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Small-Scale Mining in Burkina Faso

Djibril Gueye

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Summary

Burkina Faso has rich and diversified mineral resources, which are still relatively untapped. The artisanal small-scale mining sector mainly deals with gold and construction materials.

Artisanal gold mining began in the late 1980s, in the aftermath of serious droughts which led to great poverty, especially in rural areas. During this period rural populations began to seek and exploit gold deposits in order to survive. However, these activities were disorganised, resulted in the destruction of the environment and often caused serious accidents in the field.

As a result of these problems the state has begun to regulate and monitor small-scale gold mining activities more closely. It provides basic safety training to gold miners and has introduced measures to help establish more cost-effective small-scale operations. It has also tried to take steps to help preserve the environment from deforestation and chemical contamination.

Such initiatives have given the state more control over national gold production and have enabled gold miners to be better organised and able to exploit and sell gold to state-run companies such as the Burkinabe Precious Metals Counter (CBMP).

Today, artisanal gold mining is far more than just a survival activity. Rather, gold produced by artisanal mining is Burkina Faso's third largest export.

Although the people of Burkina Faso have always mined construction materials for building purposes, it was only when the fall in the price of gold began to have a detrimental impact on the artisanal gold mining industry that the state became more involved in the artisanal mining of construction materials, with a particular emphasis on initiatives to help combat poverty.

The approach that the Burkinabe state has taken towards organising the small-scale mining industry can certainly be seen as an example of good practice in the sub-region. However, much more still needs to be done in order to reverse the recent decrease in artisanal mining productivity and adequately address the problems relating to health and safety in mining sites and environmental devastation.

The main objective for the future should be to enable artisanal miners and Burkinabe business people to evolve from artisanal activities to more organised and cost-effective mechanised small-scale mining operations. At present, however, artisanal miners do not have the means and business people are hesitant to get involved in such operations, being more used to low-risk investments which offer immediate results.

Whether such an objective can be achieved therefore depends on the capacity of the state to establish financing mechanisms through local banks and other financial institutions to help artisanal miners. It may be that the issue of financing small-scale mining may be best

addressed within the context of larger initiatives aimed at combating poverty in Burkina Faso.

Definition of Small-Scale Mining

Definition at International Level

The definition of the term small-scale mining varies at an international level. Some definitions state that the difference between small-scale and large-scale mining is simply related to the size of the deposit. Others put more emphasis on the technical and economic conditions under which a mine operates.

Definition at Sub-regional Level and in Burkina Faso

Francophone African countries' mining laws (especially those of the Liptako-Gourma Authority (ALG) member countries, including Burkina, Niger and Mali) are based on French laws. However the laws relating to artisanal small-scale mining have been further developed in African countries where the industry plays a more important role in terms of the national economies.

The issue of the definition of the term 'small-scale mining' has been discussed at mining industry seminars held in Ouagadougou, Bamako and Niamey and it has been agreed that the term should be loosely based on one or more of the following criteria:

- Type of equipment and level of mechanisation and technology used;
- Production levels;
- Physical size of the deposit;
- Importance of the investment; and
- Organisational and management structure of the mine.

Following these discussions, each member country of the ALG has adopted a definition it considers most appropriate to its specific circumstances.

Definition in Burkina Faso

Taking the general criteria and the nature of the Burkina Faso mining industry into account, the Burkinabe mining code has provided the following definitions:

- Artisanal mining: 'any operation which consists of extracting and concentrating mineral substances to obtain marketable products by using traditional or manual methods and procedures'.
- Small-scale mining: 'small mines equipped with a minimum number of fixed installations using semi-industrial or industrial methods based on a primary discovery of a deposit'. The definition also states that the mine should not have the capacity to treat more than 100 tonnes of ore per day.

Definition in Mali

Artisanal mining: any operation which extracts and concentrates mineral substances drawn from primary, secondary outcropping or sub-outcropping deposits using manual or traditional methods and procedures to obtain marketable products.

- Small-scale mining: any permanent small mine equipped with a minimum number of fixed installations, using semi-industrial or industrial procedures with an annual production not exceeding a certain tonnage of the marketable product (determined according to substances and a ministerial decree).

Mali has an additional definition specifically relating to small-scale gold mining: ‘a small mine is any mining operation with a treatment capacity below or equal to 150 tonnes of ore per day, corresponding to a production capacity below 500kg of gold per year from a deposit whose total reserves are below or equal five tonnes of gold.’

The fact that Burkina and Mali decided upon similar definitions is helpful now that the ALG countries are attempting to standardise laws and regulations pertaining to the mining industry.

Institutional and Legal Framework

Institutional framework

The Ministry of Mining, Quarries and Energy

The Ministry of Mining, Quarries and Energy has the following responsibilities:

- Designing, coordinating and applying a specific policy aimed at promoting mineral production;
- Implementing the geological and mining research policy and monitoring its execution;
- Promoting and overseeing policies pertaining to research, development and use of mineral resources;
- Collecting and disseminating technical documents relevant to the mining industry; and
- Negotiating mining investment conventions between mining companies and the state.

In order to carry out these activities the Ministry of Mining, Quarries and Energy has established specific departments, such as:

The General Directorate of Mining, Geology and Quarries

This directorate is responsible for putting the ministry policy on mining and geology into practice. It designs and coordinates activities to promote research into and exploitation of

minerals, disseminates documents publicising mining regulations and manages mining permits.

The General Directorate of Mining, Geology and Quarries also oversees and is responsible for the work of the Directorate of Small-Scale Mining which, as the name suggests, specifically focuses on strategies to promote small-scale mining. The Directorate of Small-Scale Mining's activities include training traders involved in small-scale mining, creating workshops that manufacture appropriate equipment and generally regulating the small-scale mining sector.

In addition to these central services, the Ministry of Mining, Quarries and Energy also supervises other related directorates or companies which are known as public commercial institutes, such as:

The Office of Geology and Mining of Burkina (BUMIGEB)

The state has given certain responsibilities to BUMIGEB, such as: mining and geological research, monitoring listed institutes, cartography and drilling wells. The company has also just taken on a project involving research into the mining of construction materials, for which it has received United Nations Development Programme (UNDP) funding.

BUMIGEB is also the body in charge of the practical application of mining legislation. It has created three main directorates (the Directorate of Mining and Hydrocarbon, the Directorate of Research and the Directorate of Boreholes) to assist in carrying out this responsibility.

The company has about 300 employees. It used to play a key role in mining research in Burkina Faso, but this role has been reduced since the liberalisation of the mining sector.

The Burkinabe Precious Metals Counter (CBMP)

The Burkinabe Precious Metals Counter is a public commercial institute created by the Burkinabe State in May 1968. Its responsibilities are:

- Collecting and marketing precious metals (gold, silver, platinum, etc);
- Supervising artisanal miners;
- Establishing other production units (small-scale mines);
- Buying gold from miners;
- Ensuring miners' safety; and
- Marketing gold in the field.

Through the CBMP the State has been able to calculate the quantity of gold produced by the artisanal mining industry since 1986.

Table 1: Artisanal Gold Production Since 1986

Year	Quantity of pure gold in grams
1986	272,496
1987	616,323
1988	805,500
1989	1,255,292
1990	2,302,274
1991	1,499,143
1992	1,338,311
1993	928,937
1994	698,909
1995	804,788
1996	788,206
1997	944,370
1998	950,995
1999	755,353
2000	512,801
Total	14,473,754

Background and Evolution of Regulations and Laws

Precolonial and colonial period

Burkina Faso does not have a long history of mining activity (unlike some of the other countries in the African sub-region such as Mali and Ghana), yet it is rich in mineral resources. Indeed, within Burkina Faso there is a 70,000km² area of volcanic-sedimentary formations (low Proterozoic area). Such formations are well known for their high mineral content.

There is therefore the potential to mine a large number of minerals within Burkina Faso, including gold, manganese, phosphates, copper, limestone, marble, zinc, bauxite, and antimony. Yet despite this mineral diversity, only gold, phosphates and dolomitic limestone are currently being exploited. This is mainly due to that fact that the mineral potential has only recently been recognised. Previously Burkina Faso was listed as a country without mineral resources and its economy has largely been based on agricultural activities.

Gold mining, however, was the exception to this rule. Gold sites in the Gaoua and Poura regions were well known and have long been exploited by the local populations. These sites were regulated by customary laws - a decree passed on 22 October 1922 by the colonial administration demarcated zones reserved for artisanal mining by the local people.

A few companies such as the Mining Company of Upper Volta and the Equatorial Mining Company carried out gold exploration activities in the Gaoua region, but these activities were abandoned during the 1932 economic crisis.

Researchers such as geologist Mr J. Sagatzky undertook further exploration work in 1934. In his report of that year he wrote:

‘In the area of Domenandio, the Blacks have applied a pretty special method: they have dug wells in the laterite valley on the way of a stream. After the flowing of rainwater they concentrated heavy elements fallen in the bottom of the wells by extracting big pieces of gold, thus without executing exhausting and long works.’

It is therefore clear that even if the local populations did not have a strong mining tradition, they certainly knew how to exploit alluvial deposits.

Period from 1960 to 1991

Between 1960 and 1991 no further legislation was passed relating to the mining industry. The only relevant decree was the *zatu* related to land tenure re-organisation. This law stipulated that the land and what lies beneath are the property of state, but that sites and quarries would be regulated by specific regulations depending on their nature and location.

In reality, all research and control activities were carried out by the Voltaic Geology and Mining Office (BUVOGMI) which has now become BUMIGEB. BUMIGEB has developed regulations directly drawn from the French legislation :

1. Decree No 75-008/PRES/COPIM/DGM: related to the regulation of workplaces that are hazardous or cause discomfort, modified by Decree No 98-322/PRES/PM/MEE/MICA/MEM/MATS/METSS/MEFces now called ‘listed workplaces’. This decree places workplaces in accordance with their classes and their categories, thereby enabling environmental impact studies.
2. Decree No 79-175/PRES/MCD/MBUVOGMI: regulates the manufacture and sale of gold artefacts. According to this decree no-one shall manufacture gold artefacts for marketing without valid authorisation. Authorisation permits shall be valid for three years and renewable.
3. Order No 00566/MCDIM/BUVOGMI: regulates the fixing of fees covering the checking and inspection of hazardous workplaces.
4. Decree No 74-012/PRES/CODIM/DGM: regulates the manufacturing, conservation, import and transportation of explosive substances.
5. Decree No 75-010/PRES/CODIM/DGM: regulates the administration of Order No. 75-012/PRES/MCDIM/DGM signed on 18 March 1974 regulating explosive substances.
6. Decree No 75-09/PRES/CODIM/DGM: regulates technical conditions related to the application of Order No 74-012/PRES/MCDIM/DGM.
7. Decree No 77-128/PRES/MCDIM/DGM: regulates safety and hygiene in mining zones and quarries.
8. Decree No AN IV 86/001/CNR/PRECO/BUMIGEB: is related to determining the right to control and punch gold items and the right to provide and renew authorisations for making or marketing gold items.

These regulations are still in force today although many of them are in need of revision. The Project for Reinforcing the National Capacity of the Mining sector and Managing the Environment (PRECAGEME) is responsible for updating these regulations.

Current Legislation

Since the adoption of the Structural Adjustment Programme (SAP) in 1991, Burkina Faso has been committed to a structural reform policy which encourages socio-economic development through the promotion of private initiatives.

In January 1996, Burkina Faso made an official policy declaration stating its intent to promote the development of the mining industry. The basic policy document defines the major strands of the mining policy and the strategies needed to implement them. In terms of small-scale mining the document confirmed that the government considers small-scale mining among its key development priorities and that the state would promote small-scale mining by establishing technical and financial support for all those involved in the small-scale mining sector.

As a result of this policy, Burkina adopted the Mining Code in October 1997. On the whole, the code has provided an incentive for mining investors. It preserves the interests of the general population as well as those of the grassroot communities. Based on international examples of best practice, it clearly defines:

- the role of the state and also that of decentralised communities;
- the role of the private sector in the development of mining activities; and
- the rights and duties of the different actors involved in the mining sector.

The Mining Code states that research and exploitation of mineral substances must be authorised and enforced by a mining title and that the following activities must have administrative authorisation:

- artisanal mining;
- research and exploitation of quarry substances;
- exploitation of quarry waste; and
- prospecting, treatment, transportation and processing of mineral substances.

These titles and authorisations are bestowed on individual or legal entities regardless of their nationality and in compliance with the provisions of the Mining Code.

A decree relating to the application and enforcement of the Mining Code has been in force since December 2000.

Mining titles applicable to small-scale mines during a research phase

Artisanal mining

According to the Mining Code, research and exploitation of mineral substances must be authorised by obtaining a mining title. However artisanal miners and those exploiting quarries, slag heaps and waste are exempt from this rule and only require a basic administrative authorisation.

Authorisation for prospecting

Authorisation for prospecting is required in order to carry out small-scale mining activities. The Mining Code states that:

- Any individual and legal entity, regardless of their nationality, may carry out prospecting activities without prejudice to obtaining a prospecting authorisation beforehand issued by the mining administration.
- The authorisation for prospecting allows its holder to carry out prospecting activities for all mineral substances within the permitted zone. Prospecting is prohibited in areas classified as forbidden or protection zones or areas being requested for mining purposes. The authorisation for prospecting does not allow the holder subsequently to obtain a mining title or any other authorisation.
- The authorisation for prospecting is valid for a year as of its issuing date. It is renewable by decision of the issuing authority for an identical period as many times as required by its holder if all his papers comply with regulations in force.
- Permit holders for prospecting should send an application for renewal to the Minister of Mining three months before the expiry of their authorisation.
- The authorisation for prospecting is bestowed on a personal and nominative basis. It is neither assignable nor transferable.
- During the prospecting phase, holders of the prospecting authorisation must not execute research or mining works within the authorisation zone. They must not suspend prospecting works without valid reason for more than three months. They must pay specified taxes. Failure to meet these and other conditions specified by the Mining Code will lead to a formal notice and, after 30 days, the authorisation will be withdrawn.

The research permit

The Mining Code stipulates the following regulations regarding research permits:

- The research permit shall be given to any individual or legal entity upon submission of an application which complies with the requirements of mining regulations, without prejudice to previous rights by a mining ministerial decree. Applicants must also provide a copy of the proposed work schedule and budget for the first year of research.
- The research permit authorises its holder to seek mineral substances on the surface and underground within the boundaries of the permit zone and under conditions stipulated by the Mining Code. The research permit holder may ask for an extension of his permit to cover additional mineral substances within the boundaries of the permit zone. If mineral deposits are found within the research zone, the research permit holder may

then apply for a mining permit. If necessary, this mining permit can overlap the boundaries of several research permits belonging to the same holder. Authorisation can also be obtained for seeking quarry substances within the same perimeter as a research permit, provided that the permit holder agrees and that the quarry works do not hinder the research works.

- The research permit is valid for three years as of its issuing date. It can be renewed twice subject to the payment of fees in compliance with the mining regulations. The application for renewal must be submitted at least three months before the expiry of their permit.
- The maximum surface area the research permit may cover is 250km². Holders of research permits must reduce the surface area of their permit by a quarter during the second renewal period of their permit.
- The holder of a research permit is obliged to carry out the research programme as laid out in the initial work schedule. Mining regulations also stipulate that the permit holder must spend a minimum amount of money per square kilometre on these works. Any deviation from the initial schedule must be declared and approved by the administration. The permit holder must start the works no later than six months after receiving the research permit and pursue them industriously.
- The research permit holder must provide an annual report showing the results of the research executed and the research programme for the following year. This document must be submitted to the mining administration no later than 45 days after the anniversary of the date on which the permit was issued. The holder must pay the taxes within 45 days of the date on which the liquidation bulletin was received.
- The holder of a research permit is authorised to use the products extracted through research and testing as he wishes, provided that the research works do not include mining works and subject to a declaration made to the mining administration.
- If these obligations are not fulfilled, permit holders will receive a formal notice and their permits will be withdrawn at the expiry of this notice.

Mining titles applicable in a mining phase

Artisanal mining

According to the Mining Code, artisanal mining may be carried out by holders of the Artisanal Mining Authorisation, provided they meet the following conditions:

- The authorisation for artisanal mining can only be granted by the mining administration following consultation with the administrative authorities and urban or rural communities concerned. Recipients may be Burkinabe citizens, cooperatives or companies subject to Burkina law.
- The artisanal mining authorisation allows its holder to exploit mineral substances found within the boundaries of the authorisation zone. It does not automatically allow him subsequently to obtain a mining title.

- The authorisation for artisanal mining does not prevent research being carried out within the authorisation zone. If a mining title is granted covering the same surface area, the artisanal mining authorisation will not be renewed, but the mining artisan must receive compensation from the new miner. The authorisation is an unmortgaged right to property which can only be changed by the mining administration following specific regulations.
- The artisanal mining authorisation is valid for two years. It can be renewed twice provided that the recipient has fulfilled his obligations and that the authorisation zone has not been requested for industrial mining.
- The artisanal mining authorisation covers a surface area not exceeding 100ha; the shape should be square or rectangular. The artisanal mining authorisation holder must have his zone demarcated by an approved geometer in compliance with specific regulations. If he fails to do so, the administration will employ a geometer to mark it out at his expense.
- The holder of an artisanal authorisation must comply with standard regulations relating to health and safety, preservation of the environment and marketing. As well as exploiting mineral substances the holder may also carry out farming activities within the authorisation zone, provided he consults with other farmers and does not hinder the normal irrigation of crops. He will be responsible for any reparation costs resulting from this agricultural practice.
- If an important deposit is discovered within a zone being requested for artisanal mining, a written declaration should be made to the mining administration within 30 days. The administration will then advise as to the new working conditions necessary and provide the miner with a compulsory programme to be implemented. The miner must then obtain a mining title as a matter of priority. If he fails to carry out the programme, his authorisation will be terminated, and he will be compensated by a new miner.
- The authorisation for artisanal mining is not transferable, except in case of death or personal incapacity and with the consent of the mining administration.
- The miner can, at any time, give up the artisanal mining authorisation without penalty if he fulfils all stipulated requirements.
- The authorisation for artisanal mining can be withdrawn after a formal notice of 30 days by the issuing authority for any failure to fulfil requirements dictated by the Mining Code.
- If the authorisation has expired, been relinquished or withdrawn, the holder cannot lay claim to any rights over the authorisation zone.

Authorisation to exploit quarries

In order to mine quarries, one of the following types of authorisation is required:

1. Authorisation for permanent exploitation of quarry substances.

An authorisation for the permanent exploitation of quarries is granted by a decree signed by the Mining Minister following consultation with the administrative authorities and the local communities concerned.

2. Authorisation for temporary exploitation of quarry substances.

The temporary authorisation is obtained upon payment of mining taxes.

The following conditions must be met:

- The owner of the land in which the quarry lies must also be authorised if he wishes to mine the quarry himself (but not if he is only using the land for domestic purposes).
- Work must commence within two years of issue of a permanent mining authorisation and within six months of a temporary authorisation or permission will be withdrawn. The permanent authorisation is valid for five years as of its issuing date and may be renewed after three years. The temporary authorisation is only valid for one year and may not be renewed.
- The authorisation for permanent or temporary mining allows the recipient to exploit substances discovered within the boundaries of the authorisation zone and transport them to a storage area or market them. It also permits the holder to set up mechanisms to process primary products in accordance with the regulations in force.
- As with the artisanal mining authorisation, the holder of a permanent quarry mining authorisation must employ a certified geometer to mark out the precise area that the authorisation covers; otherwise the administration will do so at his expense.
- The holder of a quarry mining authorisation must conform with the mining and development plan and the programme for environmental preservation and management. Any deviation from these programmes should be authorised by the mining administration.
- An authorisation for permanent mining in quarries is transferable under the same conditions as mining titles, subject to the approval of the mining administration. Temporary authorisations are not transferable.

Authorisation to exploit spoil heaps, slag heaps and quarries' waste

There is no specific body of law dealing with small-scale mining in Burkina Faso although certain regulations have been passed in response to particular cases; for instance, the authorisation for the exploitation of quarries now also contains provisions for the exploitation of spoil heaps, slag heaps and mining waste.

According to the Burkinabe Mining Code, the same conditions as those described above for a quarry mining authorisation must be met in order to receive authorisation to exploit spoil heaps, slag heaps and mining waste. However, only an individual who does not already hold a mining permit, surface area mining authorisation or any title covering the area in question requires such an authorisation.

The mining permit

According to the provisions of the Mining Code, only mining permit holders may carry out mining activities:

- The mining permit is authorised by a cabinet decree, which has been proposed by Minister of Mining and is approved by the National Commission for Mining. The permit is granted to research permit holders who fulfil all requirements in compliance

with the mining code and who have submitted an appropriate application at least three months before their research permit has expired.

- The application for a mining permit should include a feasibility study and a development and mining plan including a study of the potential environmental impact, a programme for the conservation and management of the environment and a programme for the rehabilitation of the mining sites.
- A public investigation must be carried out before a mining permit can be granted. This investigation lasts a month and is conducted by departments concerned according to the mining regulations. It looks into the positive and negative impacts that the mining works may have on affected communities. Taking the resulting information into account, the mining administration establishes specific conditions under which the works must be executed - these conditions are included in the mining permit.
- Miners should include social aspects within their work programmes to help encourage the socio-economic development of local communities.
- Once a mining permit is obtained, the research permit within the mining zone is immediately cancelled. However, research works relating to mining can be continued.
- Holding a mining permit means that 10 per cent of the mining company's shares must be paid to the state.
- The mining permit allows its holder to seek mining substances on surface and in depth within the limits of the permit zone.
- Without prejudice to regulations in force, the mining permit authorises the holder to own, keep and transport extracted mining substances or their rough derived products to their storage or processing areas and to market these products within or outside of the country.
- The mining permit also includes an authorisation to install conditioning, processing and refining plants for mineral substances within Burkina Faso.
- The permit for small-scale mining is valid for ten years as of the issuing date of the decree granting it. It is renewable every five years until the deposit is exhausted. The mining permit holder must make an application for renewal four months before the permit is expired.
- The surface area covered by the mining permit depends on the deposit to be exploited, including satellite deposits, as defined in the feasibility study designed by the research permit holder. The recipient of the mining permit should have the zone demarcated by an approved geometer in compliance with mining regulations and practices in force.
- The holder of a mining permit must start development and mining works within two years of the date of issue of the permit and continue working industriously. An exemption from starting development and mining works or proceeding with the exploitation of the deposit within this time period can be obtained by a decree signed by the Minister of Mining. Subject to the payment of taxes fixed by the mining regulation, the exemption is valid for two years and may be renewed twice. Such an exemption is always granted if an economic study proves that the product market is weak during the exemption period. The issuing authority can withdraw the exemption after six years, in compliance with the provisions within the Mining Code.

- The mining permit holder must take the feasibility study and development plan produced by the mining administration into account when exploiting the deposit. Any modification should be authorised by the mining administration following consultation with the National Commission for Mining.
- The permit holder must submit an annual report on the technical assessment of works executed. This report must be sent to the mining administration within a month of the anniversary of the date on which the permit was issued.
- The permit holder must pay quarterly and annual taxes and other related fees.
- The permit holder must respect laws and regulations in force relating to the environment, health and safety.
- If the permit holder fails to fulfil these obligations, the mining administration may withdraw the permit after a two month period of formal notice.

Mining titles and preservation of the environment

Activities regulated by the Mining Code must ensure that the environment is protected and the exploited sites are rehabilitated in accordance with standards and conditions established by the law in force. Any holder of a mining title or an authorisation for exploiting quarries must prepare and submit an environmental impact study and a programme for the management and conservation of the environment which includes a rehabilitation plan for the sites to be exploited, before executing any work which is likely to affect the environment on the surface area of this zone. The study must include consultation with the local populations, comply with the environmental code in force and be approved by the mining administration. Any modification should be authorised by the mining administration.

The Ministry of the Environment has recently introduced a decree specifying in more detail what should be included within the environmental impact study.

A holder of a mining title must open an account with the West African States Central Bank (BCEAO) or any commercial bank of Burkina to establish funds to cover the implementation costs of the environmental programme. These funds are exempted from taxes on Industrial and Commercial Profits.

In addition to the provisions of the Mining Code, holders of mining titles must also comply with legislative provisions in force, especially those relating to environmental protection and management.

Economic, financial, fiscal and customs provisions

In Burkina Faso, the Mining Code provides permit holders with important customs and fiscal advantages, which vary according to activity phases.

Regulation of foreign exchange and overseas finance

Holders of mining titles or authorisations have to abide by foreign exchange regulations in Burkina Faso. In this respect, they are authorised to:

- Acquire or borrow funds necessary for the execution of mining operations from abroad;
- Transfer funds designed for reimbursing debts (capital and interests) abroad;
- Transfer dividends and products of invested capital abroad;
- Have access to currencies at the market rate;
- Freely convert the national currency and other currencies;
- Open a foreign currency account in an intermediate local bank to service their operations;
- Open a domiciliary account in BCEAO in which they can deposit receipts generated by mineral exploitation, and another account to make external payments in relation to financial commitments abroad; and
- Expatriate personnel holding a mining title or authorisation for mining and living in Burkina Faso are authorised to convert and transfer all or part of the amount they are paid to their country.

Customs regulations

During research phase Article 78 of the Mining Code states that the following materials imported in order to carry out a programme of research are subject to Category 1 customs duties at a rate of 5 per cent:

- Materials and raw materials;
- spare parts for machines and equipment - the value of spare parts should not exceed 30 per cent of the insured freight value (CFAF) of imported machines and equipment;
- fuel and lubricants for fixed installations;
- drilling materials and machines; and
- any other equipment used in the research programme.

A full list of equipment subject to the customs duties described above is being jointly compiled by the Ministers of Mining and Finances. This list will be included as an integral part of the research permit.

Table 2: Mining titles and authorisations in Burkina Faso

Mining Title/ Authorisation	Surface Area	Duration Of Validity	Renewal Transfer Transmission
Research permit	250km ² (maximum)	3 years	Renewable twice per three year period. Transferable, Terminable.
Permit for small-scale mining	Deposit	10 years	Renewable every five years until the deposit is exhausted. Transferable.

Permit for industrial mining	Deposit	20 years	Renewable every ten years until the deposit is exhausted. Transferable. Terminable.
Authorisation for prospecting	Defined in the authorisation	1 year	Renewable Non-transferable. Non-terminable.
Authorisation for artisanal mining	1 to 100ha	2 years	Renewable every two years. Non-transferable. Terminable.
Authorisation for seeking quarry substances	Defined in the authorisation	Defined in the authorisation	Not indicated
Authorisation for temporary exploitation of quarries	Defined in the authorisation	1 year (maximum)	Non-renewable Non-transferable Non-terminable
Authorisation for permanent exploitation of quarries	Defined in the authorisation	5 years	Renewable every three year period. Terminable.

Materials used for research, imported professional equipment, machines and vehicles for special use or use on the work sites, with the exception of tourist vehicles, can benefit from a temporary admission regulation.

Geo-service companies, including drilling companies, and laboratories analysing mineral samples for research and mining activities will be subject to the customs tax even though they operate as sub-contractors. However, vehicles exclusively imported for personal use and materials and equipment purchased within Burkina Faso are not subject to customs tax.

During the mining phase holders of a mining permit or an authorisation for mining must pay Category 1 customs duties at a rate of 6 per cent for materials, raw materials, parts, spare parts, fuel and lubricants, vehicles and equipment used in mining activities.

Despite this regulation, the holder of a mining permit for small-scale mining can ask for customs duties to be suspended. Conditions for obtaining and auditing a temporary admission are determined by the current regulations.

The fiscal system

During the research phase research permit holders are exempt from the following taxes during the research phase:

- Value Added Tax (VAT);
- tax on Industrial and Commercial Profits;
- patents and licences contributions;
- lump minimum tax on industrial and commercial professions;
- employer and learning tax; and
- registration fees on properties values.

The Mining Phase

During the mining phase, holders of a mining permit or authorisation must pay the following taxes :

- tax on industrial and commercial profits: 35 per cent; and
- tax on properties values revenues: 12 per cent.

But for seven years holders of a mining permit are exempted from the following taxes:

- lump minimum tax on industrial and commercial professions;
- employer and learning tax;
- tax on properties for assistance; and
- total exemption from VAT.

Payable taxes and licences

Rights to mining titles are no longer an integral part of the Mining Code but have been expressed as a separate decree. Table 3 shows regulations on taxes and licences as laid down by Decree No 96-419/PRES/PM/MEM signed on 13 December 1996 and modified by Decree No 98-464/PRES/PM/MEM/MEF.

Changes in legislation since 1986

There was no Mining Code in Burkina Faso until 1986, when the practice of artisanal mining began to increase and the state was obliged to increase regulations and structures to monitor the industry. The Burkinabe Precious Metals Counter (CBMP) was therefore created by Order No 86-190/CNR/PRES/PRECO on 21 May 1986.

The state bestowed the CBMP with the sole monopoly over collecting, processing and marketing precious metals produced by artisanal, industrial and semi-industrial mining. Only the CBMP had the right to export or fix the price of gold (in relation to London prices).

Table 3: Value of Taxes on Mining Permits and Licences

	List of Taxes	Value of Taxes IFF = 100CFAF in Local Currency
Fixed rights	1. Quarry title	
	Research permit	100,000
	Grant	2,000,000
	Renewal	3,000,000
	Transfer	3,000,000
	2. Mining title	
	Authorisation for prospecting	
	Grant	2,000,000
	Renewal	1,000,000

Proportional rights	Research permit for 1 st year	500 CFAF/km ²
	Grant	1,000,000
	First renewal	1,500,000
	Second renewal	2,000,000
	Transfer	2,000,000
	3. Authorisation for artisanal mining	
	Grant	400,000
	Renewal	400,000
	Transfer	400,000
	4. Permit for small-scale mining	
	Grant	1,000,000
	Renewal	2,000,000
	Transfer	2,000,000
	5. Permit for industrial mining	
	Grant	5,000,000
Renewal	12,500,000	
Transfer	12,500,000	
Taxes on surface works	1. Mining title	
	Research permit for 1 st year	500 CFAF/km ² /year
	2 nd year	3000 CFAF/km ² /year
	3 rd year	4500 CFAF/km ² /year
	From the 4 th year	7500CFAF/km ² /year
	2. Authorisation for artisanal mining	30,000 CFAF/km ² /year
	3. Permit for small-scale mining	
	First year	100,000 CFAF/km ² /year
	Following years	100,000 CFAF/km ² /year
	4. Permit for industrial mining	
Proportional rights licence	First year	500,000 CFAF/km ² /year
	Following years	500,000 CFAF/km ² /year
	Movable materials (sands, gravels, etc)	200 CFAF/km ²
	Hard materials (blocks of granite, basalt, sandstone, limestone, laterite)	400 CFAF/km ²
	Diamond and precious stones	7% of the FOB value
Proportional licences on mining	Basic metals and mineral substances	4% of FOS value
	Precious metals	3% of FOB value

The Gold Purchase Counter was the only body allowed to purchase, process and market gold. It established an organisation dedicated to carrying out these tasks. It employed technicians to purchase gold from artisanal sites and granted authorisation cards which permitted local buyers to purchase gold that could be resold to holders of gold marketing cards. CBMP had several local buyers who resold gold to the Counter.

In order to obtain an agreement to purchase gold, an application had to be submitted to the Mining Minister, after which an inquiry was conducted by the police force. The agreement to purchase gold could only be signed by the Mining Minister. The CBMP Executive Manager could sign local purchasers' cards. Local purchasers' cards cost CFAF 1000 each while the agreement to purchase gold cost CFAF 250,000.

Today, however, since the opening up of the mining sector, the CBMP no longer has a monopoly over gold export. A joint order signed by the Ministers of Mining, Finances and Trade lays down the conditions for creating gold purchase counters. The counters are governed by the same regulations as non-government commercial ventures and the current customs regulations. Also, all counters must export a minimum of 200kg of gold (in nuggets) and must report their activities on a quarterly basis to the Minister of Mining.

The counters are controlled by the Minister of Mining who is entitled to withdraw the agreements or refuse their renewal. The counters are subject to the same fiscal regulations as any commercial company.

Following this decree, the Ministries of Mining, Finances and Trade jointly signed Order No 97-035/MEM/MEF/MCIA which determines agreement and specification conditions for the purchase and export of gold in Burkina Faso. The Order states that no one can purchase or export gold unless specifically authorised to do so. Any individual interested in gold marketing activities must send an application to the Minister of Mining for approval. This application is examined by an ad hoc commission made up of two representatives of the Ministry of Finances and two representatives of the Ministry of Trade.

The agreement is usually approved for a year and is renewable as many times as necessary. The agreement specifies that the gold purchase and export counter should be a company under the jurisdiction of Burkinabe law, its main office should be in Burkina Faso and its activities should be exclusively limited to the purchase and sale of gold. Its accounts must comply with legal prescriptions relating to gold marketing activities.

The following fees and taxes must also be paid in order for the agreement to be approved:

- Approval taxes: CFAF 5,000,000 to be paid in full upon obtaining the approval. Renewal doesn't provide any perception right.
- Ad valorem taxes: CFAF 35,000,000 representing the pre-payment of the mining licence. This payment should be made in a trust account in a local bank. At least CFAF 15,000 should be held in this account at all times. Gold should only be purchased using CFAF.

In order to establish structures and regulations to reflect the increasing liberalisation of the mining sector, the Ministry of Energy and Mining was established in 1995 with the responsibility to create appropriate regulations for the mining and energy sector.

The Minister of Energy and Mining developed the first mining code including the following existing regulations:

- I. Part of order No AN-328/TER/FP/PLAN-COOP on 4 June 1991 modified by the decree No 93-6252/PRES/PM/MICM/MDEM on August 3, 1993 related to Land Tenure Reorganization;
- II. Decree No 93-253/PRES/PM/MICM/MDEM on 3 August 1993 related to rights to mining titles;

- III. Decree No 93-186/PRES on 16 June 1993 passing the law No 014/93/ADP on 19 May 1993 related to mining investment code;
- IV. Law No 014/93/ADP on 19 May 1993 related to the mining investment code; and
- V. Convention on mining investments.

However, this initial mining code provided few incentives and failed to take artisanal small-scale mining into account. In October 1997 the Mining Code was therefore thoroughly modified under Law No 023/97/II-AN to cover all areas of the mining sector and offer more incentives to the mining industry. The mining investment code, licences and taxes were also revised.

Characteristics of Artisanal Small-Scale Mining In Burkina Faso

As previously mentioned, gold mining has formed part of the Burkina Faso economy for several centuries, but its significance increased considerably during the droughts of the 1980s. The traditional rural economy was severely affected during that period and gold digging was adopted as an alternative source of income.

Currently, 100,000-200,000 artisan miners are actively involved in gold mining on a minimum of 200 sites across the country. Many of the miners are those who have abandoned farming activities and taken up mining in the hope of getting rich quickly and even during the rainy season some sites are busy with miners.

In addition to artisanal mining, there are semi-industrial mines, including the Essakane mine exploited by the Burkina Mining Company (CEMOB), Guiro mine exploited by Guiro Mining Company (SMG) and Sebba mine exploited by the Korean-Burkinabe Company (SOMICOB).

Phosphates, limestones, kaolin and clay are also exploited on a small-scale basis although production is just intended for internal needs.

Geology and Location of Minerals and Artisanal Sites

Geologically Burkina Faso belongs to West African Craton and its most significant geologic formations are located in the Baoule-Mossi area.

Important mineral resources were discovered following work by UNDP, BUMIGEB and other mining companies. These mineral resources are primarily located in volcanic-sedimentary formations covering more than 70,000km². Many deposits have been discovered, including ferrous and non-ferrous metals and precious metals. Despite this diversity of minerals, only gold and construction materials are artisanally exploited.

Table 4: Mineral reserves in Burkina (source: West African Economic and Monetary Union 1998, modified)

Mineral	Project Zone	Extent Of Reserves	Mineral Content
Gold	Poura	1.6 million tonnes	
	Tap Arko	40 million tonnes	
	Bombore	37 million tonnes	
	Essakane	31 million tonnes	
	Bouda	15 million tonnes	
	Belahourou	15 million tonnes	
	Youga	15 million tonnes	
	Kalsaka	15 million tonnes	
	Bogore	430,000 ounces	1.5 g/T
	Bouroum	520,000 ounces	1.3 g/T
	Goulagou	700,000 ounces	1.1
	Guïro	220,000 ounces	9.68
	Inata	500,000 ounces	3.0
	Inticdougou	200,000 ounces	1.4
	Kerboule	200,000 ounces	
	Larafella	500,000 ounces	
	Liliga	240,000 ounces	
Nagsene	150,000 ounces		
Tonnte	100,000 ounces		
Manganese	Tambao	19 million tonnes	55% Mn
	Kiere	600,000 tonnes	43-55% Mn
Phosphates	Kodjari	30 million tonnes	22.5 of P2O5
	Aloub-Djanana	(unevaluated)	
	Arly	4 million tonnes	
Copper	Gaoua	24 million tonnes	0.8 Cu and 0.5%
	Wayen	45 million tonnes	
	Goren	40 million tonnes	
Limestones	Tin Hrassan	6.3 million tonnes	44.1% Ca O
Zinc	Perkoa	5.6 million tonnes	18.2% Zinc
Bauxite	Kongoussi	1.5 million tonnes	60-75% Al ₂ O ₃
Antimony	Mafoulou	35,000 tonnes	
Sands	Bobo-Dioulasso	3.7 million tonnes	

Gold is widely mined across the country, exploiting the large Birrimian reefs. Deposits exploited in the north include:

- the Bouroum reef of Yalogo, Djibo and Dori-Yalogo-Bouroum with Guïro deposits (reserves of 220,000 ounces of gold) discovered by Stremco in 1995;
- the reef of Taporko (reserves of 1,150,000 ounces of gold) discovered by High River Gold in 1997;
- the reef of Bouroum (reserves of 250,000 ounces of gold) discovered by Channel Resources;
- the gold district of Aribinda and the indications of Belahouro (15 million tonnes of ore); a

- the Gold district of Ouahigouya, Essakane and Essakane deposit (31 million tonnes of ore).

In the West, the reefs of Hounde and Boromo are exploited within the following districts:

- Yako-Kaya gold district with gold sites in Bouboulou, Bouda, Nagsene, Guibare,
- Dossi-Kiere gold district with indications in Kari, Bagassi, Dama.

Small-scale mining sites: gold, phosphates and limestone

Today a few sites bearing gold, phosphates and limestone are being exploited as small-scale mines.

In Essakane, the Burkina Gold Mining Company (CEMOB) had installed equipment for treatment, but this company has now closed down. Nevertheless, other companies have been prepared to undertake small-scale mining activities, such as the Burkina Mining Company in the region of Dama, the Massako Company in the region of Piela and the Mining Research Group (GERM) in the region of Aoura-Ramenkoura-Lougou.

The phosphate deposit in Kodjari is now being exploited by Burkina Phosphates, which is a branch of the Ministry of Agriculture. The extracted mineral is used in soil improvement. Annual production is estimated at 3000 tonnes on average, with total reserves estimated at 63 million tonnes.

The limestone deposit in Tiara in the region of Bobo-Dioulasso has been exploited by small-scale mining by Covemi since 1976 to produce quicklime, slaked lime, dolomite powder (for soil improvement) and ornamental materials (marble, tiles).

Methods and Working Tools

Gold mining

Minerals are exploited from alluvium and alluvion deposits and reefs. In the case of alluvium and alluvion deposits, mining is carried out by scraping and digging both at surface level and in depth. The exploitation of reefs can often be carried out in depths of 50m. Tools used in these processes include hammers, pickaxes, shovels, wood ladders, ropes, buckets, calabashes, and plastic bags.

Treatment varies according to the nature of the deposit. In the case of reefs, the mineral is extracted and selected prior to treatment. The fragments of quartz that do not contain gold are disposed of and the remaining mineral material is crushed using metal pestles and mortars. The degree of crushing varies from site to site. The crushed mineral is then washed with the use of sluicing plates. Other tools used in the treatment process include wood or metal sieves and calabashes.

Chemical products have also been recently introduced to treat gold in Burkina Faso. For example, mercury is used to amalgamate the gold on several sites (eg Seguenega, Gueguere, Dasso, Bouere and Bouda).

In the case of alluvial gravels, the gold is collected in two different ways: gravel may be washed in metal pans or calabashes using the 'panage' method; alternatively, in the north of the country, where water is scarce, a sluicing method is used.

Construction materials

Quarried construction products (notably sands, gravels, stones, clays and blocks of quartz) are largely artisanally extracted by local miners. These materials are transported by a variety of means, such as trucks, carts, wheelbarrows, pails and donkeys. It is very difficult to evaluate the number of people involved in this artisanal practice and the number of work sites since practically no statistics on these activities exist and their scale varies considerably from season to season.

An Overview of Small-scale Mining

Many deposits are being exploited via small-scale mining and this form of intermediate mining (between artisanal and industrial mining) presents certain advantages:

- it can be rapidly established;
- a wide range of business people are interested in this type of activity since the equipment and the material for extraction and treatment are affordable;
- it is mechanised and employs a large number of workers;
- the small size of deposits can have less impact on the environment; and
- it requires less serious investment and consumes less energy and water, which is cost-effective for a Sahelian country like Burkina.

However, the following issues should be considered before small-scale mining is undertaken:

- a good feasibility study should be conducted before installing machines and equipment;
- mining activities should be carried out in the open and use little or no dynamiting;
- the technology used should be simple;
- the exploitation should occur above the ground water;
- the equipment for extracting and treating should use a minimum of water and energy; and
- the metal should be easy to extract.

The above points apply equally to gold as to the other minerals. Generally, large companies are not interested in small-scale mining, but the results of their prospecting can be utilised.

Small-scale mining can play a part in sustainable development and the political authorities in Burkina quickly grasped this and effected the necessary legislative and institutional changes.

Statistics on Artisanal Production and Earnings

From 1986-1997, Burkina Faso produced over 26 tonnes of pure gold including 13.933 tonnes from the mining industry (the Poura and Essakane sites) and 12.256 tonnes from artisanal mining. Although these figures might be underestimated since some of the product may have been purchased outside the official system. Artisanal gold mining is practised by over 100,000 miners and supports over 200,000 people across more than 200 sites in Burkina Faso. The estimated value of gold produced by non-industrial means since 1986 is CFAF 50,000 million. However, it has proved impossible to gather accurate data about the artisanal mining of construction materials due to the very fluid and mobile nature of this industry. Table 5 shows the fluctuations in gold production between 1986 and 1997.

Although there are no specific statistics on revenues obtained by artisanal miners and their families in Burkina Faso, a study conducted in the sub-region (Burkina, Guinea, Cameroon) suggests that average earnings for those involved in gold mining are FF7 per person per day (assuming gold is valued at FF44 per gram). The average production per person per day is 0.16g, giving an average annual production of 35g per person.

However, it should be noted that gold production in Burkina has fallen considerably from its peak in 1990 (see table above). This is mainly due to the fact that smuggling resulted in the price actually being paid to artisanal miners being lower than the international price. There has also been an overall fall in the international price of gold.

Table 5: Gold production in Burkina Faso, 1986-1997 (in grams)

Year	Artisanal	Industrial	Total
1986	272,496.668	2,456,044.00	2,728,540.668
1987	616,323.824	2,677,271.00	293,594.824
1988	805,550.735	2,5558,008.86	3,363,559.593
1989	1,255,292.345	965,244.38	2,220,536.720
1990	2,302,274.127	1,199,501.73	501,775.856
1991	1,499,143.676	956,111.00	2,455,204.672
1992	1,338,311.239	890,535.79	2,228,847.029
1993	928,937.200	689,274.36	1,618,211.560
1994	698,909.244	731,143.06	1,430,052.304
1995	804,788.098	556,446.30	1,361,234.401
1996	788,206.906	109,164.64	897,371.544
1997	944,327.147	144,327.52	1,088,697.667
Total	12,254,604.207	13,933,022.63	26,187,626.838

Source: Burkinabe Precious Metals Counter (CBMP), 1998).

Impact of artisanal mining on income generation

Through improving the organisation of artisanal mining the state has been able to collect gold, supervise local miners, increase the general level of economic activity and improve the balance of trade through marketing gold. At the local level, the state pays CFAF 50 per gram to provinces and departments producing gold (see Table 6), in addition to the increase in related economic activities such as jewellery manufacture. At the family and individual level, small-scale mining plays an important economic role within the communities

particularly after a poor harvest. The state has also included artisanal gold mining in its programmes to combat poverty. During the dry season, thousands of people work on these gold sites – of whom 50 per cent are men, 45 per cent women and 5 per cent children.

Table 6: Transfer of Production Prices to the State and Local Communities (provinces)

Year	Quantity of pure gold (g)	Share of the treasury (CFAF)	Share of the local communities (CFAF)
1986	272,496	6,812,417	6,812,417
1987	616,323	15,408,096	15,408,096
1988	805,550	20,138,768	20,138,768
1989	1,255,292	31,382,309	31,382,309
1990	2,302,274	57,556,853	57,556,853
1991	1,499,143	37,478,592	37,478,592
1992	1,338,311	33,457,781	33,457,781
1993	928,937	23,223,430	23,223,430
1994	698,909	34,945,452	34,945,462
1995	804,788	40,239,405	40,239,405
1996	788,206	39,410,345	39,410,345
1997	944,370	47,218,507	47,549,760
1998	950,995	47,549,760	47,549,760
1999	755,353	37,767,672	37,767,672
2000	521,801	25,640,082	25,640,082
TOTAL	14,473,754	498,299,479	498,299,479

Structure and Organisation of Artisanal Mining Sites

In Burkina Faso, gold mining is mainly practised by local migrant populations (especially farmers). These activities are seasonal and run from the end of harvest (November) to May. However, certain sites are exploited throughout the year. Artisanal gold mining is an economic activity that is as important as agriculture and livestock management and thus is an important economic asset for Burkina Faso, particularly for the rural communities. It also helps reduce rural exodus and greatly contributes to generating foreign currency for the national economy.

Artisanal mining sites can be organised in a number of different ways:

Organisation at family or individual level:

This type of organisation is particularly found on alluvial sites. The owner of the deposit (the individual or the head of the family) supervises all activities. He keeps and manages any resulting profits.

Organisation at group level:

Generally, one individual will own and fund the development of a well and share the profits on the basis of two-thirds for him and one third for the rest of the group. If the well is unproductive, then it is the head of the group who has to bear the cost and this results in financial ruin in some cases. While each individual treats the mineral as he wishes, the head of the group usually supervises the works until the mineral is obtained.

Organisation using employed labour:

The owner of the well finances all activities from the extraction to treatment. To this end, he builds a shed in which some specialists (usually women or children who cannot go down the well) are in charge of treating the extracted ore and paid CFAF 300 per mortar they crush. The resulting crushed ore is skilfully washed by women until they obtain the concentrated mineral which is then collected by a person the owner trusts (usually a family member). This concentrated mineral is then treated with nitric acid or mercury to obtain pure gold. The workers involved are immediately paid in cash and the system is well organised and regulated.

Working atmosphere and social behaviour on artisanal mining sites

There is no overall chief or ruler on artisanal mining sites – each person has to manage by himself/herself. The miners come to get rich and care little for conventional social behaviour or traditional values. And although there are no traditional mining practices (as there are for example in Mali), nevertheless certain mystic beliefs and practices occur. For example, the miners think that when one of them dies, there will be more gold in the area. They also believe that a gun shot drives gold away and that blood sacrifices will make the area richer. In Poura, the locals will sacrifice a cow before opening a mine; usually performing such a sacrifice secretly at night.

Problems Associated with Artisanal Mining

Artisanal mining creates problems on three levels: technical (haphazard exploitation of sites); social (especially health); and cultural (the mores of the sites). In addition, there are numerous obstacles to efficient and effective mining, which can be summarised as follows:

- lack of well-known reserves;
- inadequate organisation of work sites (especially hazardous and maladapted mining methods);
- lack of control of water consumption;
- inadequate treatment methods (typically resulting in the extraction of only 30 per cent of the available gold);
- negative environmental impact;
- difficult and unsafe working conditions;
- lack of financing;
- lack of adequate institutional framework;
- inadequate mineral resource management; and
- lack of miners' organisations.

Taking the social and economic importance of artisanal mining into account, the government of Burkina Faso has realised the necessity of improving the organisation of local mining sites without hindering traditional extraction methods.

In this respect, Burkina Faso has received financing from the World Bank to implement the Project of Reinforcing the National Capacities of the Mining Sector and Environmental Management (PRECAGEME). This project focuses on four areas – one of which is small mine and artisanal mining. The project's proposal for the improvement of artisanal mining includes the following main objectives:

- to strengthen institutions in charge of promoting small-scale mining;
- to improve the organisation of artisanal mining;
- to encourage the use of appropriate equipment in artisanal mining and ensure adequate training for small miners; and
- to support research for financing artisanal mining activities.

To attain these objectives, the following procedures are to be undertaken:

- strengthening companies in charge of promoting small mining – namely the Directorate for Promoting Small Mining (DPPM), Burkina Precious Metals Counter (CBMP) and the Burkina Mining and Geology Office (BUMIGEB);
- conducting socio-economic, geological and environmental assessments on six selected mining sites;
- organising an awareness-raising campaign related to health and safety on certain mining sites;
- evaluating local financing mechanisms; and
- conducting studies and extending the manufacture of local equipment.

The aim of these procedures is to reduce poverty in rural areas by improving artisanal mining.

Role Of Women On Artisanal Mining Sites

In Burkina Faso, women have always assisted men in all activities especially in business ventures such as artisanal mining. About 45 per cent of those working on site are women (45,000-85,000 individuals) where they carry out various tasks, including domestic chores, mineral treatment (crushing, washing and extracting) and trading.

Initially, men thought that women were playing a secondary role on the sites since they could not go down the wells. However, today many women are running profitable businesses. Some of them have managed to buy land and employ male workers. However, in certain areas, women's roles on the mining sites are defined by customs and traditions. In the southern region of Gaoua *only* women may exploit, keep or sell gold. Attempts to get men involved in gold production activities were rejected by the local population (Traore, CEA, 1997). Whereas in the north, women's roles are limited to running small businesses (eg restaurants) and mineral treatment.

Women also actively participate in the production of construction materials (sands, gravel, blocks of quartz) but it is very difficult to estimate their number since the activity is of a temporary and seasonal nature.

Child Labour in Artisanal Mining

Children are also present on the work sites. A 1998 study of 500 working children (BIT/IPEC, 1998) revealed that:

- 41 per cent were over 12 years old;
- none of them went to school;
- 25 per cent of them lived with their parents;
- a third of the group had 10 brothers and sisters;
- 95 per cent of them took one hour to get to work;
- 96 per cent lived in very difficult family conditions;
- 66 per cent lived in extreme poverty;
- 95 per cent found the work very tough;
- a quarter found it monotonous;
- 15 per cent had to work continuously;
- 96 per cent thought that their work was very risky;
- two-thirds had to cover long distances each day;
- 83 per cent worked in very difficult positions;
- all of them worked in dust;
- a quarter were constantly disturbed by noise and vibrations;
- 98 per cent of the children worked more than 10 hours a day;
- three-quarters worked with their parents;
- two-thirds were not paid at all, 15 per cent were paid in kind and 19 per cent in cash;
- two-thirds of the children stated that they lived in precarious conditions;
- 80 per cent were totally unqualified for the job; and
- there was practically no personal protection, no health facilities, no preventive medicine, no social protection and housing was inadequate.

Burkina Faso's public authorities were quick to express concern about child labour on mining sites – particularly the effects on their physical and moral health, the high numbers involved and the increasing cases of diseases and accidents. In 1999, an action plan on child labour on mining sites in Burkina Faso was produced analysing the situation of these children and identifying the risks and problems they faced in order to better organise programmes (including practical actions and institutional responsibilities) to tackle the issue.

In February 2000, an inter-ministerial commission presented an awareness-raising programme on child labour to four mining sites in Burkina Faso. This mission's aim was to inform the miners of the problems of child labour and included a documentary film *The Ransom of Gold* produced by the Ministry of Employment and Social Security.

In June 2000, a pilot project on child labour on artisanal mining sites was established with the support of IPEC/UNICEF for the Ministry of Employment and Social Security in Burkina. This awareness-raising programme was implemented via a workshop with the following objectives – to inform the target population, show the documentary film (*The Ransom of Gold*) and discuss the issues raised with the participants. And it was expected that this would result in the following actions being taken:

- formally forbidding certain practices;
- taking protective measures;
- taking preventive measures; and
- regulating and applying punitive measures.

Health and Safety Issues

There are serious health and safety issues associated with artisanal gold mining in Burkina Faso. Mining sites are usually located in remote areas and the miners live in poor housing conditions without access to safe drinking water or electricity. Security is poor or non-existent and theft and other criminal behaviour goes unchecked.

Many of the young male workers in particular abuse hard drugs and alcohol and consequently many young drug addicts are found in these zones. Diseases such as meningitis, cholera, HIV and other sexually transmissible diseases are rife. Young girls who have contracted HIV on the sites return to their villages where they may continue to spread the disease.

In order to tackle these problems, police forces have been stationed on the most important mining sites. Initiatives have been introduced to help prevent diseases such as malaria, skin diseases, diarrhoea, etc. However the resources available are insufficient to meet the needs of the 200 or more small-scale mines in Burkina Faso.

Environmental Issues

Current agricultural and livestock practices, extreme poverty and severe drought (the northern part of the country has an annual rainfall of below 600mm) all have a detrimental impact on the environment.

Within this environmental context, artisanal mining activities can cause further damage:

- Digging, creating embankments etc contributes to the degradation of arable lands.

- Shrubs and trees are cleared to build huts and sheds in mining zones. The wood is used for supporting walls in the wells, making ladders and cooking.
- Dust produced by mining activities (eg crushing, digging, sluicing) and gas from chemical products (nitric acid) pollutes the air. As a result, eye troubles, skin diseases and respiratory infections (cough, cold, bronchitis, pneumonia) are common in mining zones.
- Treatment waste containing harmful chemicals cause damage to areas surrounding the mines.
- Plastic waste is scattered all over the sites.
- Artisanal miners increasingly use mills to grind ore to obtain a purer form of gold. About 100 mills are operated on the site of Bouéré alone, causing severe environmental damage through the use and disposal of oil and gas, as well as causing noise pollution.

The Economy of Burkina Faso

In order to understand the role and nature of artisanal small-scale mining in Burkina Faso and how it might be improved, it is important to see it within the wider context of the country's economy as a whole.

Burkina Faso is a landlocked country covering a surface area of 274,000km². In 1999 the population was estimated to be 11 million and increasing at a rate of 2.8 per cent per year. The environment, which is already fragile, is strongly affected by the high density of the population in certain areas, which is exacerbated by the increasing demographic rate and internal migration.

The economy is mainly based on agriculture (35 to 40 per cent of GDP), which involves about 80 per cent of the active population and contributes to 80 per cent of export income.

The primary sector includes food crops (maize, millet, sorghum, rice) with low output. This type of agriculture is practised on clayish soils and is heavily dependent on certain climatic conditions. Cash crops such as cotton are the main source of export income for the country (53 per cent in 1999) and provide about 30 per cent of household income.

After cotton and leather, gold is the third largest export product contributing to 10 per cent of GDP.

After a decade of intensive external aid (more than 50 per cent of the state budget and 73 per cent of GDP) and economic reforms implemented in the context of structural adjustment programmes dictated by Bretton Woods institutions and IMF, the country experienced positive growth rate of 3.3 per cent per capita. However there is still extreme poverty in Burkina Faso. GDP per capita ranges from between US\$230 and US\$250 per year in comparison with US\$500 dollars in sub-Saharan Africa, placing the country in the 172nd position out of 174 according to UNDP Human Development Indication.

In 1998 it was estimated that poverty affected 45 per cent of the population. The literacy rate was below 20 per cent. With insufficient healthcare (according to the World Health Organisation, there is one doctor per 100,000 people), the main causes of death are infectious and parasitical diseases and HIV/AIDS. Under these conditions, life expectancy at birth is 44.7 years.

In the light of these statistics the government of Burkina Faso has aimed to meet the following objectives by 2005:

- to reach a real economic growth of 30 per cent per capita per year;
- to decrease poverty by 40 per cent;
- to raise the literacy rate to 40 per cent; and
- to increase life expectancy to 55 years.

Support to the Artisanal Mining Sector

External Support

The PRECAGEME project financed and coordinated by the World Bank has a project specifically related to supporting small-scale mining in Burkina Faso. PRECAGEME was initiated in 1997 and is due to be completed by 2002.

Financial Support from within Burkina Faso

Although attempts have been made to seek finance for small-scale mining activities, most financial institutions have so far been reluctant to provide funding for these operations.

Central banks etc.

There are seven institutions within Burkina Faso which operate within the system of central banks, such as BCEAO (West African States Central Bank) and UMOA (West African Monetary Union). Their clients tend to be workers, traders, institutions and companies. There is also a saving bank which offers a rate of 6 per cent per year.

Decentralised financing system (SFD)

There are several 'decentralised' saving banks.

Informal financing system (SFI)

The informal financial sector in Burkina Faso includes tontines, mobile banks, store keepers, money lenders, etc

Regional funds

There are several regional funds which provide funds and/or guarantees for investment loans, such as the African Guarantee and Economic Cooperation Fund (FAGAGE) and the Mutual Assistance Funds of the *Conseil de l'Entente* (FEGECE).

Proposals

To date the artisanal small-scale mining sector has received little support from financial institutions. However, certain proposals to remedy this fact are currently being investigated. For example, the creation of a development bank for the mining sector has produced satisfactory results in Latin America. In several other African countries (such as Ghana, Zimbabwe, Tanzania) mining cooperatives have benefited from external funding and it seems likely that this could also be the case in Burkina Faso.

One possibility might involve several financial institutions grouping together to provide funding for small-scale miners. Such a mechanism would be successful if a global approach were adopted.

Conditions required for the promotion of small-scale mining are as follows :

- availability of prospective land;
- necessary legal frameworks to be in place;
- access to knowledge and skills required to manage mining activities;
- access to markets to obtain receipts at international prices;
- access to sufficient capital; and
- mining needs to be considered to be a professional activity.

A group of mining professionals called the 'Burkina Mining Professional Group' has been created with the following objectives:

- to encourage the promotion and development the mining sector;
- to encourage technical, economic and professional relations between members of the government;
- to preserve the common interests of the mining sector; and
- to support miners.

Relations Between Artisanal Miners and Mining Companies

Good relations generally exist between artisan miners and mining companies. This is mainly due to the fact that the Mining Code states that authorisation for artisanal mining does not allow its holder to obtain a mining title, not does it prevent research being carried out on the surface area covered by the authorisation. Furthermore, if a mining title covering

the same surface area is granted, the artisanal authorisation will not be renewed, although the artisanal miner must receive compensation from the holder of the mining title.

Although most miners comply with these regulations, mining companies do sometimes complain about the presence of artisanal miners within their territory. In such cases, the administration is expected to resolve the matter by removing the artisanal miners from the zone in question. Such a case occurred on the site of Kougpela Magséné (100km from Ouagadougou) in 1995, for instance.

The state is also expected to resolve the fairly frequent conflicts between miners which occur when one miner is unaware that he is working in the domain of another miner.

There have also been cases of conflict between the state and the mining companies such as in the case between the Burkinabe state and the Burkina Gold Mine Company (CEMOB) which was brought to the International Court of Justice. Another case between a Canadian company (Interstar Mining) and the Burkinabe state has yet to be resolved, although it is likely that a diplomatic solution will be found.

Conclusions

The artisanal small-scale mining sector has seen some positive changes such as:

- the creation of health facilities on some mining sites (Essakane, Bouda);
- a reduction of child labour on some sites (Essakane);
- the integration of small-scale mining in the strategic programme for combating poverty; and
- the promotion of the role of women in artisanal mining regions (eg a small mine in Tourba - 200km north of Ouagadougou is now being managed by a woman).

However there is still much to be done if the small-scale mining industry is to be developed and the environment preserved. Specifically:

- the working conditions of miners and their families needs to be improved;
- further assistance needs to go to women and children on mining sites;
- mechanisms need to be established to enable artisanal miners to have more access to financial assistance; and
- more regulations need to be introduced to help conserve the environment (eg to stop the deforestation which is taking place simply to provide wood for building and cooking, and to prevent the damage caused by the chemical waste from mining sites).

As stated at the beginning of this report, some of these issues may be best addressed within the context of larger initiatives aimed at alleviating poverty in Burkina Faso.

Appendix I: List of Abbreviations

ALG	Liptako Gourma Authority
ADP	People's Representatives Assembly
AN	National Assembly
BAD	African Development Bank
BCEAO	West African States Central Bank
BEI	European Investment Bank
BM	World Bank
BRGM	Ceology Research Office
BUMIGEB	Burkina Mining and Geology Office
CAO	Gold Purchase Counter
CBMP	Burkinabe Precious Metals Counter
CEMOB	Burkina Gold Mining Company
CEDEAO	West African States Economic Community
CONAGESE	National Environmental Management Council
COVEMI	Village Mining Company
DGM	General Mining and Geology Directorate
DGMGC	General Directorate for Mining, Geology and Quarries
DEMPEC	Directorate for Small-Scale Mining
EIE	Environmental Impact Study
FAGACE	African Guarantee and Economic Cooperation Fund
FMI	International Monetary Funds
GERM	Mining Research Group
GPMB	Professional Mining Group of Burkina
MMCE	Ministry of Mining, Quarries and Energy
OIT	International Labour Organisation
OMS	World Health Organisation
UNDP	United Nation Development Programme
PRECAGEME	Project for Reinforcing the National Capacities of the Mining Sector and Environmental Management
RAF	Land Tenure Reorganisation
SOMICOB	Research and Mining Company of Burkina
UEMOA	West African Economic and Monetary Union