains a threat that communities will retreat into using child labour. The progressive elimination of child labour is at risk when education is not valued or of a poor quality and when natural occurrences, economic depression or conflict upset the balance in communities.

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## 5. Conclusion

This research proves that a substantial number of girls, under the legal working age, are involved in hazardous mining activities in different areas of the world. This is child labour at its worst – putting girls at serious risk of lifelong and life-threatening injury and illness, impeding their attendance and performance at school, and locking them into a life of poverty and few options other than continued work in the small-scale mining industry.

The physically hazardous tasks in mining are equally damaging whether it is a girl or a boy who carries them out, just as in both cases they are equally illegal and abusive to their rights. However, we must call special attention to the plight of girls due to the unique circumstances in which they find themselves. The studies demonstrated that girls are working longer hours, carrying out more activities and in some cases entering into even riskier underground work than in times past. The growth in demand for their labour, driven by desperate poverty in the household, is not matched by a decline in the responsibilities of the girl child in the home. Girls are stretched between growing labour activities and burdensome chores at home, which constitute excessive hours of often dangerous work, a lack of time for rest and recuperation and an impossible schedule to fit around school attendance, or at least optimum school performance.

Development programmes and efforts on behalf of workers and children's rights in small-scale mining communities (i.e. the establishment of safe and decent working conditions for adults and universal schooling for children) must pay attention to gender. The hazards and risks of the work of women and girls must be granted the same recognition as those of men and boys. The studies have shown that the problem of double burden, dangerous work exists; it is time now to give it double attention.



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