



Netherlands Commission for
Environmental Assessment

Advice on pre-terms of reference for the Post Conflict Impact Assessment for the Reconstruction of the Mining Sector in Katanga - Democratic Republic of Congo-

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1. INTRODUCTION

1.1 The UNEP PCIA

The United Nations Environmental Programme (UNEP), more specifically its Post Conflict and Disaster Management Branch has decided to assist the DRC in its post conflict reconstruction planning and sustainable development by providing a Post Conflict (environmental and social) Impact Assessment (PCIA). UNEP has decided that this assessment will address four aspects related to post conflict reconstruction:

- rebels in the national parks,
- resettlement of refugees,
- the environmental problems of Kinshasa and its surrounding areas,
- reconstruction of the mining sector (base elements) in Katanga.

The present advisory report relates to the fourth component of the PCIA: the reconstruction of the mining sector in Katanga.

1.2 Component 4: PCIA for Reconstruction of the Katanga Mining Sector

The specific objective of this component of the PCIA is to define the conditions and modalities in which the development of the mining sector in Katanga can contribute to poverty reduction, to political and civil stability and to a better environment.

An important additional objective is to identify approaches that can be useful for the development of the mining sector in RDC as a whole.

Primary focus is on industrial mines of the base metals: copper, cobalt, zinc, while small scale mining will also get attention. The component will be mainly geared towards assessing the development perspectives for the sector, the conditions for management of the sector so that it contributes to sustainable development, to improvement of environmental governance, to poverty reduction and to peace.

Main Aspects of the Component :

- What is the distribution of control over mineral resources over national and international parties?
- How is governance of the sector secured? Is improvement needed and, if so, how?
- What is the state of affairs with regard to positive and negative impacts, the accumulated impacts of past mining operations and the cumulative impacts of the presently active operations?

The study zone is indicated in the map in Appendix 11.

Project Ownership and Consultations

UNEP assures buy-in and participation of the Interior and Mining Ministries through the PCIA Coordinating Committee and the Ministry of Environment

and Sustainable Development. The UNEP and the Ministry of Environment and Sustainable Development mobilise the governor of the province, provincial authorities on mineral resources and, whenever necessary, municipal authorities.

1.3 PCIA Process and present Stage

The process is of a rather programmatic in nature. It is designed according to the facts as they present themselves. In broad lines the following phases can be distinguished:

1. Prep- and inventory phase:
 - setting the principles and basic designing of the process;
 - getting basic government buy-in;
 - priority setting on issues, inventory of available information and identification of gaps in knowledge;
 - getting solid government buy-in.
2. Consultations and assessment:
 - impact assessment;
 - consultations.
3. Field verification:
 - verification of results;
 - validation of results.
4. Recommendations:
 - writing the draft report + formulation of recommendations;
 - getting government buy-in for proposed solutions and action plan; final report;
 - writing final report.
5. Media presentation and donor engagement for implementing action plan.

Presently, the process is the last stage of its first phase.

1.4 UNEP's Request

By mail dated 11 July 2009, the UNEP has requested the Netherlands Commission for Environmental Assessment (NCEA) to advise on the present state of knowledge with regard to issues that condition the rehabilitation of the Katanga base mining sector and on gaps in knowledge that definitely must be addressed before rehabilitation planning can be done. The NCEA received the request for the site visit on July 16th 2009 (Appendix 1).

2. APPROACH

2.1 Points of Departure

The NCEA advises in line with the approach proposed by the Organisation for Economic Cooperation and Development (OECD) as specified by the SEA Task Team of its Development Assistance Committee (DAC)¹. This implies amongst other things, that The NCEA assumes the main stakeholders will be consulted and heard throughout the PCIA-process.

2.2 Expert Working Group, Site Visits and Interviews

In order to formulate this advice, the NCEA has composed a working group of experts. The group consists of experts in mining, metallurgy, social aspects of the mining industry, mining economics and environmental aspects of mining. A professional chairman chairs and a technical secretary coordinates and assists the working group. The composition of the working group is given in Appendix 2. The working group visited Katanga from 16-23 August 2009, paid visits to various mining sites and old and new metallurgical complexes. It held a number of interviews with representatives of various types of stakeholders, among which MONUC (United Nations Organisation Mission in the Democratic Republic of the Congo), mining companies, NGOs (Non Governmental Organisation), mining service delivery companies, the University of Lubumbashi and the chamber of commerce and industry/syndicate.

During the site visit, a number of locations in Katanga could not be visited. In addition, the NCEA regrets not having had interviews with decision makers such as the Minister of Mining and Environment and with the CEO of the Gécamines. Hence, the NCEA will not express itself on certain issues on which it does not feel confident. The NCEA will indicate in this advisory report where it refrains from making statements.

2.3 This Report: Information, Analyses and Advice

In chapter 3 the NCEA recommends priorities for the PCIA study. In chapter 4, the NCEA substantiates its advice on subjects the PCIA should study and works out the details of its advice. Each paragraph in chapter 4 starts with a context analysis, in which the NCEA first presents its general conclusions on the subject, which are subsequently substantiated with literature findings² and its own observations from interviews and visits in Katanga. With this context analysis in mind, the NCEA then provides recommendations for further study in the PCIA.

The digital version of this advice³ includes a literature database including all documents referenced in this advice.

¹ <http://www.seataskteam.net/guidance.php>

² Which do not necessarily represent the opinion of the NCEA

³ see <http://www.eia.nl>

3. THE NCEA-RECOMMENDED PRIORITIES FOR PCIA STUDY

Priority 1: Governance of Mining Sector⁴ (Scope: whole of RDC)

1. **Actual governance of the mining sector:** Study actual government behaviour in governing the mining sector as compared to governance as required by mining code and regulations and to international best practices.
2. **Investment climate:** Study investment climate for, employment figures of and government income from the mining sector etc. if the mining code and other applicable legislation would be enforced as compared to the actual situation under current governance practice. Draw conclusions regarding necessary fundamental changes and make recommendations thereon.
3. **Transparency of governance:** Study what the government of RDC would need to regulate in order to achieve transparency of decision-making in addition to actual regulation to comply with EITI (Extractive Industry Transparency Initiative)⁵ ambitions.
4. **Environment:**
 - a. Investigate if there is, indeed, a controversy over competence/authority concerning environmental issues between the Ministry in charge of environment and the Mining ministry.
 - b. Study what institutional development is needed to enhance the recommended governance model for the mining sector in order to realise environmental compliance and how this development can be financed.
 - c. Governing the environmental heritage: complete the SNC (Société en Nom Collectif) Lavalin⁶ study on the environmental heritage of past mining operations and do a literature study of their (potential) health impacts. Estimate monetary costs per year in terms of loss of lives and/or productivity as a result of mining operations heritage. Make an inventory of approaches to arrest dispersion of pollutants from the heritage and propose an approach per polluted site, guesstimating the costs and benefits.
 - d. Do a full environmental, health and safety audit of all operations of 'Gécamines' (Générale des Carrières et des Mines)⁷ and other operations. Realise a categorisation of the operations according to environmental, health and social performance and where needed set up a plan to reach compliance. In cases of severe and unacceptable infringements, recommend to shut down the operations.

⁴ see 4.1

⁵ Extractive Industry Transparency Initiative (see <http://eiti.org/>)

⁶ SNC-Lavalin International 2004, see 4.3.1.

⁷ see appendix 5

Priority 2: Prospects and Alternatives for the Artisanal Mining Sector⁸ (cope: Katanga)

5. **Artisanal mining:** Explore existing studies on the options for craft mining. Study and formulate recommendations on alternative sources of employment in Katanga.

Priority 3: Structure of the Mining Sector⁹ (Scope: whole of RDC):

6. **Structure of Gécamines:** The Gécamines in its actual composition - a set of activities and responsibilities-, is an outcome of a long-lasting process of adding on and splitting of activities and assets. This might mean that the present shape of the company is not necessarily an optimal one. The NCEA recommends the PCIA to study the structure of the mining sector and more specifically the Gécamines and, if the study results suggest that alternative structures with a better separation of interests provide better chances for Gécamines, work out substantiated (motivated) recommendations as to alternative structures.
7. **Selection of potential Concession Holders:** Critically study the process of selection of concession holders and the financial, social and environmental screening criteria actually used. Make recommendations on improvement of the selection process and outcomes.

The priorities the NCEA recommends above are elaborated in chapter 4.

⁸ see 4.2.3. and 4.4.2

⁹ see 4.2

4. ISSUES FOR IN-DEPTH STUDY

4.1 Governance of the Mining Sector

4.1.1 Legislation (Mining Code and Regulation)¹⁰

Context Analysis

Although not perfect in all its aspects¹¹, the NCEA considers the Mining Code and the Mining Regulation to provide in principle a solid base for regulation of the mining sector and a stimulus for investments. However, the NCEA observes that overall compliance with the Code and Regulation is weak and that government practice seems to have deviated from at least some of the basic principles underlying these legal texts. The NCEA concludes that the resulting situation of legal insecurity for investors discourages investments.

These observations are based on multiple sources in literature that describe limitations in the implementation of the mining code:

1. Reports produced by the Commission for the Re-visitation of Mining Contracts emphasise on the following issues:
 - a. Conclusions of the commission: None of the contracts revisited (n=61) could be maintained as such; 64 per cent of them had to be renegotiated; 36 per cent should be terminated.
 - b. Feasibility studies are often delivered beyond delays.
 - c. Less than one project over two that are implemented in partnership with Gécamines has led to visible social realisations (creation of jobs non included).

They also mention that the commission was insufficiently documented and noticed withholding of information from the part of some public servants and their partners.

[Ministère des Mines, RDC, Commission de ré-visitation des contrats miniers, novembre 2007 : "Rapport des travaux" #2: Partenariats conclus par la Gécamines", p 1- 246]

2. Other gaps are mentioned by international agencies:
 - a. In 2007 only six of the 237 mining companies present in the DRC published their mining production data [IMF (International Monetary Fund), 2007].
 - b. There is a serious problem with what is called the Tax Gap (see Appendix 3): "*The Mining Code of 2002 is consistent with international best practice and the fiscal regime is internationally competitive*". However, "*fraudulent practices by companies and*

¹⁰ for an introduction to the mining code, see Appendix 6

¹¹ e.g. the mining code is not clear on where exactly craft miners are allowed to collect minerals and where they are forbidden to do so.

government agencies have created a gap of US\$ 35 million of what should be paid versus what is actually recorded as having been received in terms of royalties and surface rents alone. The gap is larger if total mining taxes are considered: about \$200 million per year should be generated by the sector; the Government claims to have received sector taxes in 2005 of \$27 million” [IPIS, World Bank and DR Congo , Mining Session, Paris November 30, 2007. Custers, R (Notes: Raf Custers, researcher with International Peace Information Service)]

3. Several independent entities also point to the disrespect of the mining code:
 - a. ”Because Gécamines (GCM) cannot buy minerals directly from the (artisanal) miners, it deals with traders. The traders work at mining sites that have been assigned to them by GCM. To dig for the minerals they engage artisanal workers who can only sell their products within the limits of the mining site that is owned by GCM. They cannot leave for other markets to try to seek a better price. Consequently, all products that leave the site before having been sold to a trader are illegal” . [S Spittaels & F Hilgert, 2008: Mapping Conflict Motives: Katanga Update: May- September 2008, IPIS Report; p 8-9]
 - b. In a speech, the technical advisor for the BIT notes that improvement of working conditions in craft and industrial mines is a priority in Katanga; disrespect of hygiene, health and security at work are infractions to the mining code (art. 14) and of the Labour Code (art. 59); he recalls that foreign investors come from countries that are member of the International Labour Organisation where legislation is strict regarding such issues. [G Bokundu et al., 2008 : « Rapport de la table ronde : Journées minières du Katanga, musée de Lubumbashi, 30-31 mai 2008 », p 1- 26 ; p 15-16, NCEA translation]

4. At a higher level, the responsibility in the failure of the reform process is shared by the big international finance institutions:
 - a. Mazalto suggests that legal texts are ill adapted: priority was given to aligning them with the mining codes of other African countries rich in mineral resources, without taking Congolese specificities into consideration: *“Cette stratégie, qui mise sur l’implantation rapide d’un Etat de droit, semble ignorer la part grandissante occupée par le secteur « artisanal » informel, ou encore la faiblesse des moyens et l’absence de l’Etat dans de nombreuses zones minières. Ces données de contexte étaient-elles inconnues, ont-elles été minimisées ou tout bonnement ignorées par les concepteurs du Code et des nouvelles institutions minières ? ”*
 - b. Mazalto suggests that the important role played by the Worldbank (WB) in elaborating the agenda, the orientations and the content of the new legal and institutional frameworks did not encourage a genuine appropriation of their content and objectives by the Congolese political elites. Furthermore, the methods of adoption of the mining law reveal a process that was largely framed, i.e. controlled by the presidency and foreign actors: according to a Congolese member of parliament’s evi-

dences “(...) le texte de loi, dans sa version définitive, aurait été soumis au Parlement pour adoption sans examen préalable de son contenu. Plus encore, alors que ces parlementaires proposaient certains amendements destinés à protéger les acteurs congolais œuvrant dans le secteur, des ‘instances supérieures’ contactent le président de l’Assemblée par téléphone, lui demandant une suspension de séance”.

[M Mazalto, 2009: "De la réforme du secteur minier à celle de l'Etat" in T Trefon (sous la direction de): "Réforme au Congo (RDC): Attentes et désillusions", Cahiers Africains n°76, Musée Royal de l'Afrique Centrale, Tervuren & L'Harmattan, Paris, p 171-190 ; p 176]

5. Despite the fact that a high majority of foreign mining companies do not even produce EIA nor EMP studies, counter examples do exist. Some companies go further than what the code expects (see Appendix 4, produced by a member of the team that prepared the EIA for the Tenke Fungurume mine).

Interviews and site visits by the NCEA confirm the above observations from literature:

- compliance with this legal and regulatory framework is weak over the whole range, but specifically on the subjects of
 - the granting of concessions, permits and authorisations,
 - enforcement of environmental regulations and standards,
 - enforcement of rules and regulations relating to (financial reservations for) mine closing,
 - revenue management;
- that decisions taken after enactment of the legal and regulatory framework have compromised the funding base of the Mining Cadastre (CAMI), undermining proper enforcement of the code and the regulation with regard to concession, permit and authorisation granting;
- that the (for compliance) necessary direct and formal link between government and mining companies is non-existent;
- that the way that government manages the sector has evolved since enactment of the code and the regulation (contract revisions, limitation of export of non-treated ores) and that the code and the regulation are no longer fully in line with the current government management practices in the sector;
- the non-enforcement of the legal and regulatory framework and newly evolved management practice, that still awaits to be formalised in policy documents, prove to be not conducive for highgrade investors despite the extreme resource richness of the country.

In some more detail the NCEA observes with regard to enforcement of the Mining code and the regulations that:

1. Most of foreign mining companies in Katanga do not produce EIA nor Environmental Management Plan (EMP) studies. When such studies are produced, they come when the approval has already been given and they often consist of mere ‘copy and paste’ versions of older projects.
2. EIA studies and EMPs are supposed to be accessible (in the ministry of mines) to the public, but in fact, they are not available.

3. There is a huge gap in terms of collection of mining taxes.
4. Private companies do not pay the caution (guarantee), so the state has absolutely no means of pressure on them if they do not respect their engagements (restitution of the site in good conditions) or in case human or environmental damages have to be repaired due to their presence: as such, some companies simply close the door and disappear without any warning.
5. Even Gécamines does not respect basic safety standards as it sub contracts companies that do not respect these rules: e.g. employment of craft diggers within concessions (while only digging in the embankments is authorised by the Code).
6. There is no collaboration between the Ministry of Mines and the Ministry of Environment, each one claiming the prerogative is theirs: Ministry of mines delivers permits within protected areas, where exploration is prohibited, for instance.

For an overview of interviews held by the NCEA, see Appendix 12.

Recommendations for the PCIA

The NCEA recommends the PCIA to study in detail the actual government practices on mining resource use and mining revenue distribution, study the consequences of these practices for the feasibility of private sector investments in the mining sector, presented in a best case, middle and worst case scenarios with regard to electricity prices, infrastructure development, presence and location of smelters and direct and indirect costs of non-legal taxation.

Based on results of this study, the PCIA could then provide clues as to the 'bien fondé' of actual government practices and provide recommendations with regard to the relevance of establishing the actual practices in a formal policy document. Also, if a new policy document proves relevant, the PCIA could express itself with regard to the need of reviewing the Code and the Regulation.

Moreover, the NCEA recommends the PCIA to study the content of social plans/negotiations with local stakeholders: check how far social plans that foreign companies do intend, or promise, to implement are pertinent in terms of mitigation measures, sustainable development or improvement of Project Affected Persons (PAP's) well being and in line with the legal and regulatory framework.

In addition to the previously mentioned studies, the NCEA advises that the PCIA analyses (in line with the foreseen adherence of the RDC to the EITI initiative), what (more than already regulated) would be needed in terms of measures and tools to enhance transparency of governance in the sector and in terms of legal and institutional optimisation measures and instruments, to secure compliance with the legal and regulatory framework. Specific subjects for this study are:

- concession permits and authorisations granting;
- enforcement of the fee structure;

- enforcement of the financial reservation for abandonment and post abandonment;
- enforcement of environmental requirements and standards;
- conditions for export of non-processed ores and products (decisions are now in the hands of the mining minister);
- revenue management and distribution;
- roles and functions of civil organisations amongst which unions.

The NCEA recommends to review the existing Guide for Mining Investors to assess whether it needs an update. This review could be done on the basis of the guides of Canada or Brazil.

4.1.2 Distribution of Powers

For an overview of the distribution of powers in the mining sector, see appendix 8.

4.1.2.1. Management of Concessions and Permits

Context Analysis

An effective mine registration and cadastre is strongly dependent upon a prime quality cartographic infrastructure based on a undisputable triangulation network. According to the World Bank observations, published in Mineral Rights Cadastre, 2009, the geodetic network in the recent past was not ready to allow for the use of GPS and the accuracy of available topographic maps still today does not allow for representative license boundaries and forms a potential danger for lease hold conflicts. Today however, the DRC's mineral rights are managed by a modern and efficient institution, well organised, with trained and capable staff and CAMI (Cadastre Minier) is a reasonably well-equipped computerised cadastre with a guarantee for transparency and accuracy. First steps are taken with the revision of the geodetic network in Katanga. [Worldbank, Extractive Industries for Development Series #4 June 2009; EO Girones, A Pugachevsky, G Walser "Mineral Rights Cadastre, Promoting Transparent Access to Mineral Resources; Washington, p 1-100]

Clear and transparent procedures for granting licenses, and an efficient Mining Registration Cadastre are prerequisite for the security of tenure for mineral rights. According to World Bank observations DRC has a comparatively low institutional capacity and civil service tradition in managing the mining sector, and there is a strong dependency on foreign financial support. Nevertheless, at the technical level, this dependency is less significant, at least for the mining sector, because of the accumulated experience in exploration and exploitation activities.

From interviews during its mission, the NCEA further observed that the capacity of the CAMI to cope with the number of applications is restricted both in terms of budget and human resources. Until recently, CAMI was economically sustainable, due to collection of mineral rights management fees. The government decided in 2008 to change this situation and the fees are now transferred to the central treasury, making CAMI vulnerable for political fluctuations.

Recommendations for the PCIA

Based on the above, the NCEA recommends that the PCIA should study the practices with regard to management of concessions and permits before and after the 2008 decision on CAMI funding.

4.1.2.2. Environmental Governance in the Mining Sector

Context Analysis

The NCEA concludes that the Ministry of Mining is neither monitoring nor enforcing the mining code with regard to its environmental paragraphs. In practice there is no environmental governance in the mining sector in Katanga. The staff of the Ministry of Environment, observing absence of environmental governance, regrets its present lack of competence in the mining sector and hopes to be attributed competence by the Environmental Framework Law, which has been submitted to the DRC parliament for approval.

The NCEA bases its conclusions on interviews and literature sources which paint the following picture on competence for environmental compliance monitoring and enforcement:

1. It is clear that, at all levels of the mining hierarchy, environmental policies are still only being partially applied. Several factors explain why this is the case. Firstly, the State's central and provincial services are functioning without adequate means to ensure that operations actually perform to the expected standards. Lacking adequate transport, expertise, equipment and supplies, the directorate is unable to enforce the environmental standards contained in the law [Secrétaire Général des Mines, 2005]¹².
2. In the mining regions, state bureaucrats, who are typically poorly or irregularly paid, tend to be complacent towards investors, while corruption is reported to continue to dominate the institutional landscape. [Global Witness, juillet 2006. Rapport : « Une corruption profonde : Fraude, abus et exploitation dans les mines de cuivre et de cobalt du Katanga », Washington, p 1-55]

1 and 2 cited by M. Mazalto in: [Environmental Liability in the Mining Sector : Prospects for Sustainable Development in the Democratic Republic of the Congo. (19/01/2010 – GRAMA)]¹³ chapter, written by Marie Mazalto in a book of JP Richards, University of Alberta : Mining, Society and a sustainable World. 2009; p 1-506]

3. The Mining Code, adopted in 2002, has not yet been widely disseminated and is still inconsistently applied. Reportedly, many companies operating in the DRC are not aware of the new code and its requirements, and there are insufficient copies of the code available to ensure that all affected communities and interested parties are informed about their rights under the code. In particular, concerns have been raised that artisanal miners are not well-informed about changes in the Mining Code and accompanying regulations pertaining to the regulation of small-scale mining. Accord-

¹² www.miningcongo.cd).

¹³ http://www.ieim.uqam.ca/spip.php?page=article-grama&id_article=5457

ing to civil society sources in Kolwezi, copies of the Mining Code were available from the Mining Service for \$50 each, before the limited supply ran out. At the time of the BIC/ED (Bank Information Centre's Executive Director) visit, the provincial office of the Ministry of Mines in Lubumbashi did not have any copies of the Mining Code available. [Bank Information Centre, DRC trip report 2006, p 1-197]

Findings from interviews by the NCEA further substantiate the above observations:

1. The Mining Code attributes the power to provide the various forms of mining licenses to the ministry of mining. Provision of these licences is not subject to presentation of an environmental certificate or licence. However, the minister of mining can not provide a mining license without an approved Environmental Impact Statement (EIS) including an Environmental Management Plan (PGEP) or Mitigation and Rehabilitation Plan (PAR).
2. The Mining Code attributes the power to instruct approve and enforce PARs, EIEs and PGEPs to the Mining Ministries' own Mining Environment Protection Service. The code imposes that this service works in coordination with other State Agencies, but expressly denies other state agencies the power to enforce the Mining Code.
3. Decree 038/2003 sets out detailed guidelines for EIA, PGEP and PAR, including effluent standards and guidelines for financial security for closure. [Réglement minier 2003 No-038-2003. p1-179]
4. The Mining Ministry's Environmental Service institutional capacity is far from being adequate to correctly administer and enforce the environmental governance dispositions of the mining code.
5. Consequently, the effectiveness of environmental governance instruments like EIEs, PARs, PGEPs and the like are in practice dependent of the intentions of the mining and metallurgical operators.
6. The Ministry of Environment deplores the lack of enforcement of the Mining Code and its own lack of competence on enforcement of environmental governance in the mining sector. The Ministry of Environment expects to remedy this lack of competence by the enactment of the environmental framework law, which is soon expected.
7. The level of professionalism of the Ministry of Environment agencies trusted with environmental compliance and environmental law enforcement needs to be proven.

Suggested Study for the PCIA

The NCEA does not expect that a new version of the Mining Code will be published any time in the near future, which means that the responsibility for environmental governance for the sector remains with the Ministry of Mines and Energy. Given the observed limited current practice and capacity for environmental governance in this Ministry, the NCEA recommends that the PCIA studies which institutional arrangements could eventually lead to effective environmental monitoring and enforcement, including looking into options to in the mean time delegate tasks on environmental governance such as quality review of EIAs PARs and PGEPs and tasks on monitoring and inspection to other ministries or private sector.

The NCEA further recommends that the PCIA assesses the Environmental Framework Law, its coherence with the Mining Code, its consequences for en-

vironmental governance in the mining sector in Katanga and the likeliness of its enactment. Based on the results of this assessment, the NCEA also advises that the PCIA evaluates which structural financial arrangements could eventually lead to effective environmental monitoring and enforcement.

4.1.2.3. Revenue Management

Context Analysis

Payment, collection and allocation of revenues from the mining sector seems to be qualitatively and quantitatively far from sufficient¹⁴ and is not at all transparent.

Recommendations for the PCIA

The NCEA recommends to make revenue management an important part of the PCIA. The experience and competence in this matter of Norway is well known¹⁵ and they could formulate a set of rules and give advice on an adequate governance structure.

4.1.3 Investment Climate

Context Analysis

Based on the literature sources and interviews mentioned below, the NCEA's general conclusion is that the investment climate in the RDC is very unfavourable. In order to create the right conditions for a healthy and profitable private sector, a precondition for economic development, the investment climate needs massive improvement, mainly on the government side.

In the opinion of the NCEA, improvement of governance is of the highest priority and without a serious effort in this regard there will be no, or only very limited economic growth or sustainable development. Without improvement of governance, illegal and undesirable activities and non social behaviour will flourish, making the situation even worse. That's why the NCEA recommends governance to be at the centre of the PCIA.

There is ample information publicly available that shapes the above picture of the "Entrepreneurial Conditions" in the DRC. The NCEA consulted respectively:

Doing Business 2010 (World Bank)

Economies are ranked on their ease of doing business, from 1 – 183, with first place being the best. A high ranking on the 'ease of doing business' index means that the regulatory environment is conducive to the operation of business. This index averages the country's percentile rankings on 10 topics, made up of a variety of indicators, giving equal weight to each topic. The

¹⁴ see paragraph 4.1.1.1

¹⁵ see the Norwegian Oil for Development program:

<http://www.norad.no/en/Thematic+areas/Energy/Oil+for+Development/Oil+for+Development.127154.cms>

ranking stems from the Doing Business 2010 report, covering the period June 2008 through May 2009.

The DRC is rated 182 out of 183 countries.

[World Bank, Doing Business 2010, Reforming through difficult times (p 1-231); Overview. p 1-9]¹⁶

Africa Competitiveness Report (World Economic Forum)

In the Africa Competitiveness Report of The World Economic Forum, the RDC is not ranked. The report gives a Country Investment Climate Profile 2009 of the DR Congo, presenting the 10 most serious constraints perceived by entrepreneurs. In 8 out of 10 constraints, RDC scores (much) worse than the African average. [Online publication: World Economic Forum, The Africa Competitiveness Report 2009; 2009 World Economic Forum, the World Bank and the African Development Bank, p 1-162]

Corruption Perception Index (Transparency international)

The Corruption Perception Index shows a country's ranking on how that country compares to other countries included in the index. The CPI score indicates the perceived level of public-sector corruption.

DRC is rated on the 162th place out of 180.

[More information on the Corruption Perception Index¹⁷ is available in a country report and regional report for southern Africa.]

The Human Development Report 2009 (UNDP)

Each year since 1990 the Human Development Report publishes the human development index (HDI) which looks beyond GDP to a broader definition of well-being. The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and gross enrolment in education) and having a decent standard of living (measured by purchasing power parity, PPP, income). The index provides a broadened prism for viewing human progress and the complex relationship between income and well-being.

The DRC is situated on the 176th position out of 182 in the Human Development Index. The Country Fact Sheets (of the Human Development Report) give more detailed information on the DRCs' rating. [Human Development Report 2009, Overcoming Barriers: Human Mobility and Development (p1-229), published for the United Nations Development Programme]

¹⁶ <http://www.doingbusiness.org/Reports/Doing-Business/Doing-Business-2010>

¹⁷ http://www.transparency.org/policy_research/surveys_indices/cpi/2009

The Economic Freedom Map 2007 (The Fraser Institute)

This report of the Canadian Fraser Institute comprises a rating of the Economic Freedom in 141 countries based on 2005 data; RDC is on position 138. should the economic climate in DRC be favourable, RDC would jump to position 2 mainly because of the richness of its mineral reserves¹⁸. [The Economic Freedom Map 2007 (The Fraser Institute)]¹⁹

In addition to the above, the NCEA recorded the following issues concerning the investment climate during meetings with private sector company representatives (a full list of interviews can be found in appendix 12):

- There is not a good relationship between the national and regional authorities and the private sector. Government's perception seems to be that the private sector should serve the government and its servants. Government officials do not seem to see the importance of this sector for the economic development and they do not seem to support economic development through private initiative in this sector. "Civil servants rather see private initiative as a potential possibility for personal benefit".
- Private sector companies indicate that they receive frequent visits of all kinds of (said) incapable officials from various public services with unclear and often illegal messages.
- Private sector observes unclear division of responsibilities and competences between a number of governmental services.
- Private sector companies claim that they cannot rely on the court system to be fair, impartial and uncorrupted.
- Private sector companies cannot rely on the licences, permissions, conditions, agreements etc. covenanted with the government. They state that the government itself does regularly offend such legal documents.
- Companies claim to suffer from unreliable and expensive power supply (in comparison with, for instance, Zambia).
- The financial infrastructure is insufficiently developed.
- There is poor and sometimes non existing physical infrastructure.
- There is an insufficient and inadequate educational system.

Recommendations for the PCIA

For the reasons outlined in the previous paragraph, the NCEA recommends governance to be at the centre of the PCIA. Given the large quantity of available information that the NCEA considers credible, the NCEA recommends the PCIA to concentrate on remedies for the flaws and not so much on the analysis of the flaws of the investment climate.

Besides this search for remedies the NCEA recommends the PCIA to study as other determining factors for the investment climate:

¹⁸ personal communication Mr M Bouchard

¹⁹ <http://www.fraserinstitute.org/>

Infrastructure

1. Electric power:
 - a. evaluate the future demand in Katanga,
 - b. evaluate the future production capacity (in relation to Inga, transport and substations),
 - c. evaluate tariff security and delivery collateral.
2. Roads and rails:
 - a. evaluate road construction and maintenance,
 - b. evaluate vulnerability of rail haulage to Zambia, Dar es Salaam, Durban and Lobito.
3. Smelter and processing capacity:
 - a. assess the total installed smelter and processing capacity and its availability within Katanga.

4.2 Structure of the Mining Sector

4.2.1 Role of Gécamines, Partnerships

Context Analysis

The Gécamines in its actual composition (a set of activities and responsibilities) is an outcome of a long-lasting process of adding on and splitting of activities and assets:

- The Gécamines owns and exploits assets like mining concessions and metallurgical plants;
- The Gécamines also participates in quite a number of other private concession holders.

The present composition or shape of Gécamines might not necessarily be an optimal one.

Recommendations for the PCIA

The NCEA recommends to have this issue analysed in the PCIA process.

More specifically, the NCEA suggests the following subjects for study:

- Quality of Gécamines' concessions and its production assets, status of installations, logistical implications etc, etc.
- Quality of Gécamines' participations in other private concession holders.
- Pros and cons of Gécamines being a state owned company.
- Is the current combination of assets and participations and the fact that Gécamines is government-owned an optimal combination, and if this is not the case, what would be better options?

4.2.2 License to Operate

Context Analysis

The selection process of potential concession holders is not known and, thus, not transparent. In addition, the NCEA has found no indication that concession holders and their operators accept or implement international standards

of social and environmentally responsible entrepreneurship, such as required by the OECD Guidelines for Multinational Enterprises, the ILO Guidelines and others.

Recommendations for the PCIA

The PCIA should analyse this process. Additionally, the NCEA recommends to establish a list of criteria to assess potential concession holders. Keeping in mind the potential value of the deposits, there are strong arguments to set high performance standards for successful selection. For the benefit of the country and the people of RDC the potential concession holder should be a financially strong international company with an impeccable reputation for fraud, corruption, health and safety, environmental and social behaviour. The PCIA should study which (internationally required) quality standards potential concession holders would need to meet.

4.2.3 Artisanal Miners, Diggers

Context Analysis

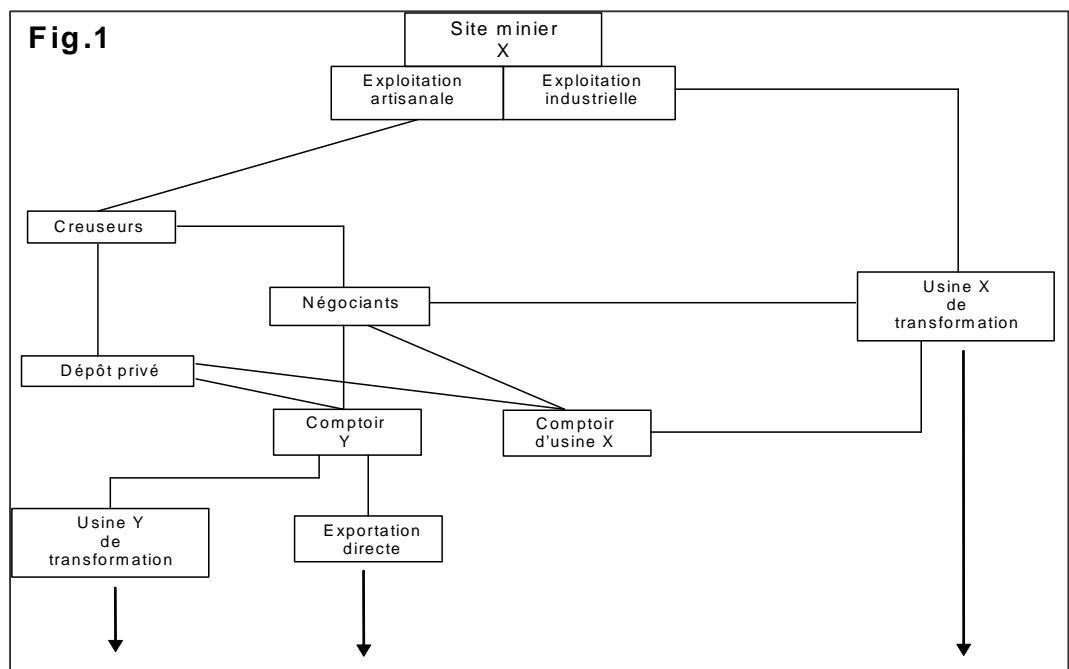
The NCEA concludes that working conditions in the informal, artisanal mining sector leave much to be desired. MIRECA (Mineral Resources in Central Africa (task force)) claims that craft mining is a disaster in terms of working and living conditions for the diggers: those are submitted to exploration, unacceptable working conditions as well as to all sorts of extortions from officials.

1. *" Au plan social, il y a un écart de revenus énorme entre la base et le sommet de la chaîne de production. Les creuseurs travaillent dans des conditions éprouvantes, insalubres et dangereuses. Leur équipement est rudimentaire et inadapté à l'activité extractive. L'étañonnement, la ventilation et l'éclairage des galeries est insuffisant. L'instabilité du sol très altéré dans lequel ces galeries sont creusées conduit à de nombreux éboulements, qui sont régulièrement à l'origine d'accidents mortels. Les ouvriers sont exposés aux poussières riches en métaux lourds lors de l'extraction et du tamisage des minerais. Ils sont également exposés à la radioactivité, s'ils travaillent dans des zones minéralisées enrichies en uranium"* (TF MIRECA, 2008, p 6).
2. MIRECA also claims that, technically speaking, craft mining is poorly efficient and productive, and potentially detrimental to a profitable further large scale industrial exploitation of the sites:
"Au plan technique, l'exploitation artisanale est peu efficace et peu productive : les ressources sont mal identifiées, mal valorisées et les gisements écrémés par une activité qui prive tout exploitant ultérieur (désireux de travailler de manière professionnelle) de la partie superficielle, très enrichie en métaux et la plus rentable, du gisement ". [TF MIRECA, p 6].
3. In addition, MIRECA claims that the opacity surrounding the flows of income in the craft mining sector hides the fact that this activity, that contributes to illegal exporting of minerals, represents also a huge loss of earnings for the State :
"l y a un manque de transparence total dans le flux de revenus générés par cette activité minière artisanale et donc un important manque à gagner en termes de recettes fiscales au profit de l'État" [TF MIRECA, p 15]
4. MIRECA also demonstrates that while the craft mining sector is usually perceived as separated from the industrial sector, their respective activi-

ties in fact intermingle (see figure 1): part of the minerals dug by craft minors enter the formal channel; conversely, part of the minerals exploited by allegedly official enterprises are exported illegally; part of craft miners are former Gécamines workers; Gécamines itself subcontracts companies that hire craft miners. Finally, both sectors take advantage in the same way of the lax and corruption demonstrated by state agents. [MIRECA, p 8]

[Task Force "MIRECA" – Mineral Resources in Central Africa, Ministère belge des Affaires Étrangères; Bonne Gouvernance & Transparence dans le secteur minier, Traçabilité des flux de matières et des flux financiers dans le commerce des minerais de Cu et de Co en RDC Description synthétique du projet Avril 2008 p 1-111]

Fig. 1. Simplified representation of the ownership circuits of minerals from any site, artisanal or industrial; the complexity of the artisanal circuits is obvious, although it is only schematised [TF MIRECA, 2008:8], translated from French by the NCEA).



5. Steps have been taken by the government to control and integrate the craft mining sector: beyond the establishment of ‘unions’ or cooperatives²⁰, craft diggers and traders are recognised by the State as professionals and, as such, supposed to comply with different taxes and authorisations. Practically, they do not. The fact is that being in possession of all official documents does not exonerate their being bribed and harassed by guards in the mining sites and policemen on the road; in consequence, they prefer to pay only for bribes, thus aliment-

²⁰ see section: 4.4.2.

ing the corruption channel, at different steps in their work (see Appendix 9: Data collected in 2004-2005 in the village of Kawama, 15 km from Lubumbashi).

The NCEA further observed during its meetings in the area (see Appendix 12 for a full list of interviews) that:

- The craft mining sector is perceived as problematic by the majority of persons met by the team: main issues relate to work and living conditions, see to respect of elementary human rights²¹;
- The way it is implemented currently, craft mining is unproductive and little efficient;
- The craft mining sector exemplifies, though at a lower scale, the drifts noticed in the formal mining sector in terms of disrespect of rules, resort to bribes, tax evasion, illegal export of minerals, etc.

Recommendations for the PCIA

As far as the NCEA is aware, two initiatives study alternatives to craft mining as it currently happens:

- Task Force MIRECA : feasibility study on the possibilities of certification and traceability of mineral resources, with the objective to fighting against illegal exploitation and illegal export and favouring transparency in the mining sector [Task Force "MIRECA" – Mineral Resources in Central Africa, Ministère belge des Affaires Étrangères; Bonne Gouvernance & Transparence dans le secteur minier, Traçabilité des flux de matières et des flux financiers dans le commerce des minerais de Cu et de Co en RDC Description synthétique du projet Avril 2008 p 1-111] ;
- "BIT ACT MINES [(Amélioration des Conditions des Travailleurs dans les mines au Katanga)] : Improvement of worker's conditions in Katanga mines : reinforce the craft mining sector through relying on cooperatives issued from the base (Contact : M. Yerodé 099/930.60.71)]. Financed by Belgium and implemented by Group One and Belgian Technical Cooperation. ²²

The NCEA recommends the PCIA to evaluate these studies and take stock of their results.

Further dimensions of the wide issues linked to craft mining are amply discussed below (paragraph 4.3, 4.4). What resorts so far is that abuses in the craft mining sector are strongly influenced by corruption practices. In consequence, the NCEA suggests that the PCIA:

- focuses on the literature devoted to this issue at the level of the African continent, with special attention to measures adopted in the field of development;

²¹ see also section on employment under 4.4.1

²² <http://www.artisanalmining.org/userfiles/file/ilo.pdf>

- adapts such initiatives to the current context or ongoing initiatives²³ in the DRC;
- identifies agencies apt to fund and implement such measures in the field concomitantly with the more economically oriented initiatives.

4.3 Environment

4.3.1 Environmental Heritage

Context Analysis

The NCEA concludes that there is an enormous, yet not inventoried heritage of environmental impacts (amongst which impacts caused by deforestation and pollution) of past Katanga mining operations. There is enough information to suggest that pollution is dispersing over large areas, is ingested by humans and is potentially affecting their health. Yet, at the level of those entities legally entrusted to take action, the containment of these impacts does not seem to be urgently felt.

The NCEA comes to these conclusions on the basis of information from the following literature and interview sources:

1. In 2002 and 2003, SNC Lavalin's experts inspected 39 sites in the mining districts of Lubumbashi, Likasi and Kolwezi, and assessed environmental performance at 32 of these sites. The conclusions contained in a preliminary report are clear: the environmental situation at the sites visited, and in the region in general, is described as highly problematic²⁴. The authors of the report noted the striking absence of recent data that would permit detailed documentation of the extent of environmental consequences of mining activity in Katanga. Consequently, they indicated their inability to "distinguish which of the different forms of contamination are most problematic". [M Mazalto, Environmental Liability in the Mining Sector referring to SNC- Lavalin International (2004) Rapport Préliminaire, Étude sur la restauration des mines des cuivres et cobalt, République démocratique du Congo. Division Internationale, environnement. Banque mondiale, Montréal, 2004]
2. *High human exposure to cobalt and other metals in Katanga, a mining area of the Democratic Republic of Congo (2009)*. The human health impact of the historic and current mining and processing of non-ferrous metals in the African Copperbelt is not known. This study assessed the exposure to metals in the population of Katanga, in the south east of the Democratic Republic of Congo, using bio-monitoring²⁵. Conclu-

²³ One possible way would be to add to the staff of the cooperatives that have been created around each mining site (BIT-project), representatives of civil society (churches, health, education), targeting increased social pressure on the racketeers to change their behaviour into a socially more acceptable behaviour.

²⁴ "Of a total of 32 sites assessed, 13 (4%) are considered as presenting Priority 1 environmental problems (requiring immediate corrective measures), and 10 sites (31%) present moderate, Priority 2 problems (requiring corrective measures in the short term). Finally, 9 sites are considered as presenting few or no environmental problems and require few or no corrective measures (Priorities 3 and 4)". (SNC-Lavalin International, 2004, p IV)

²⁵ Seventeen metals (including Cd, Co, Cu, Pb, U) and non-metals (including As) were measured by ICP-MS in urine spot samples from 351 subjects (32% women), aged 2-74yr (mean 33yr). Forty subjects (controls) lived 400km

sions: This study reveals a substantial exposure to several metals, especially in children. The urinary Co concentrations found in this population are the highest ever reported for a general population. The pathways of exposure and health significance of these findings need to be further investigated. [Environ Res. 2009 Aug; Banza CL, Nawrot TS, Haufroid V, Decrée S, De Putter T, Smolders E, Kabyla BI, Luboya ON, Ilunga AN, Mutombo AM, Nemery B. High human exposure to cobalt and other metals in Katanga, a mining area of the Democratic Republic of Congo. *Unité de Toxicologie et Environnement, Ecole de Santé Publique, Université de Lubumbashi, Democratic Republic of Congo.* 109(6):745-52. Epub 2009 May 31]

3. World Rain Forest Movement (WRM). WRM Bulletin 133: "The Democratic Republic of the Congo (DRC) has the second largest tropical rainforest in the world, second only to the Amazon rainforest in Brazil. The country's forests have recently drawn international attention, not only due to the challenges posed by climate change, but also because of the struggle being waged by Congolese civil society in general, and the environmental movement in particular, to stop the government from lifting its current moratorium on new logging concessions. In the province of Katanga in south-eastern DRC, another type of forest predominates, known as the Miombo or Zambezian woodlands²⁶. There are numerous factors responsible for the gradual shrinking of the Miombo woodlands in Katanga, and one of the principal causes is mining. Mining activities inevitably require deforestation. Every day large tracts of forest and woodland are cleared to allow access to mineral deposits, as well as for the processing of the minerals, since the mining companies operating in Katanga use archaic techniques that do not respect the environment²⁷" [WRM Bulletin 133].

outside the mining area; 311 subjects lived in the mining area, either very close (<3 km) (n = 179; 6 communities) or moderately close (3-10 km) (n = 132; 4 communities) to mines or smelting plants. Results: For all metals (except Ni) urinary concentrations were significantly higher in subjects from the mining area than in control subjects. In subjects living very close to mines or smelting plants, the geometric means (25th-75th percentile) of urinary concentrations, expressed as µg/g creatinine, were 17.8 (10.9-29.0) for As, 0.75 (0.38-1.16) for Cd, 15.7 (5.27-43.2) for Co, 17.1 (8.44-43.2) for Cu, 3.17 (1.47-5.49) for Pb and 0.028 (0.013-0.065) for U, these values being significantly higher than those of subjects living 3-10 km from mines or industrial operations. Urinary Co concentrations were markedly elevated, exceeding 15 µg/g creatinine in 53% of the subjects, and even 87% of children (<14 yr), living very close to the mining areas. Urinary As was also high (79% above 10 µg/g creatinine in subjects living very close to the mining areas). Compared with background values from the US general population, subjects living very close to areas of mining or refining had 4-, 43-, 5- and 4-fold higher urinary concentrations of Cd, Co, Pb and U, respectively.

²⁶ The Miombo has been defined as "a mixed plant formation with a thin layer of grass species beneath a population of trees between 15 to 20 metres in height; the canopies of the trees, often umbrella-shaped, touch or almost touch, but their foliage is not very dense, which means the area as a whole is well illuminated." (Aubréville, cited in Malaisse, F. (1997) *Se nourrir en forêt claire africaine: Approche écologique et nutritionnelle*, p. 21). The Miombo woodlands are rich in biodiversity, with regard to both animal and plant species. They are also vital to the people who live there. Their importance has become even more crucial after a decade of civil wars and ongoing economic crisis, which has left the majority of Miombo dwellers cut off from the formal economy. Under these conditions, it is the woodlands that provide them with food, medicine, building materials, and so on. Consequently, the destruction of the woodlands endangers the survival of these local populations.

²⁷ The WRM Bulletin 133 continues: "Even worse, for some time now mining operations have been spreading towards the province's so-called listed forests. According to the current legislation in the DRC, namely the Forest Code passed on 2 August 2002, listed or protected forests are state-owned assets. This heading covers national parks (strict nature reserves), game reserves, urban forests, botanical gardens and reforested areas controlled by the state or decentralised agencies (articles 12 and 13 of the Forest Code). In the province of Katanga there are two national parks and fifteen game reserves, of which five are in operation. One of these is the Basse Kando Reserve, an appendix to Upemba National Park in the district of Kolwezi. It was created by Decree N° 52/48 of 27 March 1957, which has been extended several times since then, including most recently by the Ministry of the Environment and Conservation of Nature, Waters and Forests in December 2006.

During its visit to Katanga, the NCEA further observed that:

- There is an as yet only partly mapped and quantified heritage of environmental impacts caused by all forms of mining and metallurgical processing that have taken place in the past in Katanga.
- The major constituent of this heritage is a multitude of locations where substantial surface areas have been withdrawn from their natural status and are now occupied, polluted and have become sources for dispersion of pollutants. These locations include:
 - a. tailing deposits,
 - b. slag and debris deposits,
 - c. metallurgical industrial area,
 - d. non dismantled yet abandoned metallurgical installations,
 - e. abandoned yet not rehabilitated pits.
- Dispersion of the pollutants from these sites is ongoing, mainly by leakage and infiltration, surface drainage, erosion (wind and water) and sedimentation. The magnitude of the dispersion of pollutants that has taken place is qualitatively and quantitatively unknown.
- There is proof (see observations from literature above) that contact with the (dispersed) pollutants affects human health and aquatic and terrestrial life.
- Gécamines, as monopolist of mining and metallurgical operations in Katanga up to the seventies of the past century, is to be considered owner on the majority of this heritage.
- Only in civil society organisations the NCEA observed a serious sense of urgency and real commitment to rehabilitation of the sites and to putting an end to the dispersion of pollutants from the sites.

For an overview of interviews conducted during the visit, see appendix 12.

Recommendations for the PCIA

Departing from the SNC Lavalin study information, the NCEA recommends to complete the inventory and classification of the potentially pollutes sites, dam conditions, the character and degree of the pollution and the risks of dispersion of pollutants (per site), to make an inventory of the techniques available for containment of the pollution identified (focusing on techniques that eliminate further dispersion of pollutants and prioritising approaches that are self-funding) and to propose an approach per site and guesstimate costs and benefits per site. Moreover, the NCEA recommends to do a further literature survey on health impacts and to quantify and qualify the impacts of the mining sector on vegetation and wildlife.

As some of the pollution problems require immediate action, the NCEA recommends that a quick assessment is made within the context of the PCIA to see whether mining waste would qualify as raw material and could be classi-

Ironically, it was around this same time that the competent government agencies began to grant mining concessions for the same area. As a result, companies like the Bazano Group, Tenke Fungurume Mining, Semex, SOMIKA and Phelps Dodge moved in and proceeded to take samples, conduct drilling, clear forests, and essentially destroy the reserve. As a result of these operations, the elephants that once comprised a major part of the local fauna have migrated to Zambia.” <http://wrmbulletin.wordpress.com/2008/08/25/democratic-republic-of-the-congo-deforestation-of-protected-areas-for-mining-operations-in-the-province-of-katanga-the-case-of-the-basse-kando-reserve/>

fied (according to mineral associations, grade, layered composition, extractability) for further mineral extraction and safe disposal of waste products. In case the mining waste does not present any value, the PCIA should study and develop feasible plans how to eliminate the threat related to waste deposits.

With respect to vegetation and wildlife: not only past mining operations but also present and targeted mining operations seriously threaten vegetation cover and wildlife. The NCEA advises that the PCIA identifies ways to improve the protection of declared (gazetted) conservation areas as well as new conservation areas and compensation measures for vegetation and wildlife loss.

4.3.2 Environmental Behaviour of Operating Enterprises

4.3.2.1. Gécamines

Context Analysis

While the NCEA did conduct an interview with Gécamines it should be noted that the NCEA's own observations regarding Gécamines environmental behaviour are very limited and only regard the production site Shituru. The NCEA observes that Shituru is a very old and poorly maintained metallurgic site in Likasi. With regard to safety, environment and quality, The NCEA considers working practices at the production site in Shituru to be far below standard. While the construction of new installations and new processes is underway, the NCEA observes that progress is slow and that it is difficult to secure sufficient financial means.

Recommendations for the PCIA

The NCEA recommends that a thorough and complete environmental, health and safety audit of all the operational sites of the Gécamines should be conducted. A plan should be made up (i) how to stop further pollution and (ii) to determine what to do with existing damage. This plan is recommended to include an inventory of the necessary investments to be made to make the company 'state of the art'.

In the mean time the NCEA recommends to study closure and decommissioning of existing old installations²⁸. The NCEA reiterates its advice to reconsider the structure of Gécamines to make this all possible²⁹.

4.3.2.2. Big Enterprises

Context Analysis

The NCEA concludes that the picture on actual environmental behaviour in Katanga is diverse, but that overall environmental compliance could be much

²⁸ see also 4.3.3

²⁹ See 4.2.1

better. The government has the legal tools in hand to guarantee compliance but does not use these tools in the sense that they effectuate compliance.

This conclusion is based on the following observations, made during interviews (see appendix 12 for an overview of interviews):

- The NCEA observed a sense of responsibility for the environmental performance of new mining and metallurgical operations, both at the level of some major mining and metallurgical companies and to a lesser extent of the Gécamines.
- Information provided to the mission by various interlocutors suggest that there are also companies operational that lack that sense of responsibility and that continue to increase the environmental burden on Katanga³⁰.
- The NCEA has the opinion that the Mining Code provides sufficient legal basis for selection of reliable and responsible partners/foreign investors. The Mining ministry does not use its legal competence to enforce this code.
- As a consequence, the effectiveness of environmental governance instruments like EIEs, PARs, PGEPs and the like are in practice dependent of the intentions of the mining and metallurgical operators.
- In its interviews, the received credible information that the fact that some international companies seem to behave responsibly is due to standards imposed by financiers.

Recommendations for the PCIA

The NCEA recommends that a thorough and complete environmental, health and safety audit of all the mining and metallurgical sites be done, those in production as well as those abandoned. This assessment could be the basis for a characterisation/categorisation /rating of the enterprises based on their environmental performance and for a pinpointing of responsibilities for observed pollution. As the NCEA is aware that this is an enormous task, it recommends to do a quick scan first, leading to a list of priorities for urgent intervention.

4.3.2.3. Small Enterprises, Diggers

Context Analysis

The NCEA concludes that the craft mining sector is extremely harmful in terms of damages to the environment and in terms of social and health impacts. This conclusion is substantiated by literature as well as interviews, as follows:

³⁰ CHEMAF, for instance, is said to still use old mineral transformation technologies that generate serious ecological and human damages: it is said to pour out its waste residues in basins that are neighbouring crowded residential areas (cité SNCC in Lubumbashi). Public health: a doctor has pointed out the prevalence amongst women of breast nodules that could well be a consequence of toxic products and of radioactivity that are disseminated by the mining industries in their environment (for instance, in the neighbourhood behind the “Cité SNCC”, near the cemetery).

1. "L'hétérogénéité extraite de manière artisanale est exportée par des sociétés de négoce, dont la majorité sont détenues et gérées par des étrangers, notamment des Indiens, des Chinois et des Libanais. Ces sociétés ont proliféré en 2004-2005, pressentant une opportunité de réaliser des bénéfices rapides dans un environnement non réglementé. Les plus visibles sont Chemaf, le groupe Bazano et la Somika, mais il y en a bien d'autres. A ces sociétés sont venus s'ajouter une quantité de commerçants individuels –dont beaucoup de Chinois- qui achètent et exportent (Zambie, Afrique du Sud, Tanzanie) l'hétérogénéité à titre privé. Outre les allégations de fraude, d'exportation illicite et d'exploitation des creuseurs artisanaux, ces sociétés refusent d'assumer la responsabilité environnementale et sociale des mines auprès desquelles elles s'approvisionnent". [Global Witness, juillet 2006. Rapport : « Une corruption profonde : Fraude, abus et exploitation dans les mines de cuivre et de cobalt du Katanga », Washington, p 1-55; p 17]
2. "Techniquement, l'artisanat désorganisé et chaotique est une contribution insatisfaisante à la production de métaux de base, qui doivent être produits de manière efficace et rationnelle, en forts tonnages. Économiquement, l'atomisation des acteurs et des flux de matières est également contre-productive. Les aspects environnementaux doivent également être pris en compte car, d'une part, les creuseurs lavent leurs produits dans les rivières et les polluent, d'autre part les fondeurs artisanaux rejettent des gaz qui peuvent être nocifs (pluies acides) et des poussières métalliques dans un environnement fortement peuplé. [Task Force "MIRECA" – Mineral Resources in Central Africa, Ministère belge des Affaires Étrangères; Bonne Gouvernance & Transparence dans le secteur minier, Traçabilité des flux de matières et des flux financiers dans le commerce des minerais de Cu et de Co en RDC Description synthétique du projet Avril 2008 , p 1-111]
3. "De nombreux habitants du camp de Tshamilemba, dans la commune de Kamalondo, à Lubumbashi, dans la province du Katanga, souffrent des maladies de peau et des infections respiratoires. La population de cette partie de la capitale du cuivre attribue ce phénomène aux activités de l'entreprise Chemaf dont l'usine est installée non loin de cette cité" [Radio Okapi, Jeudi, 29 Septembre 2008]³¹.
4. "Les résultats de l'étude démontrent qu'il y a effectivement contamination du bassin de la Lufira supérieure par les métaux lourds. La source principale de pollution identifiée dans ce bassin est le complexe hydro métallurgique de Shituru/Gécamines et la zone d'influence de ses effluents s'étend jusque dans le lac Tshangalele. L'analyse de la composition des effluents indique un excès de cuivre et de cobalt. Les valeurs obtenues dans cette étude dépassent les seuils fixés par le code minier de la RD

³¹ <http://radiookapi.net/sans-categorie/2008/09/29/lubumbashi-lentreprise-chemaf-pollue-tshamilemba/>

Congo et toutes les normes internationales. Ces polluants solubles et toxiques détruisent les biotopes aquatiques en aval sur des distances importantes (parfois plus de 200 km). Ils sont métabolisés par l'ensemble de la chaîne trophique alimentaire et de ce fait, ils menacent tout l'environnement aquatique et présentent des risques pour la santé des populations riveraines" [J-P Vande Weghe, J Franssen, G Kalambay, JD Kramkimmel et DMusibono, 2005. Etude "Profil environnemental (PEP) de la République Démocratique du Congo"; Délégation de la commission Européenne. EURATA, p228] ; [Asadho/Katanga : Communiqué de presse 13/2005 : « L'Attaché de presse du Gouverneur de la province appelle la population du Katanga à la haine tribale contre l'Asadho/Katanga et ses responsables », 7 juillet 2005] ; [Asadho/Katanga : Communiqué de presse 15/2005 : "Insécurité de certains membres de la société civile œuvrant dans le secteur minier", 28 septembre 2005].

During interviews the NCEA further observed that:

- Small enterprises are numerous and less visible, and thus more prone to illegal practices.
- The craft sector is extremely harmful in terms of damages made to the environment. Due to the methods they use, they bring high quantities of metals in the rivers. The same applies to craft 'fondeurs' who reject harmful gazes and metallic dusts in highly populated areas.
- Artisanal diggers use to stock radioactive minerals in their courtyards, even inside their habitations. This creates a human health issue.
- Members of civil society who advocate for the environment or against abuses of the human rights, take risks in Katanga, particularly as soon as their critics call government officials into question.

Recommendations for the PCIA

The NCEA recommends:

- Using available studies, to complete the findings (inventories, exhaustive identification of impacts), using lake Tshangalele as a case study, emblematic of side effects of mining waste (from both industrial and craft activities) on downstream populations and their environment living; : this site is further located within a protected area.
- Exploit results from studies scheduled by PRODEPAAK in the field of sustainable exploitation of water resources: popularisation of responsible fishing practices; diminishing negative impacts of mining activities. [Ministère de l'Agriculture, de la Pêche et de l'Elevage en RDC & Ministère de la Coopération au Développement, Belgique (CTB RD Congo), octobre 2009 : Projet de Développement de la Pêche Artisanale et de l'Aquaculture au Katanga « Etude socio-économique et environnementale du lac Tshangalele p 1-37 ; p 37 bibliography]³²

³² <http://bch-cbd.naturalsciences.be/congo/dr/cdr-fra/biodiversity/infzonepeche.doc>

4.3.3 **Obligations for Mine Closure**

Context Analysis

Until recently, mine decommissioning and closure activities were not obligatory in most countries. “Many decades and even centuries of inadequate and non-existent mine closure practice, have left a huge legacy of derelict mine sites and often impoverished communities”³³. Katanga also has such a legacy³⁴. However, reclamation, where possible as a concurrent integrated part of the extraction, subsequent mine closure, site abandonment and decommissioning are nowadays recognised as responsibility of the mining industry and host government.

DRCs mining code holds provisions for Mine closure and decommissioning but enforcement of these provisions is weak³⁵. Guidelines, however, for sustainable development in mining are widely accepted and defined in international context. Moreover, the Democratic Republic of Congo is in the process to join EITI³⁶ which will oblige the DRC to be transparent on financial issues around mine closure and decommissioning.

Recommendations for the PCIA

Assess whether the Mining Code and associated legal texts provide sufficient legal basis for enforcing mine closure and decommissioning at a standard comparable to other mining countries. Assess whether the Mining Ministry has sufficient and quality guidance documents and toolkits for mine closure and decommissioning.

In case the recommended assessment concludes that, in the DRC, there is insufficient legal basis an/or guidance on mine closure and mine decommissioning, the NCEA recommends the PCIA to propose development of a two step Strategic Framework for Mine Closure and Decommissioning. For suggested contents of such a strategy, see appendix 10.

4.4 Social:

4.4.1 **Employment and unemployment in Katanga**

Context Analysis

The NCEA concludes that, in terms of employment, all the sectors are intermingled and interdependent and offer few job opportunities, at least in the present situation. Food production at large is acknowledged by a majority of the analyses as promising and as the first sustainable richness in Katanga, although huge improvements would first need to be realised to make this happen. This is substantiated through literature and interviews, as follows:

³³ Quote from website of Postmining Alliance (Cornwall, UK) <http://www.postmining.org/index.php>

³⁴ See 4.1.3.

³⁵ see 4.1.1.

³⁶ Extractive Industry Transparency Initiative (see <http://eiti.org/>)

1. The problems of the mining sector: there has been a recent setback in mining activity with numerous social impacts:

“Prior to the eruption of the global financial crisis, the revival of industrial mining in the transition period between the end of the civil war and the elections of 2006 coincided with a remarkable expansion of artisanal mining. Benefiting from the formal reconfirmation of the artisanal mining sector by the regime of Laurent-Désiré Kabila, an estimated 250.000 people went to the mining areas to work as “creuseurs”. [J Cuvelier, IPIS 2009. Katanga Mining and econ.crisis.pdf. 1-24; p 11]

If there is consensus among scholars, government officials and development practitioners that artisanal and small scale (ASM) mining is a poverty-driven activity, what is often overlooked is that -at least in the case of sub-Saharan Africa- it is the World Bank mining sector reforms that have fuelled the expansion of illegal artisanal mining activity: “Many of the very people left unemployed by industry privatisation both in the large-scale mining industry and other important segments of economies have pursued employment in ASM” [SM Banchirigah, How have reforms fuelled the expansion of artisanal mining? Evidence from sub-Saharan Africa Institute for Development Policy and Management (IDPM), School of Environment and Development, The University of Manchester; Resources Policy, Volume 31, Issue 3, September 2006, p 165-171; p 167]

In Katanga, access to small-scale mining sites has become a crucial part of the provincial economy: “Today, some 20 per cent of these small-scale miners are former employees of Gécamines, laid off when the company was restructured” [M Mazalto, 2009: Chapter 5 “Governance, Human Rights and Mining in the Democratic Republic of the Congo”, in Bonnie Campbell Ed.: Mining in Africa, Regulation and Development, Pluto Press/IDRC.] But one also finds graduated people who are jobless and make do with this activity, for a daily gain that, in 2006, amounted to 3 US\$. [Global Witness, juillet 2006. Rapport : « Une corruption profonde : Fraude, abus et exploitation dans les mines de cuivre et de cobalt du Katanga », Washington, p 1-55; p 10]

Mining companies are perceived negatively by the population: “Après la chute de la Gécamines, l’on assiste actuellement à l’expansion du secteur minier et les nouvelles sociétés enregistrées (plus de 300) l’illustrent. Malheureusement pour la population, ces sociétés ne font rien que piller » ; Selon Monseigneur Gaston Ruvezi, « les richesses dont notre pays a été doté ne contribuent pas encore au bonheur de nos populations mais au contraire, elles sont source de tous leurs maux ». [G Bokundu et al, 2008 : « Rapport de la table ronde :Journées minières du Katanga, musée de Lubumbashi,30-31 mai 2008 », p 26, p 3-5]

The global employment crisis, worsened by the slowing down of mining activities has provoked :

1. the sudden closure of foreign companies:
“The Katangese government is very upset by the sudden departure, at the end of December 2008, of 40 Chinese companies that were previously running copper smelters in Katanga. According to the Katangese governor Moïse Katumbi, the provincial government sent the companies a letter, asking them to pay their remaining taxes and to give a severance pay to

their former staff.” [Financial Times, 20 February 2009 : «Chinese copper entrepreneurs flee DR Congo », cited by J Cuvelier, p 10].

2. series of social troubles:

In the beginning of February 2009, the employees of the Société Nationale des Chemins de Fer du Congo (SNCC), Congo’s national railway company, went on strike because they had not been paid for the past 30 months (J. Cuvelier, p 10).

“In the beginning of April 2009, Kolwezi witnessed several demonstrations by artisanal and industrial workers threatened with unemployment. First, on the 9th of April, a group of négociants demonstrated in front of the town hall to demand the payment of an outstanding debt of \$10 million by Gécamines”; then, “On the 10th of April, 40 employees of the company MCK (Mining Company Katanga), who had been sent into technical unemployment 6 months before, took to the streets to ask for their final payment (décompte final). Finally, on the 16th of April, artisanal miners and employees of the mining company Kaol-DCP jointly protested against the cancellation of the latter’s employment contracts as well as against the low level of the latter’s final payment (décompte final)” (J. Cuvelier, 2009, p 11)

3. a perceived increase in criminality:

“The economic crisis is also leading to higher levels of insecurity in Katanga’s major urban centers. In recent months, 11 people were killed in Lubumbashi, while 2 people were murdered in Likasi. It is believed that this may have something to do with the considerable influx of former artisanal miners who are massively leaving their working places out of discouragement over the declining copper and cobalt prices” [J. Cuvelier, 2009, p 11]

“As far as the artisanal mining sector is concerned, it is pointed out that, due to the sharp decline in mineral prices, large numbers of artisanal miners have left the mines. While some of them appear to have found a new source of income in agriculture, there are disturbing reports that others may have chosen to engage in criminal activities in order to stay afloat” [J. Cuvelier, p 3]

[J Cuvelier, July 2009: “The impact of the global financial crisis on mining in Katanga”, IPIS report, p 1-24]

4. Agriculture (and, by extension, food production) as possible response to the crisis issues and to sustainable development, requiring (i) financial support, (ii) tax and collateral withdrawals alleviation.

“Though not identified in 2006 by the president of the republic as a priority objective, agriculture and food security should be the motor of job creation, and infrastructures should benefit agricultural development in the first place”. Imported basic foods are in competition with local production, which is in deficit; [E Tollens, 2009: “Agriculture, sécurité alimentaire et développement économique: défis et enjeux », in T. Trefon : Réforme au Congo (RDC) : Attentes et désillusions, Cahiers Africains N° 76, MRAC, Tervuren et L’Harmattan, Paris; p 1-275] ; the latter is highly restrained by taxes and the diverse (official and unofficial) levying. [World Bank, 2005 : « Agricultural Sector Review », Report Nr. 30215-ZR, AFTS3]

« Les importations aident à stabiliser l’approvisionnement des villes » ; “En revanche, elles concurrencent fortement une production locale largement déficitaire pour des produits clé comme le riz, le sucre, l’huile végétale, la viande, le poisson, etc. Tous ces aliments pourraient facilement être produits dans le pays avec des techniques et des investissements appropriés à condition, toutefois, de reformer le système de taxes et de prélèvements divers auxquels est soumise la production nationale, tant de façon officielle que non officielle » [World Bank, 2005 : « Agricultural Sector Review », Report Nr. 30215-ZR, AFTS3]

“Development is conditioned by agriculture and food security: agriculture has the biggest multiplying effect (1\$ given generates 3\$)”. [E Tollens, Creac’s conference, Brussels, September 17th 2009]³⁷

“Restarting the agricultural sector was also one of the recommendations put forward by the participants in a recent conference on Katanga’s economic future” (15-18 April 2009), where government officials, experts from international organisations, members of NGOs and guests from Chile, Zambia and South Africa, gathered in Lubumbashi to think about alternatives to the mining industry. Apart from the need to kick-start Katangese agriculture, the conference’s recommendations list also included the need to strengthen the production capacity in the mines, to guarantee a consistent application of the new mining code, to rehabilitate a number of tourist sites, to involve the University of Lubumbashi in scientific research on the development of various sectors of the Katangese economy and to establish a development policy based on renewable natural resources”. [J Cuvelier, July 2009: “The impact of the global financial crisis on mining in Katanga”, IPIS report, p 1-24, p15]

Despite the fact agriculture definitely should be developed in Katanga, it appears that the province will stay dependent upon food importation from neighbouring countries. A researcher has identified the 28% of remaining lands, that is those for which no research or exploration permit has been delivered by the Ministry, and made a simulation over a 50 years period (2008 - 2058) under various scenarios: The results are that these remaining lands are unable to nourish, in the long run, the population of Katanga even if they were all cultivated (Kasongo Lenge Mukonzo, 2009). [J Cuvelier, July 2009: “The impact of the global financial crisis on mining in Katanga”, IPIS report, p 1-24, p 20 footnote]

3. Employment/unemployment develops into a pretext for ethnic rivalries. Jobs (particularly formal ones) at stake exacerbate identities. There is a history of enmity between the Katangese and their generally better-educated, more successful Kasaiian brothers (from the Luba ethnic group) who predominate among the country’s intellectuals, professionals, and entrepreneurs.

“In August 2008, during an ethnic feud, members of the Katangese community in Kolwezi attacked members of the Kasai community setting fire to

³⁷ <http://www.eca-creac.eu/>

two warehouses and bikes. The row had started as revenge after a member of the Katangese community had been attacked while being caught stealing. All in all, the human costs of the violence have not been very serious, but the importance of the event lies in the memories it calls up of dramatic confrontations between the two groups in the past. The most infamous of them was the hate campaign against the Kasaians in 1991 led by the then governor Kyungu and executed by his militant youth gangs of JUFERI.” [S Spittaels & F Hilgert, 2008: Mapping Conflict Motives: Katanga Update: May- September 2008, IPIS Report; p 1-14, p 8]

Aside from observations based on literature, the NCEA noted the following on employment/unemployment issues during interviews and visits:

Formal sector

Within the formal employment context, the NCEA observed the following (A list of interviews is provided in appendix 12):

- In the past the CNCC (Société Nationale des chemins de fer du Congo) and the Gécamines used to be the main job providers.
- In people’s minds, the ‘paternalist management model’³⁸ adopted by the Union Minière de Haute Katanga (UMHK) and later Gécamines, keeps being considered as a mainstay, though it is overtaken: such expectancies could restrain entrepreneurship.
- Today, according to the FEC (Fédération des Entreprises du Congo), a mere 3.3% of the all jobs in Katanga is in the formal sector.
- The mining contract revisitation process and the credit crisis have recently contributed in restraining mining activities and investment in Katanga.
- Locally produced goods are more expensive than imported ones.

Informal sector

Looking at the informal employment context, the NCEA observed the following:

- Craft mining has become an important part of the economy: it absorbs jobless workers from the formal sector as well as immigrants and adventures. Working conditions (health and safety) are extremely bad. The sector is characterised by exploitation and criminality (see appendix 9). Inversely, the fear is that forced reduction of the informal mining activities might even generate more criminality.
- Paradoxically, the province is now extremely dependent upon neighbouring countries, for its supplying of basic food products (chicken, eggs, etc.). This sector has almost completely disappeared although those products could in fact easily be produced locally (like they were in the past).

³⁸ Taking care of its workers from cradle to grave.

- There is a tendency amongst southern Katangese, to consider migrants from other provinces as being responsible for the problems they face: according to some, it is essentially migrants (unemployed people from the North and neighbouring provinces as well as people who fled from the conflict zones in 2006-2006) who are involved in craft digging and/or charcoal production to survive. Similarly, foreigners are regularly blamed for plundering their resources.
- Agriculture remains potentially the most needed, promising and sustainable source of income and the sector that potentially could absorb a lot of the manpower now working as digger; the same applies to fishing, to a lesser extent. By opposition, the importance of the mining sector is relative in Katanga and its durability is reduced and anyhow limited in time.

The above observation lead the NCEA to believe that, the main issues are the following:

1. There is too much confidence in Katanga on the resources of the formal mining sector, particularly in terms of job creation. The recent switchback evolution of the mining sector shows how fragile and dependant this activity is upon the world economy, specifically the less developed (primitive), inefficient and labour intensive activities. Unfortunately, the workers and their families in this category of enterprises are the first victims of such fluctuations. In periods of growth they have a job, but with questionable working conditions. In periods of drop they are on the dole and obliged to accept a job in the equally suffering craft mining business with unacceptable working conditions. On the other hand one should realise that under normal and stable business conditions Katanga is one, if not the most favourable region in the world to keep on production, even in a downturn of the world economy.
2. There might also be overconfidence on the potential in food production, not as a resource per se, but due to the current situation:
 - a. this market is partly in the hands of neighbouring countries who have already invested in industrial or semi industrial food production and are extremely competitive with traditional subsistence farming;
 - b. production costs in DRC increase, due to the degraded road infrastructure, but also due to the various withdrawals and/or extortions imposed on producers and transporters by state agents, along the road and at the entrances of town markets.
3. The market in terms of goods production is also limited: small and medium Katangese entrepreneurs complain on the high production costs due to (legal and illegal) taxes imposed by the state and its agents. This situation would force to imports goods instead of producing them locally, which further restrains entrepreneurship and employment. Further, this sector necessarily profits of the fallouts from the mining sector, which forces to question its long-term sustainability. So they should avoid being too dependent on the mining sector.
4. Unemployment is used as a weapon in two ways: or by politicians to strengthen their client's base through diabolizing people originating from Kasai and/or foreign mining companies "who pillage their resources"; or

by any person who draws profit from the current situation, invoking the thread to see illegal diggers inflate the number of bandits and criminals, if deprived from jobs.

5. The very poor investment climate³⁹ and the unstable political situation have created a fatalistic society where initiatives are demoralised. The authorities aren't there to facilitate the businesses, it is considered to be the other way around.

Recommendations for the PCIA

The NCEA, admitting that the mining sector (after its reconstruction) will not be able to absorb the current number of craft miners, recommends to study in the PCIA the necessary conditions that stimulate agriculture/fishing/cattle raising development, as these are crucial components of economic development and form an alternative for the mining sector in creating jobs. In addition they are potential generators of wealth, as – at least partly - shown by neighbouring countries. More in general, the NCEA recommends to study how central and local governments can create a good investment climate encouraging entrepreneurial initiatives⁴⁰.

The NCEA further recommends the PCIA to study to what extent and under which conditions agriculture and other local production in small and medium sized enterprises can actually create economic development and jobs. The NCEA also recommends to assess the negative impacts from mining activities on such productions (fishing, notably)⁴¹.

In addition, the NCEA recommends to study the level of political will to develop agriculture, rural production and SMC's (in view of the budget currently devoted to agriculture (1.7% of the total)).

4.4.2 Mining Sector as Employer

Context Analysis

Based on literature and its own observations in Katanga, the NCEA concludes that:

1. Gécamines used to be the main jobs provider in Katanga: 35.000 agents in 1990, which corresponds indirectly to “feeding” 350.000 persons (families included), and sustaining one million persons (through indirect); Gécamines also offered the best social and work standards in the country. In the context of a World Bank re-structuring plan, 10.500 workers are sacked in 2003 (whose major part had not been paid for more than two

³⁹ See 4.1.3.

⁴⁰ See 4.1.3

⁴¹ For an example of a project that supports and finances water, plant and fish analysis to help fishermen complain on the non protection by the government of the aquatic environment that is polluted by mining activities, check the CTB-BTC (Belgian Technical Cooperation) project 'PRODEPAAK': Développement de la Pêche Artisanale et de l'Aquaculture au Katanga) : Contact : Jean-Pierre Marquet : jp_marquet@hotmail.com

years). Today, Gécamines merely employs a limited number of workers, a part of which being in technical unemployment.

2. Employment in the mining sector crystallizes all issues (environmental, social, humanitarian, linked to governance) that are at stake in the realm of resources exploration in Katanga (but also in other conflict zones in Congo), namely: non enforcement of the law (Mining code, Labour code); absence and irresponsible behaviour of the state and its servants, part of the enterprises not taking their Corporate Social Responsibility (CSR). Craft mining raises issues like: financing armed conflicts, smuggling of raw minerals; exploitation of workers, child labour, violation of human rights, extortion of money, harassing.
3. Further, craft mining makes more apparent practices that are embedded in the culture and about which local people prefer not to comment: generalised corruption, systematic exploitation of one's weaker, predatory behaviour of state agents, conflicts of interest associated to high authorities.
4. The balance sheet of the period since partnerships exist between state agencies and foreign mining companies is much mitigated: job opportunities (in socially correct conditions) are extremely limited, while working conditions have globally degraded (and worsened with the recent crises).
5. Disrespect of human and worker's rights in the mining sector is regularly denounced by civil society and international organisations, but no improvements are noticeable. According to the NCEA, there are two options: to forbid craft mining once and for all while developing alternative sources of income (by boosting agriculture, for instance) or to regularise this sector. Both solutions are not applicable in the short term (see point 1); while enforcement of rules also remains an issue.
6. The few steps towards regularisation of the informal mining sector taken by the provincial government have had no effect (forbidding access to mines to children, for instance); it appears that the state is more inclined to better controlling craft miners than to protecting their rights (EMAK and SAESSCAM experiences).
7. Noticeable achievements are nonetheless visible in the work of some NGOs and international agencies: the objectives they have in common in their respective projects is to encourage the social responsibility of private companies; to seek a stronger implication of the base (workers within co-operatives, for instance) and, finally, to diminish as much as possible the margin for manoeuvring of state agencies and civil servants in order to avoid any misappropriation of funds generated.

These conclusions are substantiated by literature as follows:

Formal Sector

1. The recent massive arrival of Chinese capital in the mining sector is not synonymous with job creation : "Enfin, les premiers contrats (signés avec les Chinois) ne semblent pas fournir à la RDC des garanties solides pour un développement futur, notamment en termes d'emplois pour les Congolais » [Task Force "MIRECA" – Mineral Resources in Central Africa, Ministère belge des Affaires Étrangères; Bonne Gouvernance & Transparence dans le secteur minier, Traçabilité des flux de matières et des flux financiers dans le commerce des minerais de Cu et de Co en RDC Description synthétique du projet Avril 2008 p 1-111, p 12]

2. Since April 2009, several big enterprises in partnership with Gécamines (such as DCP, KOL, KMT) have operated restructuring and massively made their workers redundant. [J Gorus & D Rukan, 2009 "Etat du secteur minier artisanal à Kolwezi en avril 2009", report, p 1-10]
3. In addition to the uncertainty created by the revisitation process, the credit crisis came at a very bad time for the Katangese mining industry because several companies (such as: Metorex project (Ruashi); CAMEC ((Mukondo Mountain and Luita sites), Anvil Mining (Kinsevere); Kamoto Copper Company (KCC); Katanga Mining Ltd (Tilwezembe open pit; Kolwezi concentrator)) were in the middle of starting up or expanding their activities. [J Cuvelier, July 2009: "The impact of the global financial crisis on mining in Katanga", IPIS report, p 1-24, p 8]
4. Formal employment is a crucial stake in Katanga: as soon as a mining company provides contracted jobs (also true for temporary ones), the issue of tribal identity quickly surfaces, in order to guarantee that any job ((un)qualified; temporary, long term) is given in priority to 'true' locals or 'true' Katangese nationals [personal experience of a NCEA team member as a consultant for the TF MIRECA project].

Informal Sector

1. There are numerous entities that report on human issues related to resources exploration in Katanga:
 - a. International as well as Congolese humanitarian NGO's systematically denounce violations of human rights and monitor craft mining in the field; they more precisely denounce ill practices as corruption, smuggling, fatal accidents etc. and write recommendations to the government and private operators: Global Witness; Association Africaine de Défense des Droits de l'Homme (Asadho); Action Contre l'Impunité pour les Droits Humains (ACIDH); Rights and Accountability in Development (RAID); Human Right Watch (HRW).
 - b. Independent research institute focusing on arms trade, exploitation of natural resources and corporate social responsibility: IPIS (International Peace Information Service) and Fatal Trans-action.
 - c. International NGOs who do invest in research in addition to implementing projects in Katanga :
 - i. Pact-Congo : identifies mining companies that are eager to assume social and environmental responsibility and support them; has created (+ USAID (United States Agency for International Development)) of an Extractive Industries Network whose aim is to promote sustainable and equitable social and economic recovery. Pact Congo has analysed the impact of 'cow-boy-type' mining companies : the conclusion is that the situation has worsened since such companies arrived in Katanga . They will soon make a study on existing conflicts between (i) private sector and craft diggers; (ii) cooperatives (SAESSCAM) and craft diggers.
 - ii. Group One: supports reinsertion into activities adapted to their age of children working in the mines
 - d. Scientists who make field studies and research for economically and socially pertinent alternatives to the current situa-

- tion: RMCA (Royal Museum for Central Africa) Tervuren; VUB (Vrije Universiteit, Brussel); Cedemol (UNILU).
- e. Task Force MIRECA (Cf. section on “Structure of mining sector).
 - f. Gecoproject : Cartography of mining sites (in order to identify sites that are free or could be freed for artisanal mining as proposed by MIRECA project⁴².
2. The artisanal mining sector generates unacceptable living and working conditions for small scale miners:

“The tragedy of the miners’ comes from the absence of adequate equipment and safety measures, child labour, contamination risks and mortal accidents. The DRC provides a striking illustration of the complexity of the stakes raised by the issue of human rights”. [M Mazalto, 2009: Chapter 5 “Governance, Human Rights and Mining in the Democratic Republic of the Congo”, in Bonnie Campbell Ed.: Mining in Africa, Regulation and Development, Pluto Press/IDRC (online publication, p 1-41, p 16)]
 3. Several authors denounce the institutionalisation of corruption in DRC:
 - a. « Dans le secteur artisanal, les actes de corruption se produisent à chaque étape du processus de l’extraction : à l’entrée des mines, dans les puits, à la sortie des mines, le long des routes, aux postes de contrôle et aux postes frontières, toutes sortes d’agents (Ministère des Mines, Police des Mines, Douanes et accises, ANR, agents de la Mairie, chefs traditionnels locaux) s’en prennent continuellement aux creuseurs, aux négociants, aux transporteurs et aux commerçants et réclament des pots de vin. Cette pratique est tellement institutionnalisée qu’on essaie même plus de faire croire que ces paiements sont des taxes officielles ou qu’ils contribuent aux budgets des départements concernés » [Global Witness, juillet 2006. Rapport : « Une corruption profonde : Fraude, abus et exploitation dans les mines de cuivre et de cobalt du Katanga », Washington, p 1-55; p 14]
 - b. “On the 10th of April, artisanal miners working on the site of Kolwezi’s zinc factory blocked the road leading to their workplace in order to claim the removal of all the roadblocks created by Gécamines’ Industrial Guard (Garde Industrielle) (of which the members were probably hoping to make some extra money by taxing passers-by)”. [J Cuvelier, July 2009: “The impact of the global financial crisis on mining in Katanga”, IPIS report, p 1-24, p 11]
 4. Attempts made to organise the craft mining sector proved to be a failure:
 - a. EMAK (Exploitants Miniers Artisanaux du Katanga) a union created in 1999 and supposed to organise the craft miners and the traders and protect their interest; it turned out to protect mainly the traders and to become a supplementary source of money extortion for the diggers ; a rival organisation, CMKK (Coopérative Minière Madini Kwa Kilimo) and, finally (2005) SAESSCAM (Service d’Assistance et d’Encadrement du Small Scale Mining), a public service created within the Ministry of Mines and said to be the solution to the majority of the problems of this sector. [Global Witness, juillet 2006. Rapport : « Une corrup-

⁴² www.gecoproject.org

tion profonde : Fraude, abus et exploitation dans les mines de cuivre et de cobalt du Katanga », Washington, p 1-55; p 22-26]

- b. « Actuellement il existe donc deux structures au Katanga qui revendiquent l'encadrement des creuseurs : EMAK et le SAESSCAM. Cependant, à ce jour et d'après informations qui ont été communiquées à la mission il apparaît clairement qu'aucune de ces deux structures n'ont les capacités qui permettent d'assurer une exploitation artisanale en garantissant les réglementations en la matière » [PNUE/DAH (Programme des Nations Unies pour l'Environnement et Département des Affaires Humanitaires de l'ONU), novembre 2004 : « Mine Uranifère de Shinkolobwe (RDC) : Mission d'évaluation de la situation humanitaire » ; p 1-17 ; p 10]
- a. Analysing factors that have contributed to the recent increase of artisanal mining activity in sub-Saharan Africa, Banchirigah notes that: "Another issue that has almost gone unnoticed is the fact that, efforts made under reform to bring small-scale mining into the legal realm appear to have further marginalized impoverished artisanal miners, giving little incentive to obtain a license altogether". [SM Banchirigah, How have reforms fuelled the expansion of artisanal mining? Evidence from sub-Saharan Africa Institute for Development Policy and Management (IDPM), School of Environment and Development, The University of Manchester; Resources Policy, Volume 31, Issue 3, September 2006, p 165-171; p 167]

NCEA's own observations in Katanga, through visits and interviews (see Appendix 12), further illustrate the following:

Formal Sector

- Gécamines is still the main jobs provider in Katanga, in conditions that, despite the decrease in quality standards, keep being better than the average in Congo⁴³. However, in August 2009, part of the company workers are on "technical unemployment" due to recent slowing down of activities.
- Paradoxically, Gécamines now hires, though indirectly, the services of informal workers, in the context of its partnerships (private subcontracting) like, for instance in the Kamfungo mine (MCK).
- People in Katanga have seen the arrival of foreign mining companies as generating a second breath in the mining sector, after the collapse of Gécamines. In this regard one should distinguish mid-scale, state of the art and high efficient operations from small-scale more labour-intensive activities. The first category foreign mining companies mostly hire relatively few contractual workers: 3000 in CHEMAF; 3500 in Tenke Fungurume; 375 in STL. Those companies are less vulnerable for metal price variations on the world market. The second category, being less efficient, is much more touched by the depression and the decrease in the market prices because of the financial crisis. These companies have recently slowed down their activities, see closed (some without any warning). The

⁴³ although the NCEA has observed in Shituru that health and safety conditions of workers are far below standard (see also 4.3.2).

recent re-visitation of contracts has made it more difficult to get DFI (Direct Foreign Investments).

- The recent arrival of Chinese companies appear to announce more degradation in terms of local employment and respect of labour rights: “Contrairement aux autres, les Chinois ne se soucient pas d’au moins faire semblant d’appliquer les règles”. [Task Force “MIRECA” – Mineral Resources in Central Africa, Ministère belge des Affaires Étrangères; Bonne Gouvernance & Transparence dans le secteur minier, Traçabilité des flux de matières et des flux financiers dans le commerce des minerais de Cu et de Co en RDC Description synthétique du projet Avril 2008 p 1-111, p 12]
- The distinction between formal and informal within the mining sector is not operational, for many companies take advantage of the ease demonstrated by state agents not to comply with their legal obligations (Mining and labour codes). Gécamines, for instance, indirectly resorts to craft miners in the context of its private subcontracting.
- The best (social, work conditions) standards are now found within the few foreign companies that decided to comply with WB and OESO principles, but those hire only a limited number of workers [TF MIRECA, STL].

Informal Sector

- The presence of craft diggers on mining sites is a recognised fact: the NCEA has also noticed the presence of women and children, seen their camps, settled near the mines and along their access roads.
- Craft mining sector compensates for the variations in offer and demand of the formal mining sector: beyond jobless people (see educated) it is also the recipient of people laid off from the formal sector (former Gécamines workers, notably).
- The majority of jobs in the mining sector is found in the informal sector: the number of craft diggers was estimated, for Southern Katanga, to 300.000, but some doubt they are as many as that. Prof. Gorus, evaluates their amount to 80.000, 100.000 at the best. [25 September 2009 Meeting of the NCEA with Professor Jan Gorus, Vrije Universiteit Brussel, manager of the project: TF MIRECA: « Bonne Gouvernance et Transparence dans le secteur minier”; initiator of CEDEMOL (UNILU)]
- All persons that the NCEA has met, consider craft mining as a problematic issue: this activity is synonymous with illegality, insecurity, disrespect of fundamental worker’s rights and children’s rights; they indicate that in some parts of Katanga, craft mining finances armed factions; globally, it supplies the illegal export of raw minerals. Moreover, they indicate that craft mining is the opposite of efficient use of natural resources and of care for the environment.
- Inversely, the NCEA observes that craft mining ‘feeds’ an important amount of people who could at least in part add to the ranks of thieves and criminals if they were impeded to exerting their job and have no alternative job offers.
- Most of the people met, think that craft digging should continue to be authorised, but that it must be formalised, integrated in the global mining sector and monitored; also, workers must be guaranteed the respect of their rights and of security rules. A minority thinks craft mining should be prohibited and suppressed, as far as people are encouraged to (re)invest in classical production activities (farming, fishing). The same minority expresses doubts about the results of any

plan aimed at formalizing craft mining: “Quand on organise, on détruit”.

- The NCEA observes that entities like EMAK and SAESSCAM, that were created to protect and defend the craft miner’s interests are in competition one with the other and do not necessarily fulfil their mandate.
- The NCEA questions whether the transformation of the informal sector into a formal one is realistic. It doubts that it is really possible to create a feasible formalised shattered informal sector respecting rules and laws concerning social justice, health and safety, environment, sustainable use of mineral resources?

Recommendations for the PCIA

In response to the above, the NCEA recommends to study the consequences of a fading out of the informal mining sector as it is today, along two different lines of thinking: (i) the development of sustainable alternative ways of livelihood and, (ii) the improvement of the actual situation.

In this regard the NCEA recommends to study, amongst projects identified, the results of those three projects, that seem to offer pragmatic and original outcomes to the issue:

1. Pact Congo and USAID: support private companies in their commitment into social (and environmental) responsibility; creation of an Extractive Industries Network.
2. BIT: reinforcement of the craft mining sector through relying on cooperatives issued from the base, more representatives of its members.
3. Miréca: creation of a mixed (public and private) enterprise (“Entreprise publique d’économie mixte”) where private invest, but have a say (seat in the advisory board) and a tight control on finances..

Furthermore, the NCEA has the opinion that a coherent and integral policy towards craft mining is urgently needed. Therefore NCEA suggests the PCIA to make a thorough study of all the work already done in this field, studies, projects⁴⁴, observations etc. On that basis and taking into account the objectives to be achieved (health & safety, social justice, environment, good stewardship of the natural resources etc.) a coherent and integral national policy could be formulated and implemented.

In this context, the NCEA recommends to consult, amongst others, the work done by SAESSCAM and the way it is perceived by craft diggers; consider results attained by former projects aimed at organising the craft diggers⁴⁵.

The PCIA should explore the options for:

- establishing a local mineworkers union statute;

⁴⁴ An example: “In the context of its socially oriented actions, the company « RUASHI Mining Sprl has framed craft miners working on its site in the project of finding alternative economic activities generating income” [Ministère des Mines, RDC, Commission de re-visitation des contrats miniers, novembre 2007 : “Rapport des travaux” #2: Partenariats conclus par la Gecamines”, p1- 246; p 153]

⁴⁵ Check the study that Pact-Congo is going to do: the analysis of (i) conflicts between diggers and private sector and (ii) between cooperatives (such as SAESSCAM) and diggers (information: François Philippart).

- providing to union representatives and shop stewards recognised training on this statute (collective agreement on the substance of this raining to be signed by all stakeholders).

The PCIA should also develop plans for sustainable, alternative ways of income generation for the craft miners in agriculture, farming, fishing etc.

4.4.3 **Illegal Exploitation and Commercialisation of Uranium**

Context Analysis

The NCEA concludes that it appears that no account has been taken from past experiences in illegal uranium mining, whatever the consequences for workers or surrounding residents these imply.

In literature, this is substantiated as follows:

1. Shinkolobwe mine, a past experience symptomatic of the disorganisation of artisanal mining sector and lax shown by state agents:
 « La mine de Shinkolobwe a été exploitée industriellement pour son uranium et son radium entre 1921 et 1959 (cet uranium a été utilisé pour confectionner les bombes atomiques de Hiroshima et Nagasaki). En 1960, les puits uranifères de Shinkolobwe sont condamnés. A la fin des années 1990, l'exploitation artisanale du cuivre et de l'hétérogénite se développe le site, mais de façon anarchique, au détriment des règles de sécurité. En dépit de l'interdiction de toute activité minière artisanale à Shinkolobwe (décret présidentiel du 28 janvier 2004), les travaux dans la mine continuent jusqu'au 8 juillet 2004, date de l'effondrement de deux puits (8 morts). A la demande du gouvernement, une mission commune PNUE/BCAH évalue les causes de l'éboulement partiel de la mine et se penche sur les impacts environnementaux et en matière de santé publique (contamination par les métaux lourds). La mission constate l'existence d'un conflit de compétences et d'intérêts entre les structures d'encadrement EMAK et SAESSCAM. Elle recommande qu'une structure professionnelle d'encadrement et de conseil des artisans miniers soit opérationnelle sur le terrain afin d'éviter d'autres accidents tels que celui de Shinkolobwe » [PNUE/DAH (Programme des Nations Unies pour l'Environnement et Département des Affaires Humanitaires de l'ONU), novembre 2004 : « Mine Uranifère de Shinkolobwe (RDC) : Mission d'évaluation de la situation humanitaire » ; p 1-17 ; p 3]
2. Despite recommendations made by experts, nothing has changed:
 "Uranium stays an issue in the region, to which too little attention is paid. Around Kolwezi alone, 8 sites contain minerals with a disturbing level of radiation. Some of these sites are exploited by 'majors', others by 'minors' and three of them are even run by individuals" [S Spittaels & F Hilgert, 2008: Mapping Conflict Motives: Katanga Update: May- September 2008, IPIS Report; p 8]
 "Les rapports de Pasche (2004) et Waggitt (2004) démontrent que les minerais uranifères de Shinkolobwe¹, sont lavés dans les rivières qui se jettent dans la Panda et stockés dans les maisons d'habitation ou en plein air dans les sacs, à même le sol, sans protection contre les intempéries à Likasi où tout coule vers la Panda ». [Ministère de l'Agriculture, de la Pêche et de l'Élevage en RDC & Ministère de la Coopération au Développement, Belgique (CTB RD Congo), octobre 2009 : Projet de Développement de la Pêche Artisanale et de

l'Aquaculture au Katanga « Etude socio-économique et environnementale du lac Tshangalele p 1-37; p 33]

In addition to literature analysis, the NCEA has interviewed Mr. Armand Foster⁴⁶ who has personally seen the evidence that there is illegal mining of Uranium in the Shinkolobwe area (a 10 square kilometer area is uraniferous). He has shown evidencing pictures. He claims that the mining product is evacuated by lorry and that the product is bought by Chinese. He shows pictures of dangerous situation: trapped, a lorry has dumped bags of uranium ore in a river. Villagers, who were told that the bags are worth US\$ 2000 each, have collected bags and stored them in their houses. MONUC has started to inform villagers of the risks of uranium ore.

According to Prof. Gorus⁴⁷, some measurement made in the past have been done in a non professional way and resulted in alarming irradiation rates (hence the necessity to dispose of a serious measurement unit).

Recommendations for the PCIA

The NCEA recommends to:

1. Study the project at the provincial level, to create a unit in charge of all measurement scheduled by the law (information to be obtained from Prof. Gorus, see footnote 48).
2. Study ways and means to divulge the information given by Mr Foster and use it as a means for awareness raising amongst populations living next to uranium sites.

4.4.4 Social Infrastructure : Education, Health, etc.

Context Analysis

The NCEA concludes that, contrary to practice in the sixties and seventies, the majority of mining companies no longer satisfy social duties. Amongst companies who do fulfil social engagements, it is nonetheless hard to distinguish to what extent costly achievements respond to the companies obvious needs (human resources, fair road access) or to actual social expectations of the surrounding populations. Besides this, companies engage locally in small supports, that seem to be decided case by case and out of any global plan.

From literature, the NCEA concludes that:

1. Gécamines has provided top quality social, educational and health services, until the seventies⁴⁸.
2. Since Gécamines collapsed in the nineties, nothing was done by the state to replace or even maintain what existed. Today, such services are dilapidated or do not function anymore.

⁴⁶ Civil affairs Officer at Monuc

⁴⁷ Prof J Gorus, University of Vrije Universiteit Brussel, manager of the project: TF MIRECA: « Bonne Gouvernance et Transparence dans le secteur minier »; initiator of CEDEMOL (UNILU); personal communication

⁴⁸ Personal experience of one of the NCEA team members

- a. “The real motor of the Congolese economy, the UMHK and later Gécamines has been recognised as providing the inhabitants of Katanga with one of the highest standards of living in the country, through job creation and significant investments in educational, medical and sporting infrastructure for company employees and their families. For example, Gécamines runs its own hospitals. Until 2005 the Swende hospital, located in Lubumbashi, was the most important hospital in Katanga province. Based on what has been described as a ‘paternalist management model’, widespread in Africa (Hernandez, 2000), the UMHK and later Gécamines played a major role in providing access to basic services, developing the economic and social structure in the provinces where it was operating. For this reason, the ‘bankruptcy’ of Gécamines at the beginning of the 1990s created major socio economic transformations in the region” [M Mazalto, 2009: Chapter 5 “Governance, Human Rights and Mining in the Democratic Republic of the Congo”, in Bonnie Campbell Ed.: Mining in Africa, Regulation and Development, Pluto Press/IDRC (online publication, p 1-41, p 16)]
- b. « Dans les années 1960 et 1970, la société minière étatique, la Gécamines, fournissait nombre des services plus communément assurés par l’État, notamment les soins de santé, l’éducation et le logement. Cependant, depuis la faillite de la Gécamines dans les années 1990, ces services sont dans un état vétuste, voire ont cessé de fonctionner, et, dans la plupart des cas, le gouvernement ne les a pas remplacés » [Global Witness, juillet 2006. Rapport : « Une corruption profonde : Fraude, abus et exploitation dans les mines de cuivre et de cobalt du Katanga », Washington, p 1-55 ; p 10]
- c. « Contrairement à de nombreux districts de la RDC, la zone de santé de Kilwa compte un hôpital et 10 cliniques. MSF travaille dans ces structures médicales en partenariat avec le ministère de la Santé congolais. Ce dernier prend en charge le personnel, les infrastructures et les salaires, tandis que MSF apporte son expertise spécifique, fournit des médicaments et du matériel et verse au personnel une prime en fonction du travail accompli. C’est du moins la théorie. En réalité, le personnel peut s’estimer heureux lorsque le ministère de la Santé verse plus d’un mois de salaire par an. Une grande partie des fonds disponibles disparaît Dieu sait où avant d’arriver sur le terrain. Ainsi, même si le personnel continue à faire acte de présence à l’hôpital, dans l’espoir vain de recevoir un jour ce qui lui est dû par le ministère, il n’est pas suffisamment motivé pour se donner à fond » [Médecins sans Frontières Belgique, septembre 2004 « Actualités : La problématique des soins au Katanga, RDC 49]
- d. The re-visitation commission has checked the existence or inexistence of a social plan for each contract, as well as –when such plan existed- if social achievements are scheduled or actually implemented or achieved. But no information is given

⁴⁹ <http://www.msf-azg.be/fr/main-menu/actualites/infos/news-detail/table/360.html>

concerning the nature of those plans, or on their adequacy with the legal requirements.

- e. In any case, a social plan is merely mentioned in less than 50% of the revisited contracts (signed between Gécamines and foreign partners). When mentioned, it has to do most often with 'creating jobs' and 'rehabilitating or building roads'; one also find achievements such as: providing access to drinking water, support to local health infrastructures or schools (Ministère des Mines, 2007). A minority of larger companies offer their workers a health coverage extended to the nuclear family and punctual financial support (to cover school registration costs, for instance). d. and e. : [Ministère des Mines, RDC, Commission de re-visitation des contrats miniers, novembre 2007 : "Rapport des travaux" #2: Partenariats conclus par la Gecamines", p 1-246 p]

No visit was organised for the NCEA in this realm, nor were meetings held with people having responsible jobs in the fields of education, health or social affairs. Still, in interviews that the NCEA has held, some representatives of mining companies have mentioned support given in matter of health and/or education to local or surrounding populations that is beyond the circle of their own workers.

Recommendations for the PCIA

The NCEA recommends the PCIA to review the social plans made by mining companies, when they exist, collect information on the precise nature of this support and check, in each case, its adequacy with the socially correct expectations. In addition, the NCEA recommends to assess the sustainability of social realisations: will they finish the day the company will close its doors?

The NCEA further recommends the PCIA to assess possibilities for partnerships between mining companies and locally recognised development partners who could help them define which the local priorities are, and what use could be reasonably be made of the budget devoted to social achievements.

With regard to education, the NCEA recommends the PCIA to explore options (for mining companies) to :

- prepare with priority collaborative in-company programs for Vocational training;
- create possibilities for artisanal miners to follow such training;
- establish and support practical apprentice training run by joint venture partners;
- standardise health, safety and rescue courses;
- explore for and widen avenues to promote research cooperation projects between DRC Universities and foreign institutes.