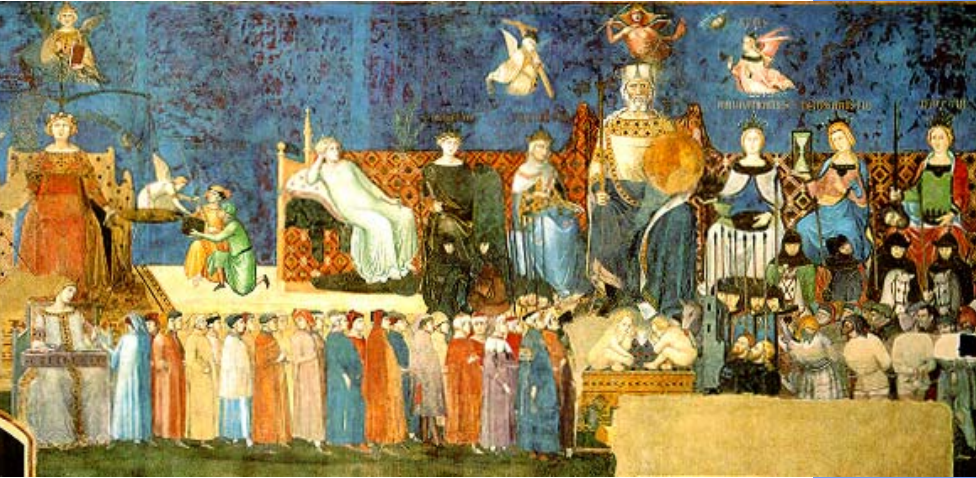


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Poverty Reduction in Africa : On Whose Development Agenda ?

Lessons from Cotton and Gold
Production in Mali and Burkina Faso

Bonnie Campbell
Gisèle Belem
Vincent Nabe Coulibaly

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**POVERTY REDUCTION IN AFRICA:
ON WHOSE DEVELOPMENT AGENDA?
LESSONS FROM COTTON AND GOLD PRODUCTION
IN MALI AND BURKINA FASO**

Bonnie Campbell, Gisele Belem and Vincent Nabe Coulibaly
Prepared for Oxfam America

Summary

While poverty reduction is at the forefront of the World Bank's mission, some of its policies require substantial trade-offs between economic growth and poverty reduction. This paper argues that World Bank policies promoting privatization of the cotton sectors while encouraging the expansion of gold mining across Mali and Burkina Faso may undermine poverty reduction efforts in both countries. Even though gold now generates more export revenues than cotton in Mali and is destined to do so in Burkina Faso, cotton generates substantially more benefits to poor sectors of the population than gold. Cotton sustains well over five million people in both countries, strengthens food security, and generates strong backward and forward linkages to the rest of the economy - contributions unmatched by gold mining. However, current reforms are undermining the cotton sector, while promoting the expansion of mining without the institutions to ensure that, at a minimum, local communities do not bear the costs of environmental degradation. Findings suggest caution in assuming the link between export-led growth and poverty reduction and stress the benefits of continued policy space for national governments and of pacing liberalization.

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Abbreviations and Acronyms

AFD Agence française de développement

APR Annual Progress Report

BGR Geosciences and Natural Resources (Germany)

BNDPA Bureau national de développement de la production agricole

BRGM Bureau de recherche géologique et minière

BUMIGEB Bureau of Mines and Geology of Burkina

BUVOGMI Bureau Voltaïque of Geology and Mines

CAS Country Assistance Strategies

CBMP Comptoir burkinabè des métaux précieux

CCCE Caisse centrale de coopération économique

CFDT Compagnie française pour le développement des fibres textiles

CIDA Canadian International Development Agency

CIDT Compagnie ivoirienne pour le développement des textiles

CIRAD Centre de coopération internationale en recherche agronomique pour le développement

CMDT Compagnie malienne pour le développement du textile

CNOM Conseil national des opérateurs miniers (Mali)

COGEMA Compagnie générale des matières nucléaires

COPACO Compagnie parisienne de coton

CSAO Club du Sahel pour l’Afrique de l’Ouest

CSLP Cadre stratégique de lutte contre la pauvreté

DIAL Développement, Institutions et Analyses de Long Terme (Paris)

DNGM Direction nationale de la géologie et des mines (National Directorate of Geology and Mines) (Mali)

EU European Union

FAC Fonds d'aide et de coopération

FAO Food and Agriculture Organization of the United Nations

FCFA (or Fcfa) - Franc de la communauté financière d'Afrique (Franc of the francophone financial community of Africa)

FDI Foreign Direct Investment

FIDA Fonds international de développement agricole

GDP Gross Domestic Product

GRAMA Groupe de recherche sur les activités minières en Afrique (Montreal)

HIPC Highly Indebted Poor Countries

HUICOMA Huilerie cotonnière du Mali

IDS Institute of Development Studies (Sussex)

IMF International Monetary Fund

INERA Institut de l'environnement et de recherches agricoles - une structure de recherche du Centre national de recherche Scientifique du Burkina Faso

INDS Institut national de la statistiques

JSAN Joint Staff Advisory Note

MDGs Millennium Development Goals

MMCE Ministère des Mines, des Carrières et de l'Énergie (Burkina Faso) (Ministry of Mines, Quarries and Energy)

MMSD Mining, Minerals and Sustainable Development

ODI Overseas Development Institute (England)

OCDE, Organisation de coopération et de développement économiques

OECD Organisation for Economic Co-operation and Development

PRSF Poverty Reduction Strategy Framework

PRSC Poverty Reduction Support Credit

PRSP Poverty Reduction Strategy Paper

PSIA Poverty and Social Impact Assessment

SAC Structural Adjustment Credit

SATEC Société d'aide technique et de coopération

SMP Syndicat des mines de Poura

SOFITEX Société burkinabè des fibres textiles

SOGEMORK Société des mines d'or de Kalana

SONAREM Société nationale de recherche et d'exploitation minière

SOREMIB Société de recherches minières du Burkina

SOTELMA Société des télécommunications du Mali

SYSMIN Système de stabilisation de recettes d'exportation de produits miniers (Mining Export Profits' Stabilization System)

UEMOA Union économique et monétaire Ouest africaine (Monetary and Economic Union of West Africa)

UMPP Usine malienne de produits pharmaceutiques

UNCTAD United Nations Conference on Trade and Development

UNDP United Nations Development Programme

UNOMIN Union des opérateurs miniers du Mali

UNPCB Union nationale des producteurs de coton du Burkina Faso

UNRISD United Nations Research Institute for Social Development

WHO World Health Organization

WTO World Trade Organization

Map of Mali



<http://www.populationdata.net/>

Preface

In 2000, the international community adopted the Millennium Development Goals which have as their objective to reduce poverty by 50 per cent in the world's poorest countries and most notably those of Africa by 2015. Almost midway to the date set for reaching that target, analysts are looking to understand policy reforms that have either moved economies and communities closer to particular goals or, alternatively, left them no better than they were before.

In this context, Oxfam America commissioned this study to analyze how donor-led policy reforms have shaped the developmental outcomes associated with two particular sectors, cotton and gold mining. These two sectors are highly relevant to Oxfam America's objective of improving the livelihoods of communities across the developing world. Cotton supports over 10 million farmers in West Africa, whose plight is well understood - relying on scarce technologies and weakened national institutions, cotton farmers export their crops only to face world prices that are artificially low because of subsidized cotton produced in the US. Meanwhile, communities living near industrial mining facilities around the world continue paying the costs of environmental degradation and debilitating health problems resulting from irresponsible mining practices.

Of special concern to Oxfam is how donor policies, particularly those of the World Bank, have been shaping recipient countries' domestic policies toward these sectors. In particular, the World Bank has been promoting the expansion of mining extraction as a source of revenue and economic growth in several African countries; at the same time, it has been encouraging countries to privatize their cotton sectors. While these measures may, in principle, make sense economically, in practice, they have important implications for economic development and equity, which are often overlooked in project proposals and reports. How have such reforms affected the economies and local communities of cotton growers or people who live near mines? How has the expansion of mining affected the welfare of households in mining areas? How have privatization and other reforms in the cotton sector affected farmers' abilities to make a living from cotton? And what have been the trade-offs between promoting the expansion of mining while undermining support for cotton?

With these questions in mind, Oxfam America commissioned this study to Dr. Bonnie Campbell, professor of political economy at the University of Quebec in Montreal. Dr. Campbell, together with Vincent Nabe Coulibaly, a professor of philosophy of Malian origin and Gisele Belem from Burkina Faso, who is presently completing a doctorate in environmental studies at the University of Quebec in Montreal, offer several insights into these questions drawing from the experience of Mali and Burkina Faso.

We hope that this paper will contribute to informed debate about donor policies relating to these sectors and their appropriate role and relationship in promoting economic development and poverty reduction in developing countries.

Kimberly Pfeiffer
Oxfam America, October 2006

1. Introduction

In 2000, the international community adopted the Millennium Development Goals with an overall goal to reduce poverty by half in the world's poorest countries - most notably those of Africa - by 2015. Almost midway to the date set for reaching that objective, this study analyzes certain strategies put forth to reform key economic sectors, namely cotton and gold, with the aim of reducing poverty in two West African countries, Mali and Burkina Faso.

In the new policy framework that has emerged, the Millennium Development Goals (MDGs) provide the targets and national poverty reduction strategies represent the vehicle, supported by associated direct budget support mechanisms, for reaching these targets. The question, of course, is whether the frameworks and programs put forward to meet MDG targets will effectively address the challenges facing the countries concerned?

The World Bank has built this elaborate planning, implementation, and evaluation structure on the premise that economic growth leads to poverty reduction. Thus, national macroeconomic planning in poor countries happens with the guidance of the World Bank and with the broad objective of reducing poverty through growth. More specifically, the World Bank has identified the private sector and the liberal economy as the most efficient means by which to achieve this growth. This presupposition has driven the liberalization and privatization reforms manifested in structural adjustment programs and continued in poverty reduction strategies. Yet, it is legitimate to question the precise development rationale for specific sector reforms. It is critical that the World Bank be able to demonstrate the development benefit of liberalizing the economy beyond the focus on economic growth.

Numerous reports have questioned whether the current growth strategies as presently formulated by the Bretton Woods Institutions - namely the World Bank and International Monetary Fund (IMF) - are appropriate for reducing poverty in the poorest countries.¹ In fact, the World Bank itself has recognized that some regions have even moved backwards in terms of tackling poverty and reaching MDG targets.²

In an attempt to re-examine the assumption about the relationship between economic growth and poverty reduction, this study traces the history of two sectors contributing to development in Mali and Burkina Faso, namely the cotton and gold sectors. Reviewing the historical development of these two sectors illustrates that economic strategies that

¹ North-South Institute. 2003. "Private Foreign Investment in the poorest countries," Rodney Schmidt and Roy Culpeper, The North-South Institute, Ottawa.

United Nations Conference on Trade and Development (UNCTAD). 2005. *Economic Development in Africa: Rethinking the Role of Foreign Direct Investment*, United Nations, New York and Geneva.

United Nations Research Institute for Social Development (UNRISD). 2006. *Targeting and Universalism in Poverty Reduction*, Thandika Mkandawire, Social Policy and Development Programme, Paper Number 23, December 2005 [online] <http://www.unrisd.org/>.

² World Bank, 2005. *Global Monitoring Report 2005. Millennium Development Goals: From Consensus to Momentum*, World Bank, Washington D.C. : 23.

fall outside of the liberalization/privatization model of the World Bank have contributed to poverty reduction. In addition, developments in these sectors suggest that the very strategies pushed by the World Bank have not succeeded in reducing poverty.

This paper is structured as follows. The remainder of this chapter discusses the general context for the question at hand and justifies the selection of the cases studied. Chapter 2 turns to cotton, tracing the historical development of the cotton sector in Mali and Burkina Faso and describing current reforms. Chapter 3 then discusses the several ways in which cotton contributes to poverty reduction in both countries and how reforms can undermine the sector. Given the shift of emphasis by multilateral financial institutions toward encouraging mining as a key source of growth and revenue, the paper then turns to gold mining. Chapter 4 traces the historical development of gold production in Mali and Burkina Faso since the 1970s, and Chapter 5 presents the reforms of the 1980s and 1990s and their impacts on poverty indicators. Finally, Chapter 6 concludes by drawing insights from the case studies on policy reforms conducive to poverty alleviation.

The international policy framework for addressing poverty reduction: MDGs and PRSPs

As part of the World Bank's Comprehensive Development Framework, Poverty Reduction Strategy Papers (PRSPs) were created as a tool for low-income countries to outline their plans to reduce poverty. Since July 2002, the World Bank has based its plans to assist low-income countries on the PRSPs. The World Bank provides training and technical and financial assistance to support the design and implementation of national poverty-reduction strategies, as well as an elaborate series of reports and assessments produced on both ends - by the Bank and by recipient countries. In addition to PRSPs, the analytical mechanisms have included Poverty Reduction Strategy Frameworks, (PRSFs), Joint Staff Advisory Notes (JSANs), Poverty and Social Impact Assessments, (PSIAs), Annual Progress Reports, (APRs), Structural Adjustment Credits (SACs), Poverty Reduction Support Credits (PRSCs), and Country Assistance Strategies (CASs), to name a few. Through this process, the World Bank generates conditionalities for assistance in the forms of grants and loans. This process has also resulted in the IMF adopting the Poverty Reduction Growth Facility as its framework for assisting poor countries through concessional lending.

According to the World Bank and IMF, the PRSP approach is based on six core principles. It is:

- Results-oriented;
- Comprehensive;
- Country-driven;
- Participatory;
- Partnerships;
- Long term.³

³ Laure-Helene Piron (ODI), Alison Evans. 2004. *Politics and the PRSP Approach: Synthesis Paper*, Working Paper 237, Overseas Development Institute, London, March : 3.

Within the context of the United Nations, countries agreed to set the MDGs in 2000. Targets included:

- Halve the proportion of people whose income is less than \$1 a day by 2015;
- Halve the proportion of people who suffer from hunger by 2015;
- Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling;
- Reduce by two-thirds the under-five mortality rate by 2015; and
- Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.

Upon the adoption of the MDGs in 2000, the United Nations recommended that all countries align their PRSPs with the MDGs and that the MDG-based PRSPs should serve to anchor increases in public sector investments, capacity building, domestic resource mobilization and official development assistance. In other words, the MDG-based PRSPs should provide the framework for strengthening governance, promoting human rights, engaging civil society, and promoting the private sector. One specific area identified to meet the MDGs was rural productivity.⁴

While progress has been made worldwide towards reducing poverty and meeting MDGs, based on the targets which the international community has set, many countries in Sub-Saharan Africa have actually fallen behind. Between 1990 and 2001 the number of people living on less than \$1 a day rose from 227 million to 313 million. Poverty rates increased from 45 to 46 per cent. The average GDP per capita in 33 countries is \$270 a year or 74 cents a day.⁵ According to World Bank indicators, the average GDP per capita in Mali and Burkina Faso was even lower than in the former group of low income countries.⁶

In fact, according to the United Nations Development Programme, Sub-Saharan Africa is off track to meet every MDG. The region has the highest rate of under-nourishment, the lowest primary school enrolment rate, gender disparity at the primary level is 0.86, the highest maternal and infant mortality rates, the highest rate of deforestation, and the lowest level of access to information and technology.⁷

Based on the goals for poverty reduction laid out by the United Nations and the World Bank, along with the identified impediments to achieving them and the assumptions regarding the solutions, this study will assess the strategies promoted by the Bretton Woods Institutions in terms of their appropriateness in addressing the articulated problems of poverty reduction and meeting poverty reduction goals.

⁴ UN Millennium Project. 2005. *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals*, United Nations Development Programme (UNDP), Geneva, 2005 : 33.

⁵ *Ibid.* : 16.

⁶ According to the World Bank, figures were \$237 a year (65 cents a day) and \$248 a year (68 cents a day) respectively in Mali and Burkina Faso. World Bank. 2006. *World Development Indicators*, Development Data Center, Washington D.C.

⁷ UN Millennium Project. *Investing in Development, op. cit.* : 19-20.

Why cotton and gold?

Throughout the 1960's, 70's and 80's in Mali and Burkina Faso, a pattern can be traced of evolving strategies for rural development which brought not only remarkable results in terms of cotton production but above all, exemplify an integrated approach to agricultural development which resulted in the improvement of agricultural techniques, a simultaneous increase in food crops in cotton growing areas and improvements in terms of poverty reduction. In a word, the approach was not merely concerned with one crop, "cotton", nor was the integrated nature of the approach merely about institutions, but the integrated approach was in fact a broad strategy involving rural extension services, support systems, inputs, etc. to ensure rural development. In the case of the two countries studied it was extremely successful.

As of the 1980s and during the 1990s, two developments were to have a radical impact on the cotton sector of the two countries concerned by this study. The first was the introduction of structural adjustment measures and more generally, measures recommended by the international financial institutions to liberalize, to privatize and to deregulate the cotton sector. The second was the impact of the subsidies of countries such as the United States and those of the European Union to their cotton producers, which brought drastic price reductions to cotton producing countries of West Africa and notably to Mali and Burkina Faso.

In spite of the recognition of the limitations of the liberalization reforms experiments and the price-suppressing effects of rich countries' support to their cotton sectors, this orientation remains the central thrust at the heart of presently proposed measures. In fact, a careful analysis of the orientation of the macro economic reforms contained in the poverty reduction strategies introduced into both countries reveals considerable continuity with the thrust of economic reforms recommended under structural adjustment.

As human index indicators have fallen in both countries (see Table 1), there is renewed interest in poverty reduction as the core challenge for development. Agriculture, it is argued, must be central to meeting this challenge.⁸

Table 1: Human Development Indices in Mali and Burkina

Country	Rank		Life expectancy		Literacy rate for adults (% 15 years and older)		Graduation rates (primary to secondary)		GDP per capita	
	1999	2002	1999	2002	1999	2002	1999	2002	1999	2002
Mali	153 rd	174 th	51.2	48.5	39.8%	19%	28%	26%	753	930
Burkina	159 th	175 th	46.1	45.8	23%	12.8%	23%	22%	965	1100

UNDP, *Human Development Reports*, 2001 and 2004.

⁸ Ian Scoones, Stephen Devereux and Lawrence Haddad. 2005. "New Directions for African Agriculture," *IDS Bulletin*, Vol. 36, No. 2, June : 7.

The comparative study presented here suggests that given current policy recommendations, there is reason to question whether agriculture—more specifically cotton production as a leading export—will be central in the struggle against poverty, as the strategies contained in the Poverty Reduction Strategy Papers of Mali and Burkina Faso, have failed to offer innovative approaches needed to support agriculture. Consequently, current strategies in this sector may well fall very short of the challenges which the two countries will have to face over the next decades.

In the face of the likelihood of future falling revenues from the cotton sector and as an answer to alternative sources of growth and government revenue, considerable attention has been given, notably by the multilateral financial institutions, to creating conditions for attracting investment in mining and in particular in gold in the two countries concerned. To this end, since the 1990s, the governments have been encouraged to introduce favorable legislation and incentives through the reform and liberalization of their mining codes. The role attributed to the mining sector by the multilateral financial institutions was encapsulated in the words of one of the World Bank's Executive Directors, Paulo Gomes, who in September 2005, at a conference in Cape Town, declared:

The mining sector is set to play a key role in the World Bank's goal to alleviate poverty in Africa by 2015. (...) If we use mining as the key driver for growth then we would become less dependent on \$ 50 billion (in aid) that I am not sure will even come.⁹

However, while private sector investment and specifically foreign direct investment is the favored strategy by international financial institutions for addressing poverty, not all FDI is the same. It is commonly asserted that natural resource based FDI is quite different from other forms because it depends less on good governance and taxation than simply on the actual resource. Extractive companies have proven that they will work in the worst conditions (e.g. even war inflicted regions) simply to extract deposits.¹⁰ While investment in the extractive sector can provide critical revenues to states to undertake infrastructure and human capital investments, too often it results in the pillaging of a country's natural resource base and corruption. In addition, it is commonly noted the extractive sector most often fails to make a meaningful contribution to the development of national economies because it does not deliver significant employment for nationals, escapes taxation as an incentive to operate, does not have an economic multiplier effect through the creation of related value-added activities, has at times devastating environmental impacts and can generate health problems for communities near operations.

In order to contribute to longer term sustainable development, the approaches and strategies introduced in the rural and mining sectors must be defined by local actors, adapted to local conditions, respectful of the rhythm of local actors and sensitive to internal political processes. With the objective of exploring the compatibility of current trends with assumptions such as the above concerning the conditions required for contributing to sustainable and equitable social and economic development in certain

⁹ Quoted in Gareth Tredway. 2005. "Mining to Play a Key Role in World Bank Africa Plans," *MineWeb*, September 20 [online] http://www.mineweb.net/columns/curve_ball/489480.htm.

¹⁰ UN Millennium Project. *Investing in Development, op. cit.* : 48.

African countries, this study is organized around four main sections before drawing a set of conclusions.

In an attempt to re-examine the assumption about the relationship between economic growth and poverty reduction, the study traces the history of two sectors contributing to development in Mali and Burkina Faso, namely the cotton and gold sectors. Reviewing the historical development of these two sectors illustrates that certain economic strategies that fall outside of the liberalization/privatization model of the World Bank have contributed to the reduction of poverty. In addition, developments in these sectors suggest that the very strategies pushed by the World Bank have not succeeded in reducing poverty.

2. Cotton: An agrarian success story in West Africa

“Le coton avant d’être une marchandise est un lien social.”

“Much more than a commercial product, cotton is above all a social relation.”

- Pierre Adama Traoré at the Social Forum in Bamako, February 2004.

Cotton production is much more than the story of a crop. It is a critical tool for social and economic development. As such, it has been described as a “development driver for other economic sectors.”¹¹ In a very immediate manner, the development of the cotton sector has led to:

- The development of cotton seed processing;
- Local cotton fiber processing;
- The development of private transport;
- The growth of internal transit and seed delinting business;
- The development of rural economic exchanges; and
- The trading of various products.¹²

It has also led to the processing of derivative products (e.g. oil and seedcake). More generally, cotton production is a critical source of employment and livelihood in Mali and Burkina Faso. It has been estimated that cotton production ensures annual income for 3.5 million people in Mali and approximately two million in Burkina.¹³

Cotton is a major contributor to export revenues and to domestic economic activity. In Mali in the 1990s, cotton represented 50 to 60 per cent of the value of the country’s exports. In Burkina Faso in 2003, cotton generated 60 per cent of the country’s export revenue, contributing half of its foreign exchange revenue and more than one-third of gross domestic production (GDP). The link between cotton production and food security is illustrated by the fact that in Mali, 40 per cent of national cereal production comes from cotton zones. Cotton production plays the role of a catalyst for social and economic development. It helps cover the costs of social services and contributes to food security and poverty reduction in cotton growing areas of both Mali and Burkina Faso.

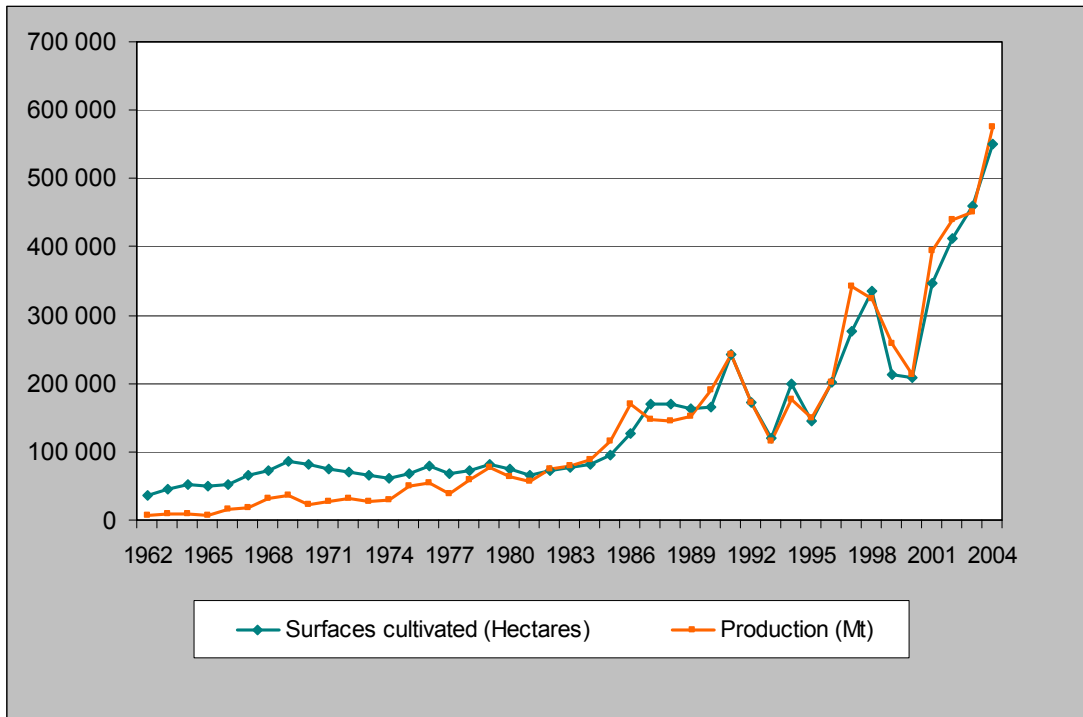
The following figures on surfaces cultivated and output produced for the period 1961 to 2003 - both based on the Food and Agriculture Organization of the United Nations, (FAO) figures contained in Annex 1- provide a concise picture of the success story of cotton production in Burkina Faso and Mali.

¹¹ BIRD and World Bank. 2004. “Cotton Cultivation in Burkina Faso – A 30 Year Success Story,” A case study from *Reducing Poverty, Sustaining Growth- What Works, What Doesn’t, and Why. A Global Exchange for Scaling Up Success*, Conference : Scaling Up Poverty Reduction : A Global Learning Process and Conference, Shanghai, May 25-27 : 10 [online] <http://info.worldbank.org/>.

¹² *Ibid.* : 10-11.

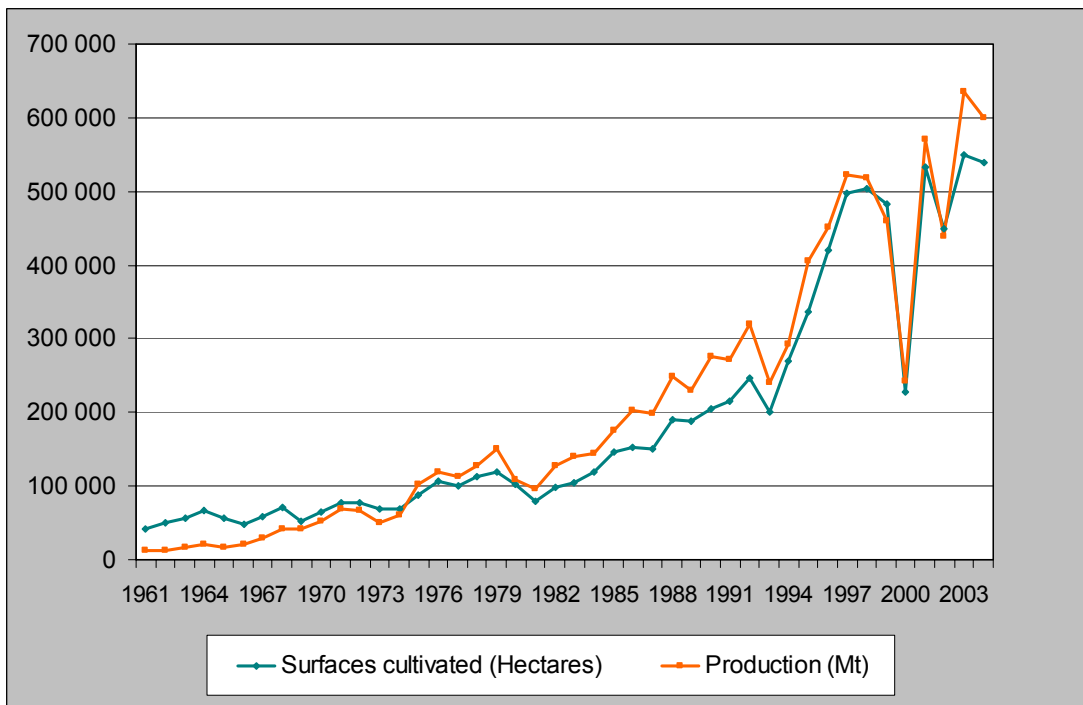
¹³ Estimate for Mali from James Tefft. 2004. “Mali’s White Revolution: Smallholder Cotton from 1960-2003”, *2020 Vision*, Focus 12, Brief 5, International Food Policy Research Institute (IFPRI), April [online] http://www.ifpri.org/2020/focus/focus12/focus12_05.pdf; And for Burkina Faso, UN Office for the Coordination of Humanitarian Affairs, “BURKINA FASO: Sahelian cotton farmers on their knees,” *IRINNews.org* [online] <http://www.irinnews.org/>.

Figure 1: Burkina Faso: Surfaces cultivated and production figures, 1961-2004



Food and Agriculture Organization of the United Nations (FAO). 2006. *FAOSTAT* [online] <http://faostat.fao.org/site/336/DesktopDefault.aspx?PageID=336>.

Figure 2: Mali: Surfaces cultivées and production figures, 1961-2003



FAO, *FAOSTAT*, *op. cit.*

The issue, of course, is how to explain this success and its impacts. The following historical review of the cotton sector will provide such an explanation while highlighting achievements in poverty reduction.

The 1960s to early 1970s: The beginnings of the “filière”—agricultural innovation and extension

Cotton was not one of the important traditional crops. Its cultivation under French colonial rule gave rise to certain excesses and to violence, notably as a result of the introduction of forced labor to ensure a workforce. Not surprisingly, cotton producers associated cotton production with colonial violence and food crop shortages.

Consequently during the first period of the extension of cotton after the political independence of both countries in 1960, the governments of Burkina Faso (which was called Upper Volta at the time) and of Mali, in association with the French parastatal, the *Compagnie française pour le développement des fibres textiles* (CFDT) which had been present in West Africa since the 1950s, had to create new forms of extension services, training programmes in order to overcome past resistances and to encourage peasant farmers to produce cotton.¹⁴ Rather than nationalizing the cotton sector at independence, the socialist leaning government of Mali, signed a ten year contract with the CFDT. The government of Burkina (Upper Volta) signed a similar accord with the CFDT in 1969/70 which conferred on the latter the responsibility for extension services for producers and a monopoly over the purchase of cotton seed and fiber. Development initiatives from this period on were organized however, on a regional basis and these were entrusted to various specialized agencies of which some were foreign.¹⁵

What is of note is that the objectives set in terms of rural development were tailored to the particular needs, potentials, and problems of each region. The strategy adopted was that of an integrated approach to the “filière” or “cotton chain,” which included programs to encourage cereal production and to promote functional literacy as of 1971, as well as programs to train blacksmiths to produce equipment for animal traction. During these early years, rural development strategies were based on supplying extension services and training as a means of persuasion to draw producers into cotton production.¹⁶

The training and extension programmes set up for producers led to the passage from the use of traditional techniques and tools to improved cultivation techniques and notably animal traction in less than one generation. The research and development that was carried out brought together researchers and peasant producers in the search for the improvement of seed varieties, not only of cotton but of food crops including corn, sorghum, millet, rice, vegetables and more recently the potato.¹⁷ In Burkina Faso, the

¹⁴ P.C. Bellem. 1985. *Coton et système de production dans l'Ouest du Burkina Faso*, Doctoral dissertation, Université Paul Valéry, Montpellier.

¹⁵ As well as the CFDT, agencies included the Société d'Aide Technique et de Coopération, (SATEC), and the Bureau National de Développement de la Production Agricole, (BNDPA).

¹⁶ Bellem, *Coton et système de production dans l'Ouest du Burkina Faso*, *op. cit.*

¹⁷ M. Coulibaly. 2005. “Recherche agronomique: les découvertes probantes de L'IPR/IFRA”, *L'Essor*, No. 15518, Mali, August 16 [online] <http://www.essor.gov.ml/>.

integration of cotton production with food crops began in 1969 as a result of a state initiative which included this requirement in the contracts which it signed with the rural extension companies. Cereal production was marked by a net increase at the same time.¹⁸ In Mali, the increase in the production of corn and its links to cotton in the zone of Sikasso illustrates the pertinence and the originality of this strategy which was adopted by producers to reach their objectives, as it was by the companies and by the state to meet their own.¹⁹ The increases in cereal production in the countries of the Sahel which resulted in the following years have been attributed to the introduction of animal traction and to the use of fertilizers in cotton production cultivated in alternation with cereal crops.²⁰

The period from 1960 to 1974 was a critically important one during which the French parastatal institution (CFDT), in association with the states of Mali and Burkina succeeded in introducing a model of agricultural development which was both adapted to local conditions and profitable.²¹

The model introduced during this first period, which has been called the “cotton system” is instructive as it allows one to see under what conditions these countries of the Sahel came to exercise control over key agricultural sectors in such a manner as to be able to draw relatively stable revenue from one year to another and to establish the basis on which to build social and economic development of their societies and populations more generally.

Early 1970s to mid-1980s: The creation of an integrated sector and organization of producer associations

As of the mid-1970s, the governments of the Sahel took control of the cotton sector while at the same time maintaining a partnership with the CFDT which retained its role of providing technical assistance. Mali nationalized its cotton sector in 1974 with the creation of the Compagnie malienne pour le Développement du Textile (CMDT), a joint venture in which the Malian state owned 60 per cent and the CFDT 40 per cent. Burkina Faso created SOFITEX (Société Burkinabè des Fibres Textiles) in 1979 along the same lines with the state owning 65 per cent, CFDT 34 per cent and private shareholders the remaining 1 per cent. Neither the past objectives nor the past strategies concerning the development of the cotton system were called into question. The Malian state entrusted an increasing number of public services to the CMDT, just as Burkina also did at the

¹⁸ Bellem, *Coton et système de production dans l'Ouest du Burkina Faso*, *op. cit.*

¹⁹ Club du Sahel et l'Afrique de l'Ouest (CSAO), Organisation de coopération et de développement économiques (OCDE). 2005. *Economic and Social Importance of Cotton in West Africa: Role of Cotton in Regional Development, Trade and Livelihoods*, Sahel and West Africa Club Secretariat/OECD, Issy-Les-Moulineaux (France), November [online] <http://www.oecd.org/dataoecd/49/19/35766122.pdf>.

²⁰ Fonds International de Développement Agricole (FIDA). 2001. *Évaluation de la pauvreté rurale en Afrique de l'Ouest et du centre*, Division de l'Afrique de l'Ouest et du Centre (Afrique I), Département gestion des programmes [online] <http://www.fidafrique.net/IMG/pdf/fida-strat-pauvrete.pdf>.

²¹ Louis Goreux. 2003. “Préjudices causés par les subventions aux filières cotonnières de l'Afrique de l'Ouest et centrale,” Study produced for Coopération française, ministère des Affaires étrangères, France [online] http://www.diplomatie.gouv.fr/fr/IMG/pdf/Prejudices_COTON_FR.pdf.

beginning of the 1970s. The measures setting out these arrangements were integrated into performance contracts (Contracts Plans) between each state and its parastatal responsible for cotton production, which defined their roles in the agricultural development and the general development of the country.²² The new responsibilities given the companies included the maintenance of rural roads, ensuring access to drinking water, the negotiation of the purchasing price of cotton and ensuring a stable source of revenue for producers, as well as the sale of cotton and the processing into fiber.

In both countries, this period was also characterized by the initiative to promote integrated rural development. This led to the creation of the first producer associations, through which producers participated in activities such as the sale of fertilizers, pesticides, and cotton, the management of agricultural credit, and the beginning of the first local development initiatives.²³

This integrated approach yielded a number of benefits. It ensured that producers had access to inputs (fertilizers, pesticides, and credit) and agricultural services (training, extension services, and support to producer associations). It also brought about the organization of a marketing system and the establishment of basic economic and social infrastructure (roads, schools, health centers, etc.). The cotton system had multiplier effects on agricultural development (e.g. encouraging the production of cereals), on households subsistence and access to services, on the economic development of the cotton zones, and consequently, on national economies.²⁴

The decisive element during this period was the capacity of the companies and the states to better understand the needs and aspirations of the populations and to integrate them into other activities within the framework provided by cotton production. To this end, the creation of producer associations was to play a critical role as they provided a vehicle for producers to put forward their needs and served as a means for the companies and the states to anchor firmly the agricultural strategies which were put forward as the basis of development. The pertinence of the strategies adopted during this period is best illustrated by the fact that they enabled the weathering of potentially destabilizing events, namely the droughts of 1969-1973 and 1984-1985.

This was also the period during which the national companies of Burkina and Mali benefited from the support of international institutions (the World Bank, the Fonds International de Développement Agricole (FIDA), from the French cooperation agencies through the Fonds d'aide et de coopération (FAC) and Caisse centrale de coopération économique (CCCE) which subsequently became the Agence française de développement (AFD).²⁵ Support from these institutions helped to reinforce their role as

²² Yves Bourdet. 2004. *A Tale of Three Countries – Structure, Reform and Performance of the Cotton Sector in Mali, Burkina Faso and Benin*, Country Economic Report 2004 : 2, Swedish International Development Cooperation Agency (SIDA), Sweden, August.

²³ Bourdet, *A Tales of Three Countries*, *op. cit.*; Tefft, “Mali’s White Revolution,” *op. cit.*; CSAO/OCDE, *Economic and Social Importance of Cotton in West Africa*, *op. cit.*

²⁴ CSAO/OCDE. 2005. *La concertation sur la crise du coton en Afrique de l’Ouest et du centre : Chronologie des évènements clés 2001 à 2005*, CSAO/OCDE, Issy-Les-Moulineaux (France), September [online] <http://www.oecd.org/dataoecd/49/8/35767069.pdf>.

²⁵ Tefft, “Mali’s White Revolution,” *op. cit.*

agencies of public service, intervening in areas which were complementary to cotton production and allowing them to respond to the needs and demands of producers and of the rural population more generally.²⁶ This was done notably by supporting producer associations and by developing cereal crops such as corn as well as sorghum and millet. In Mali the number of producer associations increased from one in 1974 to 4004 in 1981.

Cereal production and production of corn soared in the cotton zones particularly in the case of Mali. In spite of the after-effects of the droughts of 1969-73 and 1984-85, cotton production increased in both countries and contributed to ensure revenue to the state and to the local populations, while at the same time contributing to consolidate food crop production, poultry farming and the basis for community and social development.

Cereal production and production of corn soared in the cotton zones, especially in Mali. In spite of the after-effects of the droughts of 1969–1973 and 1984–1985, cotton production also increased in both countries, ensuring revenue to the state and to the local populations and contributing to food crop production, poultry farming, and community and social development.

Mid-1980s to mid-1990s: The results of the integrated sector - cotton, cereals, cattle, and the consolidation of the “cotton production support system”

During this important period, the vertically integrated structure of the cotton sector was completed. With this milestone, an orderly pattern of coordination and organization emerged for the activities surrounding production, including access to the factors of production and the integration of the cotton production chain more generally. The success of the pattern of organization around national companies and the integration of producers into this organization is illustrated by the unprecedented positive results in terms of production, as shown above in Figures 1 and 2.

A closer look at the comprehensive reforms that were introduced into the organization of the cotton sector in Mali in 1989 - including the credit and reimbursement relationships that linked producers to specific cotton companies - will help to illustrate the coherence of the structure that was responsible for the sector's success. The institutional and competitive structure of the sector resulted from a set of reforms which included the following:

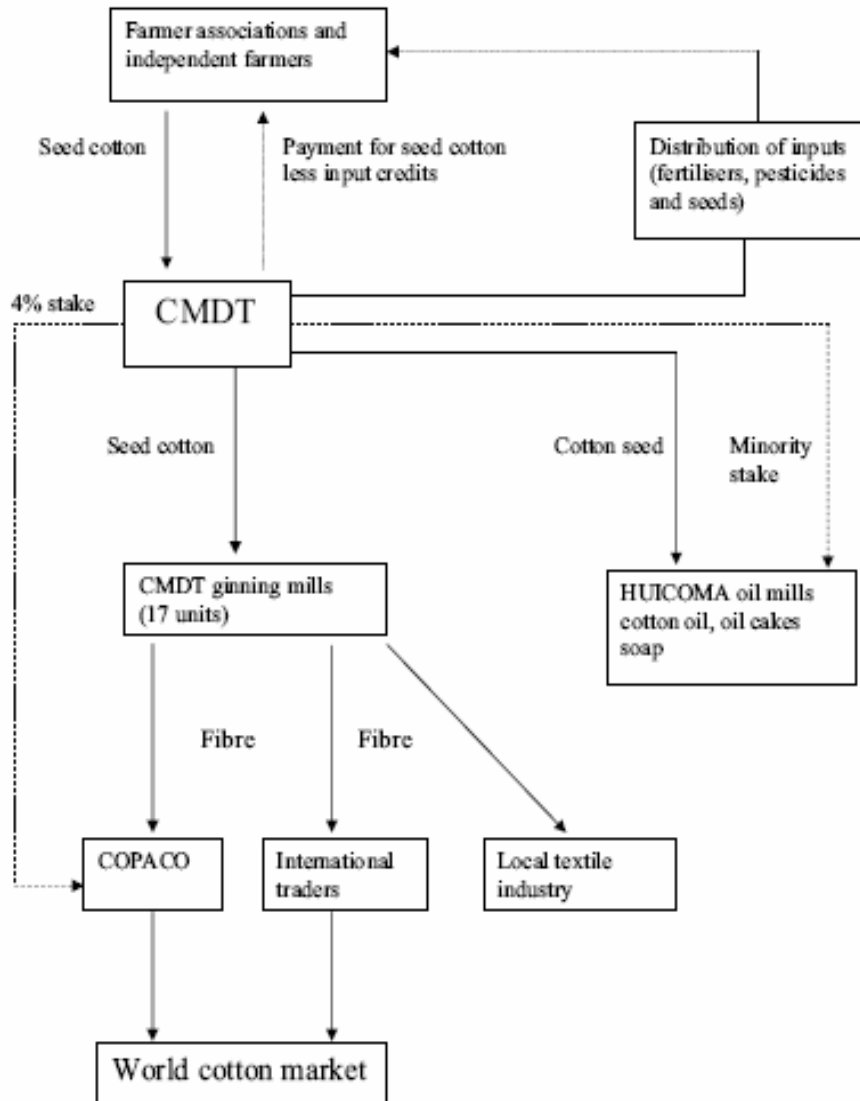
1. Strengthening the role of the CMDT and granting it financial autonomy.
2. Introducing a minimum producer price for cotton producers.
3. Establishing a stabilization fund under the responsibility of the CMDT, aimed at securing a minimum producer price and stabilizing farmers' income over time.
4. Introducing a rule for the distribution of profits between the stabilization fund, the CMDT, the state, and cotton producers (the rebate from profit sharing).
5. Setting up of the conditions required to lower the floor price paid to producers.²⁷

²⁶ *Ibid.*

²⁷ Bourdet, *A Tales of Three Countries*, *op. cit* : 17-18.

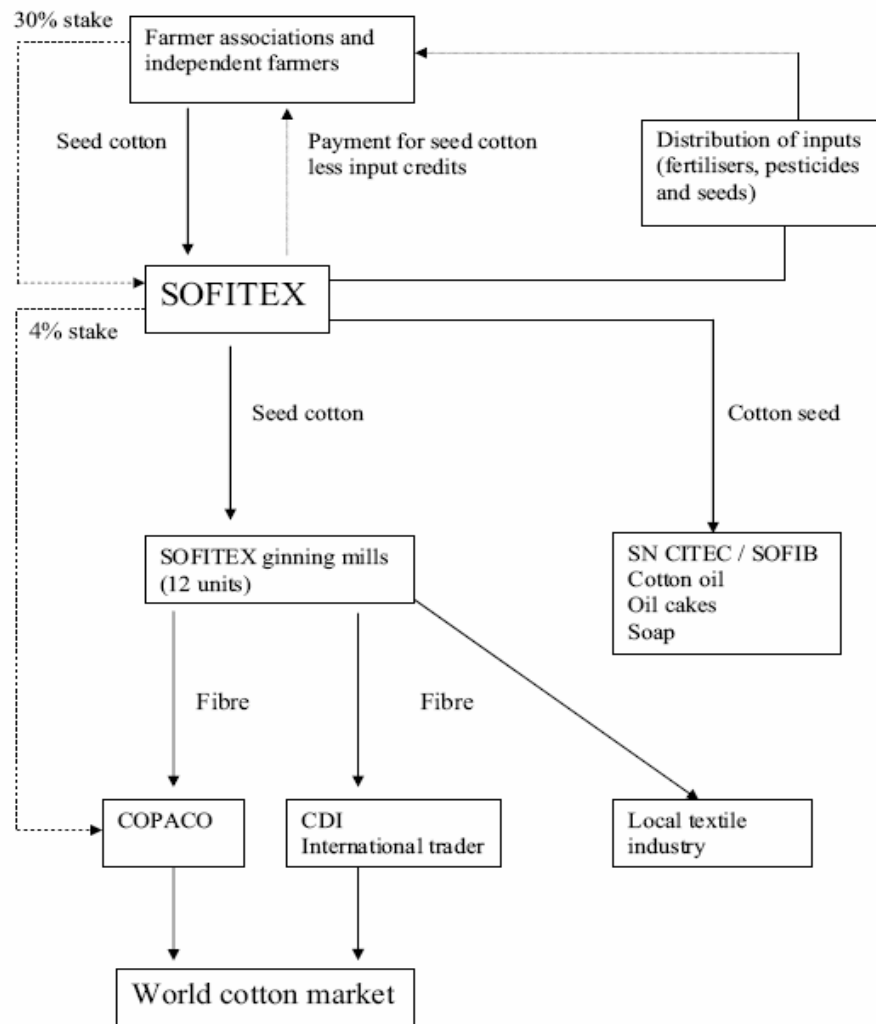
All measures were integrated in the performance contracts (Contrats Plans) between the state and the CMDT in 1989 and 1994 and supported by the bilateral and multilateral donor communities.²⁸

Figure 3: Institutional structure of the cotton in Mali



Bourdet, *A Tales of Three Countries*, op. cit. : 18.

²⁸ *Ibid.* : 17.

Figure 4: Institutional structure of the cotton sector in Burkina Faso

Bourdet, *A Tales of Three Countries*, *op. cit.* : 23.

The improved conditions under which production was organized gave producers a degree of control over certain aspects of their environment, including the use of improved agricultural techniques, equipment for animal traction, adapted seed varieties, and chemical fertilizers and pesticides. Consequently, in spite of the 1984–1985 drought and the reconstruction phase which followed, with the exception of the period 1993–1994, cotton production progressed continually and cereal production improved. Productivity (production divided by manpower) of traditional cereals (millet and sorghum) increased continually in Mali throughout the period from 1980 to 2001.²⁹ A similar positive

²⁹ Mohamed Ali Marouani and Marc Raffinot. 2004. *Perspectives on Growth and Poverty Reduction in Mali*, Working Papers DT/2004/05, Développement, Institutions & Analyses de Long terme (DIAL), Paris : 30.

correlation existed between the production of cotton and cereals (especially corn) in Burkina Faso.³⁰

However, in terms of economic and political reforms more generally, this period was the one which ushered in the introduction of structural adjustment measures. In spite of the very far reaching effects which these reforms were going to have over time, notably in reducing public spending, the emphasis in both countries remained on the continued improvement of agricultural techniques through better handling of animal traction, sowing in straight rows, the use of fertilizers and pesticides.³¹ Training programmes to improve techniques which had begun in Burkina in the 1970s, were to be reinforced through the introduction of what were called “cotton agents” and the creation of producer management councils. As a result of the lessons learnt during the periods of drought, the states increasingly attempted to orient their interventions in order to develop policies of food security and greater food self sufficiency. In order to meet this objective, it was necessary to put more emphasis on food crops (sorghum, millet, corn, etc). Given the solid implantation of the cotton “filière” or cotton chain, the structure for extending production was already established and served as a spring board to spur initiatives to diversify and intensify agriculture³². Moreover, the success of such policies in the cotton zones was clearly linked above all to the fact that they came in answer to the needs of producers and of the rural population who are most often the most severely affected by food shortages and famines.

The manner in which cotton production was organized encouraged yet another change: to make cattle and animals a source of labor, revenue, and accumulation. With the cumulated effects of the droughts, the cotton-growing zones, which were more watered, also became regions of concentrated cattle raising by traditional extensive techniques.

Finally, cotton production also gave rise to the beginnings of agriculturally based processing industries, notably seed cotton delinting and the production of cotton seed oil, oil cakes, soap, and food for livestock.

The results of the above, which can be summarized as an integrative approach to cotton, cereals and cattle, and with it the consolidation of the “cotton production support system” were to become fully manifest over the next period. Suffice it here to note that if the “cotton system” was able to produce the results which have been outlined, it was because it reflected not only the objectives of the states and the cotton companies, but above all it offered very concrete answers to the challenges of development facing the populations in the Sahel regions.

³⁰ Centre d'analyse des politiques économiques et Sociales (CAPES). 2003. “Exportations, croissance et lutte contre la pauvreté au Burkina Faso”, Conference of Dr. Abdoulaye Zonon, CAPES, Burkina Faso, April.

³¹ Alexandre Lalba and Gaspard Vognan. 2004. “Dynamique de l'intensification durable des systèmes de production mixtes ‘coton-céréales-élevage’ dans l'Ouest du Burkina,” Workshop on *Agricultural Good Practices in West Burkina Faso*, INERA and FAO, Bobo Dioulasso, March 18-20 [online] http://www.fao.org/prods/GAP/archive/INERAFAO_BPARappFinal_etude1BPA.doc.

³² *Ibid.*

Mid-1990s to mid-2000s: Current reform proposals

The World Bank has occupied the central role in shaping and promoting recent reforms introduced into the cotton sector through the PRSP process. Under the auspices of this institution, which has played a very active role in the design, timing and sequencing of the reform of the cotton sector in Mali and Burkina Faso, very profound changes have been introduced with a view to liberalize cotton sector activities in both countries.

In addition, as cotton revenues are seen as a main source of export revenues for the two countries concerned, as well as several others of the region and, given the downward trend of cotton prices, it has been considered necessary to improve the competitiveness of cotton seed production and to diversify export revenues. The strategies to improve the competitiveness are crop specific, focus on technical, economic and institutional policy measures and have as their foremost objective cutting costs and liberalizing further. The approach is uniform rather than country specific and hence it pays little attention to the particular situations involved and the more fundamental political processes of agrarian reform.

The World Bank has, as its stated objective, to increase exposure of producers to market forces by attempting to efficiently transfer market signals to them and to improve the technological package. The associated set of reforms includes four types of measures:

1. Updating the content of technological packages;
2. Improving the efficiency of fertilizer purchases;
3. Reducing insecticide costs; and
4. Strengthening supervision and research for a better usage of herbicides, etc.

To date, the former structures responsible for these activities have been gradually dismantled. However, the process of identifying what agents are to take responsibility for funding so that these measures can be carried out in a predictable and timely manner remains highly problematic.

Mali: Reform of the cotton sector and the objective of poverty reduction

In 1998, world cotton prices declined significantly, triggering losses for the CMDT. This prompted the IMF to call for an audit of the CMDT as a condition of financial support. The audit exposed inflated operating costs and alleged mismanagement of the CMDT, generating consensus at the World Bank and IMF that the CMDT must undergo partial privatization. From this point forward, the cotton sector has featured centrally in the reforms articulated in the PRSP approach and in IMF lending conditionalities.

The resulting measures, contained in the Malian government's "Letter of Sector Development Policy" in 2000, outlined a reform program for the cotton sector which aimed to achieve six major objectives:³³

1. Refocus CMDT operations on its core activities, ginning and marketing, and transfer public service programs, agricultural extension to local government agencies and supply of inputs and equipment and transport to the private sector.

³³ Bourdet, *A Tales of Three Countries*, *op. cit.* : 20-21.

2. Increase the degree of competition in the ginning sub-sector by opening up the Office de la Haute Vallée du Niger to a private operator, which will take over the ginning capacities of the CMDT in this zone.
3. Privatize the cotton oil public enterprise, Huilerie cotonnière du Mali, (HUICOMA).
4. Encourage the entry of new actors and the development of a more competitive mechanism in the marketing of cotton fiber for export. As a consequence reduce the market share for the Compagnie parisienne de coton (COPACO)
5. Increase the scope of private ownership in the cotton sector in a first stage, by opening up the capital of the CMDT to producers, and in a second stage, by privatizing the CMDT.
6. Gradually liberalize the cotton sector so that producer prices better reflect movements in international prices, and the prices of cotton seed and fiber paid by oil mills and the textile industry, better reflect the free play of supply and demand.³⁴

The reform of the sector strips the CMDT of its role to provide public and extension services to farmers, activities that should now be undertaken it is stated, by the government and private sector.

The medium-term objectives of the three-year reform program adopted by the government in November 2003 are as follows:

- Ensure that the CMDT continues to function well during the transition period;
- Privatize the CMDT and HUICOMA;
- Ensure that all accompanying measures are in place for privatization to be successful; and
- Strengthen producer associations so that they play an active role in managing the sector.

The program calls for the CMDT to be divided into three or four private enterprises, with each firm controlling a growing area in a first stage. The creation of several firms, it is suggested, will reduce the risk that a large monopsony presents to the economy. The report outlines a step-by-step timetable for the CMDT's privatization, which includes the progressive transfer of input distribution to regional producer associations.

Significantly, the issue of privatization of the CMDT, as well as that of the Malian telecommunications company, Société des Télécommunications du Mali (SOTELMA), are presented in the 2004 Poverty Reduction and Growth Facility (PRGF) as the primary focus in the proposed program. The public enterprise that produces pharmaceutical products, Usine malienne de Produits Pharmaceutiques, (UMPP) is also to be privatized.

³⁴ The precise strategies and timetable for implementing these proposals are spelled out in various documents produced by the multilateral financial institutions including: International Monetary Fund (IMF). 2004. "Mali: Request for a Three-Year Arrangement Under the Poverty Reduction and Growth Facility", *IMF Country Report*, No. 04/184, IMF, Washington D.C., June.

The government's shares in the equity of a river transportation company and a sugar company are to be reduced to 20 per cent.³⁵

The adoption of privatization plans for the CMDT and for SOTELMA are among the structural conditionalities of the proposed PRGF arrangement.³⁶ According to this IMF document, the key challenges which Mali will face in the period ahead are to ensure continued macroeconomic stability and to promote the strong, sustainable growth that is needed to make significant inroads on poverty.³⁷

Mali's first PRSP or *Cadre Stratégique de Lutte contre la Pauvreté* (CSLP) was adopted in May 2002. Among the eight strategic priorities set out in that CSLP was one which called for encouraging the development and improvement of the performance of the "filière agro-alimentaires" where the poor are concentrated.³⁸ The overall objective was to reduce the percentage of the population who are poor to 47.5 per cent in 2006 from 63.8 per cent at the time the document was adopted. In order to achieve this goal, the key macro-economic objectives aimed to achieve an annual rate of economic growth of 6.7 per cent over the period 2002-2006, with a rate of investment of 22.6 per cent, a rate of inflation below 3 per cent, a deficit of the current account inferior to 9 per cent of the GDP.

It is important to note however, that the correlation between growth and poverty reduction suggested here has been questioned by the World Bank itself as will be discussed in the next chapter. This raises the fundamental question as to why the central means to reduce poverty remains to the present a strategy based on increasing the annual growth rate with so little attention paid to the distributive implications of the policies proposed.

With regard to achieving the above growth objectives, the initial CSLP noted that particular attention would have to be paid to the development of the cotton sector because of its central place in the economy. The objectives of the reforms for the cotton sector include the following:

- Reduce production costs;
- Improve yields by increasing extension services;
- Increase the participation of peasant associations through the creation of producer associations;
- Reinforce the participation of the private sector, producers, and decentralized community associations in achieving the objectives which were formerly those of the public sector;
- Increase the contribution of the sector to the national economy;
- Contribute to the struggle against poverty by improving the quality of life of the population;
- Achieve price fixing in the sector through free negotiations among agents.

³⁵ IMF, "Mali: Request for a Three-Year Arrangement," *op. cit.* : 16-17.

³⁶ *Ibid.* : 25.

³⁷ *Ibid.* : 13.

³⁸ République du Mali. 2002. *Cadre Stratégique de Lutte contre la Pauvreté*, Document prepared and adopted by the Government of Mali, Bamako, May 29 : 37.

To reach these objectives, the CSLP put forward three strategies:

1. Reorient the activities of the CMDT. Support its progressive disengagement from its role as supplier of public services, extension services, inputs and equipment and from its role in transportation. Rationalize the use of human resources.
2. Improve participation of producers in the management of the cotton filière by opening up CMDT's capital to producers and workers.
3. Liberalize the cotton and seed oil sectors. Open them up to competition to improve their competitiveness and output and to better draw value added from their by products.³⁹

From these objectives, one can conclude that the strategy privileged for achieving poverty reduction is based above all on achieving macroeconomic stability and sustainable growth rates through reform for key productive sectors. The assumption appears to be that privatization and the free play of market forces will bring greater competitiveness, which will translate into growth and poverty reduction. Support for the critically important cotton sector has been limited to strategies that seek to cut costs, increasingly expose producers to the fluctuation of world market prices, ensure the state's withdrawal from its historical role and privatize in order to increase competitiveness.

In July 2004, the government of Mali indicated its intent to delay the privatization of the CMDT to 2008 based on the following three reasons:

1. The need to strengthen producer organizations;
2. Delays in recruiting advisors for the privatization process; and
3. The Presidential elections that were scheduled for spring 2007 (cotton reforms are understood by elected officials as a political risk).⁴⁰

A fourth Structural Adjustment Credit for \$US16.5 million was approved to Mali as a "transition instrument" contingent on reforming the price-setting mechanism in the cotton sector for the 2005/2006 cotton season. However, because the government of Mali delayed reforms to the cotton sector, it cannot receive larger forms of support from the World Bank in the form of a Poverty Reduction Strategy Credit (PRSC).⁴¹ The overarching objective articulated in the Structural Adjustment Credit (SAC IV) is "to contribute to broad-based growth and poverty reduction by strengthening fiscal policy and financial sector underpinnings of stable, long-run growth."⁴² According to this document, one key way this will happen is by promoting fiscal discipline and reducing fiscal risks to the budget from the cotton company finances.

³⁹ République du Mali, *Cadre stratégique de lutte contre la pauvreté*, *op. cit.* : 70.

⁴⁰ World Bank. 2005. *Proposed Fourth Structural Adjustment Credit (SAC IV) to the Republic of Mali*, World Bank, Washington D.C., February 22 : 5.

⁴¹ *Ibid.* : 15-16.

⁴² *Ibid.* : 16.

The pricing mechanism was adopted in January 2005. Briefly, it established a base price and a final price. It set the base price range at \$US 0.31 to \$US 175⁴³ (Fcfa 160-175) (down from \$US 0.41 [Fcfa 210 per kg]). A system for surplus sharing was established if the market price exceeds the base price. If the base price is expected to be higher than the future market price then it can be lowered. Finally, a support fund was included for when the market price falls below the base price, but it could only be used to the extent that it was financed, a critically important question which was left unresolved.

Burkina Faso: Reform of the cotton sector and the objective of poverty reduction

Cotton production has been described as a “development driver for other economic sectors.”⁴⁴ Specifically, the development of the cotton sector has led to:

- The development of cotton seed processing;
- Local cotton fiber processing;
- The development of private transport;
- The growth of internal transit and seed delinting businesses;
- The development of economic exchanges in the rural environment; and
- The trading of various products.⁴⁵

In Burkina Faso, positive outcomes have resulted from the commitment and coordination of all partners involved but above all, that of the government which has consistently supported this sector of development.

The parastatal responsible for most of the commercial and industrial activities of the sector and for various support services, SOFITEX, deserves much of the credit for the sector’s success. Its excellent financial performance has enabled it to maintain or increase prices paid to producers despite the unfavorable world market. The company’s solid results have given it strong credibility with the banks.

By any account, it is a central and constant conclusion that Burkina Faso’s cotton sector has been and is very well run. In recent years, there has been no need for balancing subsidies even when world prices dipped to their lowest. A key factor in the sector’s success is the permanent advice and support available. Moreover, the highly efficient organization of agro-input distribution and gathering of seed cotton guarantees very good credit security. SOFITEX’s ginning performance levels as illustrated in the FAO figures in Annex 1 and the grading and sale of cotton fiber⁴⁶ and seeds are very good. The outcome is that the country’s ginning costs are among the lowest in the world, and it has very good returns on fiber sales on the world market. Pricing systems, which are set by

⁴³ Average exchange rate (2004-2005) of Bank of Canada: 1 Fcfa = \$US 0.001952 (due to rounding, some conversions may not be exact).

⁴⁴ BIRD and World Bank. “Cotton Cultivation in Burkina Faso”, *op. cit.* : 10.

⁴⁵ *Ibid.* : 10-11.

⁴⁶ Michel Fok (Centre de coopération internationale en recherche agronomique pour le développement (CIRAD)). 2005. “Coton africain et marché mondial: une distorsion peut en cache une autre plus importante”, Conference of Agence Universitaire de la Francophonie, *Filières d’exportation de produits agricoles du Sud: réformes institutionnelles, négociations internationales et impacts socio-démographiques*, Bamako, April 6-7 [online] <http://www.oecd.org/dataoecd/38/34/34743843.pdf>.

consultation and stabilization mechanisms, have worked very well. Proper stabilization funds management enabled SOFITEX to maintain the guaranteed base price to the producers, even when the world prices were at their lowest.

There cannot be a shadow of doubt: This sector has been very well managed by SOFITEX. Its management is based on mutual trust between SOFITEX and the other actors, with the producers assuming a key and central place. Indeed, SOFITEX's excellent administration offers no justification for the reforms proposed by the multilateral financial institutions as a condition to access their funds as was suggested in the case of Mali.

As with the reform of this sector in other West African countries, the overall goal of World Bank driven reform is to increase the scope of the private sector in cotton production and to foster competition in the different sub-sectors. The liberalization of the sector in Burkina involves reforms in three areas:

1. The first and "real" privatization concerns the opening up of two production zones (Center and East) to new private operators. These new operators were to take over the ginning capacities of SOFITEX in the two zones which account for about 17 per cent of the total ginning capacity of SOFITEX.⁴⁷ The procedure for transferring SOFITEX'S assets in the two zones was to be finalized by June 2004.
2. The second concerns the liberalization of input markets. This is proceeding very slowly mainly because farmer organizations find it difficult to secure credits for the purchase of inputs without the guarantee of SOFITEX.
3. The third reform concerns the opening up of the transport of seed cotton to private carriers (instead of SOFITEX vehicles).

Simultaneously, through the national cotton producers association, the Union Nationale des Producteurs de Coton du Burkina Faso (UNPCB), producers have assumed a stronger position in the sector since the beginning of the millennium, notably as of 1999 when they bought 30 per cent of SOFITEX's capital in shares previously held by the state which is no longer the absolute majority shareholder.

Although there are certain differences between the two countries concerning the manner in which measures of liberalization of the cotton sector are being implemented, nevertheless, in many ways the reforms contained in Burkina Faso's PRSP are similar to those present in Mali's PRSP. The first and most central objective is to ensure the introduction of the right economic policies which are intended to open up the economy to private operators and to achieve macroeconomic stability. Significantly, in his preamble to the country's PRSP, Burkina's Minister of the Economy and Development identified the following as his first and foremost objective in the struggle against poverty:

The completion of measures of economic and structural reform with a view of creating a favorable environment for business, for competition, and for private investment. In this perspective, the Government will introduce the initiative 'contrat d'objectifs' with operators from the private sector.⁴⁸ (Our translation)

⁴⁷ Bourdet, *A Tales of Three Countries*, *op. cit.* : 25.

⁴⁸ Burkina Faso. 2004. *Cadre stratégique de lutte contre la pauvreté*, Ministère de l'économie et du développement, Burkina Faso, July : vii.

Burkina Faso's 2004 Cadre Stratégique de Lutte Contre la Pauvreté (CSLP or PRSP) has the overall objectives of accelerating broad-based growth (aiming for an annual growth rate of seven per cent), promoting access to basic social services by the poor, equitably increasing employment and income-generating activities for the poor, and promoting good governance. The strategy further outlines that broad-based growth requires: maintaining a stable macroeconomic environment; improving competitiveness; reducing factor costs; and accelerating rural development and support of the productive sectors. In particular, improving competitiveness, reducing factor costs, and accelerating rural development set the agenda for reforms to the cotton sector. While improving competitiveness involves increasing school enrolment and developing technical training, it also involves improving the effectiveness of public investment of which agriculture accounts for 30 to 35 per cent of spending. Reducing factor costs translates into market liberalization, privatizing existing structures, and cutting social welfare paid by employers.⁴⁹ To equitably increase employment for the poor, the government proposes focusing on agriculture as it is the leading source of jobs and income.

With regard to the cotton sector, Burkina Faso's CSLP suggests its overall objective is to maintain and reinforce increased production. It asserts a need to intensify production through new technologies, inputs, and better balancing of risk.⁵⁰

In light of the conditions on which past successful results were based, it is difficult to see how these objectives are to be achieved, particularly given the following present and proposed reforms:

- Liberalizing the input market;
- Opening up the transport of seed cotton to private carriers;
- Liberalizing further notably by opening up the East and Centre zones.

To date these reforms have created three regional monopsonies which replace a single national monopsony.

While it is still early to anticipate the consequences of these reforms in Burkina Faso, certain comparative experiences can throw some light on possible outcomes. The zoning model which is being introduced in Burkina Faso is primarily designed to manage the key input supply, credit, and reimbursement relationship that links producers to specific cotton companies.⁵¹ A look at the experience of Côte d'Ivoire, which has had a similar model in place for a longer period of time, is revealing of what may happen in the context of weakened state forms. Under World Bank pressure to privatize its parastatal responsible for the cotton sector, the Côte d'Ivoire government sold six of the *Compagnie Ivoirienne pour le Développement des Textiles* (CIDT's) 10 cotton mills in 1998.⁵² Like the CIDT, the new companies received the right to monopolize input distribution and markets in "their" zones. However and contrary to the agreement, a new gin bringing

⁴⁹ *Ibid.* : 70.

⁵⁰ *Ibid.* : 73-74.

⁵¹ Tom Bassett. 2005. "Price Formation and Power Relations in the Cotton Value Chains of Mali, Burkina Faso and Côte d'Ivoire", Oxfam America (draft), Washington : 12.

⁵² *Ibid.* : 15.

together the cotton grower's union and the US cotton gin manufacture, Continental Eagle, was created in one of the zones in 2002. The breakdown of the cotton zone model of privatization accelerated in 2003-2004 when the cotton growers' union and two textile firms constructed a new gin squarely within the CIDT's zone.⁵³ The two resulting new ginning companies are unlike existing cotton companies in that they do not provide inputs to producers.⁵⁴ Consequently, they illustrate the possibility of the breakdown of the credit and reimbursement relationship that aimed to link producers to specific cotton companies and which formed the basis of the zoning model.

While the non respect of the agreement in the case of the Côte d'Ivoire has undoubtedly, to do in part with the political situation there, the issues this comparison raises are twofold. First, is the very real possibility that dismantling of the parastatal responsible for cotton production and accompanying extension services be done in such a manner that it fails not only to ensure the conditions explaining the success of the production of a strategic crop, but as well, without provision to ensure the continuation of the services formerly supplied by the parastatal (extension services, inputs, credit, etc). Second, is the risk that the weakening of the role of parastatal institutions in the strategic cotton sector in countries such as Burkina Faso and Mali, a consequence which is in fact at the centre of the proposed reforms, contributes to weakening state legitimacy and the capacity of the latter to ensure the successful implementation of the very reforms which the countries concerned have been requested to bring in.

In spite of the high standard of efficiency achieved consistently over the years by SOTITEX and the unquestionable results in terms output, yields, rural development and poverty reduction achieved through a broad approach including the regulatory and coordinating role played by the parastatal, recent reforms have not been based on past approaches. It is not an exaggeration to note that the elements of the cotton sector which are at the root of this success are those targeted by the multilateral financial institutions for dismantlement.

This seems paradoxical on several accounts. First, it should be noted that the cohesion of the integrated cotton sector rested on several factors. Key among these was the role played by the parastatal in supplying extension services, as well as access to inputs, credit, and transport in a coordinated, timely, and orderly manner throughout the cotton growing regions of the country. Reform plans now assume the private sector will play these roles, but in fact the private sector has not assumed these activities. In the absence of the role played by the parastatal, what agents will fill this void and how will the new organization of the sector develop and be funded? Into regional private sector monopsonies as in the case of Cote d'Ivoire? And if so, with what implications for the various actors involved and the livelihoods of the populations concerned?

Secondly, under the former system, the sector was run with remarkable efficiency and poverty was receding in cotton producing areas. In view of the current emphasis on poverty reduction as the corner stone to development strategies, one might have expected that greater attention would have been paid to the conditions which explain past favorable

⁵³ *Ibid.* : 14.

⁵⁴ *Ibid.* : 15.

trends in this area. This would seem particularly important as poverty levels are not stable but increasing in Burkina Faso.⁵⁵

Moreover, in spite of the unquestionable results achieved in the past by the former integrated cotton filière in which government commitment was recognized as a key factor explaining the sector's success and in spite of the position taken by civil society groups such as those at the Social Forum in 2003 in favor of a more active role for the state in the PRSP process⁵⁶, there is little evidence that such considerations are incorporated into the CSLP as presently formulated.

While Mali's reform process continues to be delayed, Burkina Faso's reform experience offers some key issues and experiences for consideration regarding the very purpose and expected impact of reforms.

⁵⁵ Burkina Faso, *Cadre stratégique de lutte contre la pauvreté*, *op. cit.* : 1.

⁵⁶ *Ibid.* : 10.

3. Cotton and poverty reduction: past trends and future concerns

In light of cotton sector development and the reforms recommended by the multilateral financial institutions outlined above, this chapter discusses the sector's contribution to economic development in Mali and Burkina Faso in recent decades. It argues that, despite the unmatched contribution of cotton to poverty reduction across cotton producing areas in these countries over time, current reforms are likely to reduce the sector's capability of sustaining millions of farmers as it has in the past. Reforms are reducing public sector support to cotton without assuring that the private sector will fill in the gaps, while keeping silent as to the sector's capacity to improve the welfare of the populations concerned. The disturbing irony of the approach contained in Mali's and Burkina Faso's first PRSPs is that the projected impact assessments in the sector studied actually indicate that reforms will increase poverty. According to the World Bank, reforms could contribute to lower producer prices which could lead to a "cotton crisis" with farmers stopping or substantially reducing production and with households unable to compensate with income earned elsewhere or by increasing the production of food crops.⁵⁷

That cotton is central to the economies of Mali and Burkina Faso is clearly evident in some basic facts. Cotton sustains about three million people in Mali, including 180,000 farm households. In Burkina Faso, 17 per cent of the population depends on cotton for their livelihoods, including 200,000 farmers and 700,000 farm workers.⁵⁸ And at the national level, in the past, cotton has accounted for about 40 to 50 per cent of the value of exports in Mali, and 60 to 70 per cent in Burkina Faso. Beyond these figures, cotton promotes economic growth, food security, and poverty reduction, and provides much needed funds for building and maintaining schools, health clinics, and rural roads, all contributing to the wellbeing of millions of households and communities.

Growth

Cotton production has boomed in both countries over the past decade, growing at an average annual rate of 9 per cent in Mali⁵⁹ and 16 per cent between 1995 and 2005 in Burkina Faso.⁶⁰ During this same period, GDP growth hovered around 5-6 per cent. Though there are no studies that quantify the contribution of the cotton sector to these growth rates, in both countries GDP growth is tightly linked to their respective agricultural sectors of which cotton is an important part.⁶¹ In addition, cotton production generates multiplier effects to other sectors in the economy. Income from cotton generates demand for home construction materials, bicycles, generators, sewing

⁵⁷ World Bank, *Proposed Fourth Structural Adjustment Credit*, *op. cit.* : 76.

⁵⁸ BIRD and World Bank. "Cotton Cultivation in Burkina Faso," *op. cit.* : 9.

⁵⁹ Tefft, "Mali's White Revolution," *op. cit.* : 1.

⁶⁰ Louis Goreux. 2005. "Le coton au Burkina Faso," Notes prepared for OECD, January [online] <http://www.oecd.org/dataoecd/12/48/36047485.pdf>.

⁶¹ Marouani and Raffinot, *Perspectives on Growth and Poverty Reduction in Mali*, *op. cit.* : 71.

machines, and other consumer goods,⁶² as well as for labor associated with these goods, including carpenters, blacksmiths, and bicycle repairers.

Poverty

Despite the impressive growth rates mentioned above, national poverty rates remain unchanged, as do national indicators on health, education, and infrastructure. Burkina Faso and Mali are among the poorest countries in the world. Approximately two-thirds of Malians live below the poverty line, with about one-fifth of the population living in extreme poverty and the country's social indicators are significantly lower than the average for Sub-Saharan Africa.⁶³ In Burkina Faso, nearly half (46 per cent) of the population lives below the poverty line.⁶⁴

As shown in this study, cotton has lowered poverty levels locally across cotton producing villages, where revenues from cotton production are often the only source of cash income for producers, accounting on average for 75 per cent of total cash income per household. A typical cotton farmer in Mali produces about two hectares (five acres) of cotton and earns less than \$US 280 annually. Although this is low, cotton producers are generally better off than non-cotton producers and better able to emerge from poverty.

In Burkina Faso, the average cotton farm produces 3.75 hectares of cotton and earns about \$US 115 annually. With the average monthly expenditure for rural households at about \$US 276 annually, cotton constitutes a critical source of cash to cover basic necessities. Cotton is the only crop that provides farmers with guaranteed earnings and enables them not only to cover their production costs and personal expenses, but also to accumulate livestock, buildings, equipment, and other capital. As a result, poverty rates among producers of cotton and other cash crops tend to be lower than for farmers producing only food crops.⁶⁵

Food security

There are at least two ways in which cotton production fosters food security: by providing cash for food purchases, and by supporting the production of food crops. Cotton revenues provide households with essential income to purchase basic foodstuffs. In Mali, well over half of rural households still do not produce sufficient food to meet their needs, hence food security depends on regular access to income (in addition to affordable prices for food).⁶⁶ However, many parts of West Africa are unable to diversify

⁶² Tefft, "Mali's White Revolution," *op. cit.* : 31.

⁶³ IMF. 2002 "Mali Selected Issues and Statistical Annex," *IMF Country Report*, No. 02/1, IMF, Washington D.C.

⁶⁴ World Bank. 2006. *Project Appraisal Document for Agricultural Diversification and Market Development Project*, Vol. 1. No. 35389-BF, The World Bank, Washington, D.C., May 23.

⁶⁵ Louis Goreux, "Préjudices causés par les subventions aux filières cotonnières," *op. cit.* According to Goreux, the incidence of poverty among cash crop farmers declined from 50 per cent to 42 per cent between 1994 and 1998, compared to an increase of 2 per cent among food producing farmers.

⁶⁶ James Tefft and Valerie Kelly. 2004. "Understanding and Reducing Child Malnutrition in Mali: Interim Research Finds for the Project on Linkages between Child Nutrition and Agricultural Growth,"

beyond cotton and cereal production and have limited alternatives to cash crops and other income-generating activities. In view of this, a study from the Organisation for Economic Co-operation and Development (OECD) has argued that a long-term decline in cotton production in Mali could trigger declines in maize and millet production. These declines could lead not only to decreases in farmer incomes, but to declines in the supply of food grains to urban populations, a situation that could threaten food security and the stability of state budgets.⁶⁷

Cotton also promotes food security by enabling farmers to apply improved agricultural techniques used for cotton to other crops. The cotton sector makes the supply of fertilizers for cereal farming easier, either because the latter is rotated with cotton and thus benefits from left-over cotton fertilizer, or as the experience of Burkina Faso illustrates, because cotton producers take advantage of the producers' association (UNPCB) initiative, which made arrangements for delivering cereal fertilizers from the 2000-2001 crop year onward, to limit the diversion of cotton-fertilizers to cereals.

In fact, cotton producers who have learned to use fertilizers and other inputs and have more equipment (animal-drawn farming) often obtain better yields in their food crops than non-producers of cotton.⁶⁸ A study by the World Health Organization (WHO) in Burkina has shown that the rotation of cotton and corn led to a more balanced diet than the cultivation of cotton alone. The study concluded that the expansion of cotton was largely responsible for the improvement of the health of households in the cotton zones.⁶⁹

Improvements in infrastructure and basic services

Aside from sustaining millions of farm households, the cotton sector has also been a source of revenues to fund critically needed roads and basic services, including health clinics and schools that have improved the standards of living for those in the cotton zones. This has occurred through investments by governments and state enterprises as well as through producer organizations.

Continued growth in the cotton sector has generated government revenues, enabling the government to provide extension services, access to credit, roads and schools in cotton zones across Mali and Burkina Faso. Farmer organizations in Mali have played an important role in cotton producing zones. The investment of the revenues earned from marketing and cotton seed assembly fees has had an impact in the cotton sector but more importantly in social infrastructure in the form of new schools and health centers. The

International Policy Briefs 60, Department of Agricultural Economics, Michigan State University, Michigan, December : 2.

⁶⁷ CSAO/OCDE, *Economic and Social Importance of Cotton in West Africa*, *op. cit.*

⁶⁸ Lalba and Vognan, "Dynamique de l'intensification durable des systèmes de production mixtes," *op. cit.* : 13.

⁶⁹ Louis Goreux and John Macrae. 2003. "Reforming the Cotton Sector in Sub-Saharan Africa," *Africa Region Working Paper Series*, No. 47, World Bank, MAE, AFD, March : 7 [online] <http://www.worldbank.org/afr/wps/wp47.pdf>. This report quotes a study from the Ministère de l'Économie et des Finances. 1999. "Analyse de la Pauvreté au Burkina Faso", INSD.

cotton funds have enabled communities to successfully increase schooling rates and improve access to medical care.⁷⁰

Historically the cotton filière system has contributed to the building of schools and the development of literacy programs and women's income generating programs. In some cases, villages have also used cotton revenues to build cereal stores or cereal banks, providing better storage for their crops. "In Mali in good years, cotton generates on average 120 billion CFA in incomes for producers, 18 for the banks associated with agricultural credit and marketing, not to mention taxes and the indirect returns for the whole of the economy. The CMDT has therefore a strategic mission which should not be up for negotiation"⁷¹ Besides supporting educational initiatives, the CMDT contributed more broadly to improved livelihoods and food security by helping producer organisations with the collection and marketing of cereal crops; promoting cattle feedlots; promoting sheep fattening; promoting the production of bullocks to replace draught oxen; and promoting women's income generating activities (e.g. processing). For all these activities, the CMDT provided technical assistance and facilitated access to credit. As a result of these efforts, cotton zones tend to be areas where the largest amounts of cereals and other food crops are produced.⁷²

In a very similar manner, in Burkina Faso, SOFITEX has provided cotton farmers with much more than just a market. The study noted above conducted by the World Health Organisation found that the cotton-maize mix provided households with a greater cash income and led to a better and more balanced diet than *niebe* (a leguminous plant) alone. The study concluded that: "the expansion of cotton cultivation was a major factor in improving health of households located in the cotton belt. From 1993/94 to 1997/98, cotton production increased by 175 per cent and poverty incidence among cotton growers declined from 50 per cent in 1992 to 42 per cent in 1998, while it increased by two percentage points among subsistence farmers."⁷³ Moreover, in addition to having historically provided growers with a means to ensure more predictable incomes, increasing food security, etc, SOFITEX has been directly involved in improving the country's infrastructure as for example by embarking on a 450-kilometre rural roads construction and renovation program in 2003 in the Centre-East, Southwest and Cascades cotton-producing regions across 9 provinces.⁷⁴

Cotton farmers have also invested in basic social services in their communities, especially important in light of low government spending. This is particularly important to note because it is a form of private sector investment—the very concept which is at the core of World Bank reform policy. Cotton farmers in Burkina Faso also invest in community services through rebates. Between 1997/87 and 2002/03, farmers invested \$6.5 million into community resources such as schools, hospitals, and maternity units, with visible

⁷⁰ Tefft, "Mali's White Revolution," *op. cit.* : 32.

⁷¹ A former cadre of the CMDT, interviewed July 12, 2005, Bamako.

⁷² CSAO/OCDE, *Economic and social importance of cotton in West Africa*, *op. cit.*

⁷³ Ministère de l'Économie et des Finances, "Analyse de la Pauvreté au Burkina Faso", *op. cit.*

⁷⁴ Lalba and Vognan, "Dynamique de l'intensification durable des systèmes de production mixtes," *op. cit.* : 12-14.

results.⁷⁵ Literacy rates and school attendance rates in cotton producing regions are higher than national average rates at 34 and 56 per cent respectively compared to 21.8 and 44.1 per cent.⁷⁶

Reasons for concern

Cotton has undoubtedly generated strides in agricultural development in Mali and Burkina Faso, contributing to farm productivity, to economic added value and the improvement of rural livelihoods. In view of these accomplishments, there is a certain irony in the fact that it is precisely when numerous sources⁷⁷ concur concerning the very positive results of the past integrated approach to cotton production that the sector is facing both demands for reform of those aspects which seem most central to its success and even dismantling.

In Burkina and Mali as elsewhere in West Africa, it has taken over 40 years to build an integrated sector which included cotton, cereals and cattle and to consolidate what came to be known as the “cotton production support system” capable of weathering economic difficulties such as international price subsidies, severe climatic difficulties and political changes. However, it is this system which is being dismantled, thereby stripping these countries of their ability to compose with the impacts of the price suppressing effects of rich country subsidies to cotton and current unfavorable exchange rates due to a weak US dollar.

The brief historical overview above demonstrated that the institutional support and political commitment of the governments in Burkina and Mali have been among the central factors explaining the cotton sector’s success in both countries. Moreover, the resulting cotton production support system is central to understanding that the success of cotton was much more than the success of a crop but of an approach to agricultural development that met the needs of the local population by improving livelihoods and reducing poverty.

According to the IMF, the key challenges Mali faces in the period ahead are to ensure continued macroeconomic stability and to promote strong, sustainable growth. The IMF suggests these challenges can be addressed by improving the climate for private-sector-led growth by deregulating and diversifying the economy, improving its underlying competitiveness, and hence reducing its vulnerability to exogenous shocks and weather conditions. Such an approach, it is suggested, is needed to make significant inroads on poverty. The claim is that, in pursuing these objectives, Mali will be focusing on improving governance, expanding access to health, education, and other basic social services, developing infrastructure, and supporting key productive sectors - all set out as priorities in the PRSP for reducing poverty.

⁷⁵ BIRD and World Bank, “Cotton Cultivation in Burkina Faso,” *op. cit.* : 13; Lalba and Vognan, “Dynamique de l’intensification durable des systèmes de production mixtes,” *op. cit.* : 13.

⁷⁶ *Ibid.*

⁷⁷ Jean Sibiri Zoundi (Dr). 2004. *Étude de cas sur l’innovation agricole et le sous-secteur cotonnier au Mali : Quelles conséquences des réformes du système coton pour l’innovation*, CSAO, June (preliminary version) [online] <http://www.oecd.org/dataoecd/56/36/31612954.pdf>.

Whether such a strategy will in fact achieve the announced results, for which the radical transformation of the cotton sector has been justified, is problematic for a number of reasons. First, information available to date shows that results are lagging behind. An assessment of the Malian PRSP completed in March 2004 revealed the need for updating and strengthening the PRSP in several areas. For one thing, the growth rate remains below the goal of a 6.7 per cent average for 2002-2006. Consequently, according to the IMF's Country Report of June 2004, No. 04/184, the PRSP will need to be brought in line with the revised macroeconomic framework, with new medium-term fiscal projections incorporated along with updates on external financial assistance.

Second, and turning now to the presumed relationship between ensuring growth and poverty reduction, the study *Perspectives on Growth and Poverty Reduction in Mali* produced by the French research agency Dial (2004)⁷⁸, documents, as noted above, that economic growth in Mali has been constant. Over the long term, 1960-1996, growth rate was 3,1 per cent, a tendency which was maintained through the 90s and which increased further to the 1994 devaluation, to an average of 5,7 per cent between 1995-2000.

Economic growth has been driven by the export sector as illustrated by the period between 1993/94 and 1997/98, which was characterized by a growth rate of 118 per cent in cotton production and, in anticipation of the next chapters, a rapid increase in the exports of gold. And to the question as to whether such constant rates of growth succeeded in reversing the country's high poverty rates, the answer is negative. Another fact that is also very preoccupying notes the same study is that Mali is considered to be following the "right policies", that is, those considered appropriate by the multilateral financial institutions.

"Does the experience of Mali show that there is no relationship between 'good' policies, democracy, and poverty reduction?"

The least that can be said concludes the same study is that: "Sound macro-economic policies have not been effective in poverty alleviation."⁷⁹

In the context of the difficulties confronting cotton producing African countries in the 1990s, notably as a result of American and European subsidies which were introduced in order to protect their own producers, the question arose as to whether there existed other sectors which would be capable of driving growth. Before examining the answer that was proposed by the donor community and to recall rapidly the context of these decisions, it is worth underlining that as a result of the subsidies, world cotton prices declined by almost half as of the mid-90s. Between 2001 and 2003, American farmers received \$US 3,9 billion worth of subsidies (that is \$US 230 per acre) and the total amount represented the doubling of the figure ten years previously in 1992. According to Oxfam International, doing away with these subsidies would have permitted an 11¢ increase per pound of cotton that is a 26 per cent increase in the price paid to African producers. Just to give an idea of the importance of American subsidies, American farmers received in

⁷⁸ Marouani and Raffinot, *Perspectives on Growth and Poverty Reduction in Mali*, *op. cit.*

⁷⁹ *Ibid.* : 18.

this period in the form of subsidies for their cotton more than the GDP of Burkina Faso and almost three times more in subsidies than USAID's budget for all of Africa.⁸⁰

There have been subsequent and important recent debates notably at the WTO concerning cotton subsidies. However, in the context of the downturn in cotton prices, attention was increasingly turned to finding an alternate sector as the "motor of growth." It was found, as will be seen in the next two chapters, in the extractive sector and for both Mali and Burkina Faso in gold production.

Before turning to the study of the impact of industrial gold mining in the two countries considered, it should be underlined in conclusion to this section that there is indeed a need for West African countries to develop economic strategies to reduce their dependence on agriculture commodity exports like cotton and to foster regional trade, processing and diversification. However, in some areas of West Africa, it will take time to develop feasible diversification possibilities as viable alternatives to cotton.⁸¹ Cotton production has demonstrated its value in generating income for farmers, generating revenue for the government, generating value-added economic activities thereby contributing to diversification, and generating multiplier effects through the national economies. Because of this cotton production remains a critical development strategy to millions of people in West Africa.

⁸⁰ BIRD and World Bank. "Cotton Cultivation in Burkina Faso," *op. cit.* : 8.

⁸¹ OECD has argued this. See CSAO/OCDE, *Economic and social importance of cotton in West Africa*, *op. cit.*

4. Gold Mining in Mali and Burkina Faso

History of Gold Mining in Mali

In Mali, mining has taken place over several hundred years as artisanal mining. Under the Malian Empire of the 13th-16th centuries, gold production was extremely important and Mali was known in Europe as a major gold producer. Despite this historical legacy and the more recent boom in industrial mining production over the last decades, it should be underlined that the dominant economic activity in Mali for the vast majority of the population has traditionally been agriculture and this remains the case today. In 1995, it was estimated that some 80 per cent of the livelihood of Malian population was based on farming and fishing. In fact, until the advent of industrial gold mining, as the two previous chapters make clear, cotton was the most important agricultural export commodity. With this background, mining activity in Mali can be divided into three stages: the pre-colonial era, ending in the mid-19th century; the colonial period, which lasted for approximately one hundred years; and the post-independence period, starting in the 1960s.

The pre-colonial period

Mining activities during the pre-colonial period were governed by local customs that are still used today in artisanal sites such as Kangaba and Kéniéba. Customary regulation was centered on a fundamental notion: the right to the soil to the first occupant. Large-scale artisanal mining was greatly reduced in the second half of the 19th century following the demise of pre-colonial kingdoms and empires. Mining operations were then reorganized according to the rules and for the financial benefit of incoming colonial powers. In order to meet the increasing demand for raw materials in industrialized cities, colonial powers took interest in large deposits that were often characterized by highly favorable conditions for mining.⁸²

The colonial period

Except for artisanal mining, gold mining during the colonial period was carried out by European companies. Approximately twenty companies undertook prospecting and mining activities during this period. In total, it is estimated that 10 metric tons of gold were produced during the colonial period.⁸³

Legislation during the colonial period was marked by conflicts between traditional mining customs and the interests of European operating companies. This situation led in 1924 to the creation of zones reserved for indigenous mining according to local laws and customs. During the colonial era, the Bureau de Recherche Géologique et Minière (BRGM), the French geological research and exploration agency, contributed significantly to knowledge of Mali's subsoil resources. Following its independence from

⁸² Seydou Keita. 2001. *Étude sur les mines artisanales et les exploitations minières à petite échelle au Mali*, No. 80, Mining, Minerals and Sustainable Development (MMSD), International Institute for Environment and Development (IIED), August [online] http://www.iied.org/mmsd/mmsd_pdfs/asm_mali_fr.pdf.

⁸³ *Ibid.*

France in 1960, Mali adopted a socialist political orientation with noticeable consequences for development policies in general, and for those of the mining sector in particular.

Post-Independence

Following independence, the mining sector in Mali evolved according to changes in the political landscape. Three periods corresponding to the different political regimes in place have been identified; transitions between each regime were marked by significant changes in the mining sector.

From 1960 to 1970: In accordance with socialist precepts, mining policies during this period are marked by the State's monopoly on mining operations. Priorities for the mining sector were set on the basis of a mining inventory which had industrial development as its objective. To this end, the Malian government created the Société Nationale de Recherche et d'Exploitation Minière (SONAREM) and benefited - for the purposes of sector development - from financial and technical assistance from the former Soviet Union. Soviet support was in line with the nascent Malian republic's socialist ideology, and early mining industry texts strongly reflect this. In 1963, a mining code was adopted to serve as a legal framework for promoting mining, oil and gas extraction. Private enterprises were effectively excluded from the mining sector under the socialist regime. In 1968, Mali transitioned from socialism to a free market economy, marking the beginning of the privatization of mining operations.

From 1970 to 1990: Since its independence, Mali has focused its development efforts mainly on the exploitation of primary products. Not until the 1970s, owing partly to a drought did the mining sector become part of Mali's development plans. The need to diversify led to new, more liberal mining legislation providing greater incentives for private investments⁸⁴. In parallel to these practical aspects, changes in the political outlook favored the establishment in 1970 of a mining code in response to new free market aspirations. This code served as a regulatory framework until a new code was introduced in 1991.

The period from 1970 to 1990 was thus marked by the promotion of mining sector activities and by the securing of bilateral financing. For example, the Syndicat Or and Syndicat Diamant projects were financed respectively by the BRGM, by the Mali government, and COGEMA, a French company. These promotional projects concentrated on gold and diamond research, and were instrumental in the discovery of several potential sites that are mined today. During the 1980s, the Syndicat Or discovered the traces at Loulo, although mining there only began in 2004. The UNDP also financed the Bagoé Gold Project (Projet Or Bagoé), leading to the discovery of the Syama trace. The Western Mali project (Mali – Ouest), financed by both the UNDP and the European Union, led to the identification and evaluation of the deposits of Sadiola⁸⁵.

Kalana was the first industrial mine, operated since 1985 by the Société des Mines d'Or de Kalana (Sogemork). With technical and financial assistance from the Soviet Union,

⁸⁴ Ministry of Mines, Energy and Water (MMEE). 1998. *Déclaration de politique minière du gouvernement du Mali*, Bamako. (Mali government declaration on mining policies).

⁸⁵ Interviews conducted in July 2004 at the Malian Ministry of Mines.

exploration of this region effectively began in 1963 with the evaluation of gold-bearing traces and old gold-washing/panning activities. When Sogemork was founded in 1984 it had a projected production of 2000 kilograms of gold per year. Between 1984 and 1990, Sogemork succeeded in producing 300 kilograms of gold annually which permitted the investment of \$58,600 USD (30 million Fcfa) in the Kalana mining area. All mining at Kalana ceased after the mine was flooded in 1990. The cessation of Soviet financial assistance, coupled with mining and management difficulties, led to the closure of the mine in 1991⁸⁶.

In 1988, a few years after operations began at Kalana, mining began at Syama with BHP and the Malian government as its primary shareholders, owning 65 and 35 per cent of shares, respectively. At the same time, Iamgold, a Canadian company, obtained a mining permit for Sadiola. Iamgold joined with Anglogold in 1992 to continue exploration and, as will be discussed in more detail in a subsequent section, production began in 1996. Sadiola and Syama operated under the 1991 mining code, and both began partner-based cooperative operations, which are now common in the mining industry, particularly in Africa.

The most recent period from 1991: The real expansion of the mining industry in Mali occurred only in the early 1990s, beginning with the reformulation of the mining code under the auspices of the multilateral financial institutions and notably of the World Bank, in accordance with the implementation of structural adjustment programs. The new 1991 code sought to stimulate the extraction of mineral resources in order to improve payment balances and to promote research into energy sources capable of minimizing energy expenses. The adoption of this mining code led to the creation of national private mining companies, and to the arrival of foreign companies. Mining inventory efforts by the State during this period received support from bilateral (former Soviet Union, France, Belgium, Japan) and multilateral cooperation agencies (UNDP, European Union), as well as from foreign investors. Work undertaken with these new partners led to an updated inventory of mineral resource diversity (gold, iron, silver, copper, bauxite, diamonds, etc) and to the discovery of numerous deposits currently mined on an industrial scale. (See Annex 2). This third and important recent period will be discussed in more detail below. A similar history of mining can be traced in Burkina Faso, albeit at a few years' interval.

History of the gold mining sector in Burkina Faso

Burkina Faso is not traditionally a mining country as is the case of Mali; artisanal gold mining has existed for a number of years and has been practiced intensively for approximately thirty years. It was only in 1974, owing to a poor harvest, that the sector saw a real expansion⁸⁷. It is therefore considered a secondary activity in a country whose primary productive sector is agriculture, as 85 per cent of the population base their

⁸⁶ A.L. 2004. "Le président Touré à Kalana: la mine d'or reprend du service," *L'Essor*, No. 15187, Mali, April 19 [online] http://www.essor.gov.ml/cgi-bin/view_article.pl?id=6623. (*President Touré at Kalana : the mine resumes operations*)

⁸⁷ Pascale Hatcher. 2005. *Les enjeux politico-économiques de l'activité artisanale : le cas de la nouvelle législation minière au Burkina Faso*, Research Note, Groupe de recherche sur les activités minières en Afrique (GRAMA), Université du Québec à Montréal.

livelihood on farming or raising livestock⁸⁸. However, since the colonial period, even though on a smaller scale, the development of the mining industry has followed much the same path as Mali.

The colonial period : Geological research began in Burkina in the colonial period and was carried out by the French West-African Geological Service, a French company. The first industrial mine was at Poura and was operated by the West African Great Works Company (*Société des grands travaux d’Afrique de l’Ouest*) after 1930. The mine produced 250 kg of gold between 1930 and 1944.⁸⁹ From 1950 to 1966, the mine was run by the Poura Mine Union (Syndicat des mines de Poura – SMP) and produced 5610 kg of gold. The mine ceased activities in 1966 and was reopened by BRGM and SMO, known by then as the Mining and Research Company (*Société de recherche et d’exploitation minière*), then by the Société de Recherches Minières du Burkina (Soremib) in association with the Canadian company Sahelian Goldfield, and with the financial support of the European Union through its Sysmin project. Due to lack of financing, the mine was subsequently closed in 1999.

1960 to 1990: Since independence in 1960, Burkina Faso has created national institutions such as the Department of Mines, whose objectives were to promote geological and mining research. Due to a lack of technical and financial means, this institution has had to look to technical and financial assistance to pursue its activities. The Department of Mines called on the BRGM, the German agency BGR (Geosciences and Natural Resources), Canadian CIDA and the UNDP to help develop the mining sector between 1960 and 1977⁹⁰. In 1978, the creation of the Bureau Voltaïque of geology and mines (Buvogmi) – known after the country’s name change as the Bureau of mines and geology of Burkina (Bumigeb) – launched large inventory programs with the help of the UNDP. From 1978 to 1993, the growth of national technology and international financing (European Union, African Development Bank, World Bank and UNDP) led to the discovery of potential sites of zinc from Perkoa and gold in the regions of Bouroum, Gaoua, Arbinda, and Taparko. (See Annex 3)

From 1960 to 1990, there was no legal document framing the Burkina mining industry. The only existing legislation dealt with agricultural and land reorganization, and touched upon the mining sector, but only to the extent of enforcing state ownership of the subsoil. It was the creation of Buvogmi that developed regulating documents, largely based on the French system⁹¹. These regulations only addressed artisanal mining, which was the predominant form of mining during this period. Even though artisanal mining had always been present, during the 1980s it saw a period of sharp growth, especially in areas experiencing difficulty in the agricultural sector.

⁸⁸ Mining sector promotion CD-Rom produced by Ministry of Mines, Quarries and Energy (MMCE), Burkina Faso (no date).

⁸⁹ François Ouédraogo. 2003, “Le secteur minier du Burkina Faso,” Research Notes, Becoren, Consultants en Mines, Eau et Environnement. (*The mining sector in Burkina Faso*)

⁹⁰ *Ibid.*

⁹¹ Djibril Gueye. 2002. *Étude sur les mines artisanales et les exploitations minières à petites échelles au Burkina-Faso*, MMSD, IIED, October [online] http://www.iied.org/mmsd/mmsd_pdfs/asm_burkina_faso_fr.pdf. (*Study on artisanal mining in Burkina Faso*)

Reform Policies in the 1980s and 1990s: objectives and results

For much of the 1980s, bilateral and multilateral cooperation was aimed primarily at improving geological knowledge and inventorying of the subsoil in both Mali and Burkina Faso. However, these goals changed during the 1990s with the implementation of structural adjustment programs. New objectives under these programs were the re-establishment of macroeconomic balances, control of debt and a shift to a free-market based economy. This shift brought with it the withdrawal of the State from productive activities, and the promotion of private sector initiatives as the main engine driving socio-economic change.

Reform goals and strategies

In the context of the introduction of a more market driven economic orientation, the mining sector has been designated as one of the main engines for growth in mineral rich countries of Africa. This orientation was reasserted by one of the World Bank's Executive Directors at a mining conference in Cape Town, South Africa in September 2005. For Paulo Gomes: The mining sector is set to play a key role in the World Bank's goal to alleviate poverty in Africa by 2015. (...) If we use mining as the key driver for growth then we would become less dependent on \$ 50 billion (in aid) that I am not sure will even come.⁹²

In Mali, and to a lesser extent in Burkina, evidence of enormous mining potential - in particular for gold - has led multilateral funding institutions to persuade the governments to introduce mining sector reforms, in order to attract foreign investors⁹³. Thus, with the support of the multilateral financial institutions (IMF and World Bank) and through the creation of favorable conditions and incentives, foreign investors have been encouraged to invest in the mining sector. The reforms have been introduced on the understanding that the resulting investment would improve the balance trade and contribute to increasing GDP⁹⁴.

Mining sector promotion and legal system reform

In Mali

In Mali, structural adjustment and its associated reforms began in 1982. In the mining sector, these included re-writing the mining code in 1991. The new code introduced a significant liberalization of the mining sector's legal system, notably through increasing fiscal and tariff incentives. This process was supported financially by the World Bank, acting through the International Development Agency and the International Finance Corporation. The objectives of this investment included implementing the new mining

⁹² Tredway, "Mining to Play a Key Role in World Bank Africa Plans," *op. cit.*

⁹³ Pascale Hatcher. 2004. "Réécrire le code minier ou redéfinir le rôle de l'État?" (*Rewriting the mining code or redefining the role of the State?*), in Bonnie Campbell (ed.). *Enjeux des nouvelles réglementations minières en Afrique*, Nordic Africa Institute, Uppsala (Suède), 2004; also in English : *Regulating Mining in Africa : For Whose Benefit?* Discussion Paper 26 [online] <http://www.unites.uqam.ca/gramal/>.

⁹⁴ MMEE, "Déclaration de politique minière du Mali," *op. cit.*

code, making detailed geological data more readily available, and creating new public institutions for the enhancement and regulation of the Malian mining sector.

However, in the early 1990s, multilateral lenders identified several obstacles to the development of the mining sector in mineral rich African countries. These included the inadequacy of the mining codes and the fiscal and tariff systems to meet the demands of the evolving sector, the lack of basic geological data, the shortage of local resources and the weak participation of national mining operators⁹⁵. In order to remove these constraints, but also out of a desire to remain competitive relative to other regional countries – particularly Ghana – Mali revised its mining code again in 1999 to make it more attractive and its incentives even stronger⁹⁶. The goal of this revision was to provide the sector with “attractive legislation, a stable political environment, a balanced fiscal and customs scheme and an efficient administration”⁹⁷.

In Burkina

While the 1990s in Mali were characterized by an effervescent activity in the mining industry, in Burkina Faso this period was characterized by strong promotional activity aimed to attract investments to the sector. In fact, in the latter country, the industry was still in a development stage rather than an operational stage as in Mali. The promotion of the mining industry was financed primarily by multilateral creditors: the World Bank and the European Union. Burkina’s economic policies during most of the 1980s, and in particular during its revolutionary period (1983 to 1987), were markedly interventionist. Consequently, Burkina Faso was late – in comparison to other countries in the sub region - to embrace the principles of a free-market economy and to adhere to structural adjustment programs⁹⁸. The adoption of the structural adjustment program in 1991 led to economic policy changes favoring the private sector in Burkina, the privatization of certain state-run businesses, and the creation of an investment code in 1994. Moreover, the ten years between 1995 and 2005 have been qualified by Burkina’s government as the “Mining sector development decade.” The goal of these policies was to “inscribe Burkina Faso on the list of nations that have – with the support of international investors – been capable of harvesting their natural resources”⁹⁹.

The reorganization and promotion of the mining sector led in 1995 to the creation of the Ministry of energy and mines, in 1996 to the drafting of a declaration on mining policies, and to the drafting of the first mining code in 1997. The goal was to integrate the mining sector into the “dynamics of the new economic policy orientations”¹⁰⁰. Thus, as in Mali, the State’s role in Burkina became above all that of regulating and supervising the sector’s activities while creating an environment favorable to its development. The ultimate goal of this strategy was to increase budgetary receipts drawn from the sector’s

⁹⁵ *Ibid.*

⁹⁶ Hatcher, “Réécrire le code minier ou redéfinir le rôle de l’État?” *op. cit.*

⁹⁷ MMEE, “Déclaration de politique minière du Mali,” *op. cit.*

⁹⁸ Hatcher, *Les enjeux politico-économiques de l’activité artisanale*, *op. cit.*

⁹⁹ Ministry of Mines, Quarries and Energy (MMCE). 1996. *Déclaration de politique minière*, Burkina Faso. (*Declaration on mining policies*)

¹⁰⁰ *Ibid.*

development, but also to develop a small-scale mining industry in which investments are primarily domestic¹⁰¹.

To implement this policy, Burkina received financial support in the form of a \$US 22.5 million (13 billion Fcfa) loan from the World Bank, through a project initiated in 1997, designed to “reinforce national mining sector capacity and manage the environment”. Precageme, as the project was known, which lasted for eight years (1997 to 2004), was designed to draw up fiscal and regulatory schemes, reinforce institutions and the management of resources, and promote small mines and small-scale mining projects.

It is through Precageme that the first mining code texts were drafted¹⁰². It is also under its aegis that the second mining code was drafted in 2003. The Burkina government secured as well a \$US 37 million (19 billion Fcfa) grant from the EU in the context of the Sysmin project (Système de Stabilisation de Recettes d’Exportation de Produits Miniers (Mining Export Profits’ Stabilization System)¹⁰³. This grant was designed to improve the geological database put in place with support from the UNDP, and to rehabilitate the Poura gold mine.

Fiscal and customs incentives for mining

In the case of Mali, incentives offered to attract mining comprise mainly a decrease in government participation in the shares of companies, taxes and amortization. In Burkina, the revised mining code dealt primarily with a reduction of tax rates (taxes on trade and industrial profits and taxes on investments), the introduction of tax exemptions on activities during the preparatory phase and the extension of benefits to subcontractors.

Mining revenues owed to the State consist of a special tax on certain products and the *ad valorem* tax. The abolition of the latter tax in Mali’s 1999 code reduced by half the level of taxes owed, from 6 to 3 per cent. In Burkina Faso, royalties are also set at 3 per cent. The different fiscal and customs regulations contained in the four codes considered are summarized in Table 1 below.

According to Mali’s 1999 code, mining activities are exempt from taxes during the first five years of production; in Burkina Faso this exemption period lasts for seven years. These kinds of tax exemptions during the first years of production can deprive host countries of significant tax revenue, especially considering the limited lifespan of mining projects. In the case of a project of short duration, the mine might be nearing exhaustion before any tax related to the generation of profits could be collected. To avoid such a situation, the Burkina mining code stipulates that the duration of exemptions is equal to 7

¹⁰¹ MMCE. 2004. *Politique minière du Burkina Faso*, Burkina Faso, March. (*Mining policies in Burkina Faso*)

¹⁰² Adama Pierre Traoré. 2005. *Mining Sector Capacity Building and Environmental Management Project*, World Bank Implementation Completion and Results Report.

¹⁰³ Trade and economic relations between the EU and African countries were governed by the 1st (1975) and 2nd (1980) Lomé conventions. These conventions highlight infrastructure financing and compensation for deficits in agricultural and mining export profits – Stabex and Sysmin. Sysmin guarantees mining production recovery in the event that drops in the stock exchange threaten the production potential or mining products’ export profits of the countries concerned.

years, but cannot exceed half of the lifespan of the mine¹⁰⁴. The tax exemption for the first five years was removed from the Mali 1999 mining code as shown below.

However, the 1999 Mali code, as well as both Burkina codes, offer corporations the opportunity to amortize the costs of their production factors in an accelerated fashion. In the 1991 Malian code, the amortization period lasted for the lifespan of the mine, while in the 1999 code this period can be shorter (it depends on the calculation of each mine, and as there is no defined period, it is only described as “accelerated” in the mining code). This clause was obtained by companies on the grounds that the lifespan of a mine is highly flexible.

The lifespan of a mine depends on continuing exploration during active mining as well as improvements in mining technology, both of which may extend a mine’s life. Moreover the current market value of metals can make even small deposits profitable and justify the continuation of extraction which can extend the lifespan of the mine. For these reasons, it is often too complex to associate the amortization period with the lifespan of the mine.

Based on these arguments, the switch from a linear to an accelerated period of amortization allows companies to recover their capital during the first few years of production. Consequently, tax exemptions associated with accelerated amortization guarantee maximum opportunities for rapid recovery of investment costs by mining corporations. In the 1999 Malian mining code, this change replaced the tax exemptions for the first five years while in Burkina Faso, the two dispositions coexist.

Moreover, in Burkina, some fiscal benefits are offered for the period of preparatory activities. These benefits last for 2 years, with the possibility of extending them for one more. Corporations are then exempt from:

(...) all duties on the import of equipment, raw materials, fuel and lubricants destined for the production of energy and for the operation of vehicles and machinery relating to said preparatory activities¹⁰⁵.

Only the statistics taxes¹⁰⁶ and community taxes (related to the West African monetary and economic Union) must be paid during this period; these benefits cease on the date on which production begins.

Generally speaking, the analysis of the mining codes of these countries reveals a pattern of increasing relaxation of the obligations of companies in the more recent codes of both countries. Such an analysis of mining codes reveals moreover, a pattern of increasing permissiveness between versions in both countries. As a result, with the exception of surface rights, which are higher in Burkina, the latest Burkina mining code (2003) offers the most generous incentives.

Mali is currently in a “hybrid” stage where both the 1991 and 1999 codes are being applied. Mining operations that began before the establishment of the new code in 1999

¹⁰⁴ If the mine’s lifespan is eight years, the tax exemption is spread over four years.

¹⁰⁵ Article 87 : MMCE. 2003. *Law No. 031-2003/AN on the Mining Code*, Burkina Faso, May 8.

¹⁰⁶ This is a special tax applicable only in the UEMOA (Monetary and Economic Union of West Africa) member countries.

are still operating under the 1991 code, even though corporations have had the opportunity to switch to the newer code, as long as they integrate it in its entirety. However, according to several mining administrators in Mali, corporations are picking regulations that suit them best from one code or the other, especially with respect to fiscal and customs regulations. According to both the National Directorate of Geology and Mines (Direction nationale de la géologie et des mines, DNGM) and the Ministry of Mines, this situation has created tension between the administration and corporations.

The current situation suggests that some components in the 1999 code have not proven to be attractive enough for investors, and that the government has had a limited capacity to enforce the new code. It is undeniable however, that Mali has witnessed a true “gold rush” over the past decade. The acceleration of activities in Mali might alternatively be explained by other factors, such as the size of the country’s mining potential, the low cost of mining operations and the price of gold. As discussed above, Malian and Burkinese fiscal incentives are slowly converging. It is most likely that Mali’s mining code will soon be modified again, as it is currently under review. There is therefore every reason to believe that the new mining code will provide even more incentives for investment than the code currently in place.

Table 2: Fiscal and customs regulations of the mining codes of Mali (1991 and 1999) and Burkina Faso (1997 and 2003)

Description	Mali 1991 Code	Mali 1999 Code	Burkina 1997 Code	Burkina 2003 Code
Foreign capital investment	Max. 85%	Max 90%	Max 90%	Max 90%
Government participation	Min 15% free participation (priority shares)	Min 10% free participation (priority shares)	Min 10% free participation (priority shares)	Min 10% free participation (priority shares)
Amortization	Linear	Accelerated	Accelerated	Accelerated
Industrial and commercial benefits	35%	35%	35%	25% (-10% relative to norm)
Tax exemptions ¹⁰⁷	First 5 years of production	None	First 7 years of production	First 7 years of production
Special taxes on certain products ¹⁰⁸	3%	3%	No	No
<i>Ad valorem</i> tax	3%	None	3%	3%
Taxes on investment revenue	No	Yes	25%	7.5% ¹⁰⁹
Import duties	Exempt	Exempt	11.5%	7.5%
Export duties	No	No	Exemption of value added tax	na
Value added tax on cession of mining title	na	10% (instead of 20% since 2000)	Na	20%
Value added tax	Exemption for the first 3 years of production	Exemption for the first 3 years of production	Exemption during the exemption period	Exemption during the construction phase (max.3 years)
Exploration permit issuance fee	\$US 585.60 300 000 Fcfa	\$US 976.00 500 000 Fcfa	\$US 1,952.00 1 000 000 Fcfa	\$US 1,952.00 1 000 000 Fcfa
Exploration permit renewal fee	\$US 585.60 300 000 Fcfa	\$US 976.00 500 000 Fcfa	\$US 2,928.00 1 500 000 Fcfa	\$US 2,928.00 1 500 000 Fcfa
Mining permit issuance fee (fixed)	\$US 195.20 1 000 000 Fcfa	\$US 2,928.00 1 500 000 Fcfa	\$US 9,760.00 5 000 000 Fcfa	\$US 9,760.00 5 000 000 Fcfa
<i>Annual dues for mining permits</i>	<i>Per km² for the first 3 years : 50 000 Fcfa</i> <i>Per km² from the 4th year: 75 000 Fcfa</i>	<i>Per Km² per year : 100 000 Fcfa</i>	<i>Per Km² per year: 500 000 Fcfa</i>	<i>Per Km² per year: 500 000 Fcfa /yr</i>

CSA Group. 2004. *Audit technique et financier des sociétés d'exploitation minières au Mali*, produced for the Ministry of Mines, Energy and Water (MMEE) of the Government of Mali, December; Hatcher, *Les enjeux politico-économiques de l'activité artisanale*, op. cit.; Decree No. 2005-048 on tax setting and mining dues, Burkina Faso; 1USD = 530 Fcfa (10 August 2005)

¹⁰⁷ In Burkina, these taxes include the minimum fixed tax on industrial and commercial sectors, the patent, managing and training taxes and taxes on goods in mortmain.

¹⁰⁸ Tax base: sales before taxes.

¹⁰⁹ The mining sector must pay 50 per cent of this tax. This tax was recently reduced to 15 per cent for all.

Social and environmental aspects

As economic and financial components of mining codes in Mali and Burkina Faso have become more attractive, mining corporations have faced more severe obligations concerning their social and environmental responsibilities. These differences are particularly noticeable between the last two Malian mining codes. Expectations in terms of environmental management and participation in social development are indeed more important in the latest code. In Burkina, there appears to have been some relaxation of these expectations, as can be seen in the most recent, 2003, Burkina code.

Social aspects

In Mali, in contrast to the 1991 code, the 1999 code takes into account the relocation of populations affected by mining:

The relocation and resettlement of populations whose presence on mining sites might prevent extractive activities will proceed at the request of a mining title holder. The title holder will be responsible for the displacement and resettlement on a site chosen to this end.¹¹⁰

The above requirement is new in the 1999 mining code and it gives some precision concerning the responsibility of the mining company regarding the displacement and resettlement of populations. This dimension was not taken into account in the previous 1991 code. However, there is no reference to such a responsibility in either of the two codes of Burkina Faso.

Furthermore, the Mali 1999 code requires the creation of a community development fund in which \$US5000 must be invested every month. This fund is managed by a committee comprised of representatives from the administration, from local communities and from the mine and it is to be used to finance projects selected by the committee. In addition, mining directors have a discretionary fund, amounting to \$US100 000 in the case of Sadiola, \$US5000 per month in the case of Morila, and \$US100 000 in the case of Yatela. Since 2000, payments are also made to the patent title for the benefit of the local communities. Together, these funds are used to finance community development projects. Additionally, mining companies are required to provide housing, as well as sanitary, schooling and leisure infrastructures to miners and their families.

Finally, with respect to employment, companies are required by the 1999 mining code to respect general working conditions and give preference, given equal qualifications, to Malian personnel. “The holder of mineral rights and their sub-contractors shall be bound to do the following: to give preference to Mali personnel with equal qualifications”¹¹¹.

Health and occupational safety issues are governed - through the mining code - by regulations set forth for protection and prevention, in conformity with international norms established for occupations dealing with the transportation, use or storage of explosives.

The 2003 Burkina code is in most respects similar to the Mali 1999 code. There are, however, certain noticeable distinctions. Although it is more recent, it does not take into

¹¹⁰ Article 69 : Ministry of Mines, Energy and Water (MMEE). 1999. *Mining code*, Bamako, 173 p.

¹¹¹ Article 126, b, *Ibid.*

account the displacement of populations, and does not require of the mining companies the preferential training or employment of Burkina Faso personnel.

Environmental management

Currently, the 1991 and 1999 mining codes are both in effect with respect to environmental management in the mining industry in Mali. The 1991 code is applied by the three active mines: Sadiola, Yatela and Morila. Syama is on stand by, and not active yet. Although the 1999 mining code is more demanding with respect to the environment, it is not being applied.¹¹²

Mining permit holders must set up and invest in a trust fund which will serve to cover the costs of the preservation and rehabilitation of the environment following mining activity.

The 1991 Malian code imposes virtually no obligations on mining companies with respect to environmental protection. Rehabilitation work and responsibility for incidents are mentioned in passing. However, gold mining entails major ecological risks, including deforestation, soil erosion, water table and surface water pollution caused by chemicals used in the extraction process, air pollution caused by smoke and dust, the disappearance of fauna due to noise, etc. The 1999 mining code has taken into account these environmental risks.

Institutional responsibilities

According to the 1999 Malian mining code, exploration and mining operations are under the supervision of the government's mining administration which includes the Ministry of Mines and the National Directorate of Geology and Mines (DNGM). Together with the Ministry in charge of the environment, these entities are specifically responsible for monitoring mining activities and evaluating their socio-economic impacts. They must also participate in the analysis of environmental impact assessment documents, and insure that conformity to environmental, sanitary and safety norms are being properly monitored¹¹³.

For the purposes of monitoring and follow-up, a provision has been included in the 1999 Mali mining code allowing mining ministry agents to visit facilities and mining sites. They can request to receive documents and collect samples necessary to complete their objectives. Moreover, mining companies are required to provide the mining administration with quarterly and annual reports on the impacts of mining on land use and occupation, on the environment and on public health.

A 2002 government study in Mali found weaknesses in the mining monitoring and follow-up process. According to mining ministry officials, actions are being taken to remedy these shortcomings. However, the Malian government's capacity to control the totality of gold mining remains limited.

¹¹² CSA Group. 2004. *Audit technique et financier des sociétés d'exploitation minières au Mali*, produced for the Ministry of Mines, Energy and Water (MMEE) of the Government of Mali, December. (*Technical and financial audit of mining corporations in Mali*)

¹¹³ Article 66 : MMEE. *Mining code, op. cit.*

5. Gold mining reforms: A risky source of growth?

In both Mali and Burkina, liberalization of the mining sector has led to significant economic windfalls. Mali, for example, has moved from being the 16th to the 3rd largest producer of gold in Africa, after South Africa and Ghana. Moreover, gold production is now the largest source of export receipts in Mali, having surpassed cotton in 1997 (DNGM, 2005)¹¹⁴. Burkina Faso is currently experiencing an explosion of investments in gold mining exploration.

Investments

Efforts to attract foreign investors in both countries have paid off, as investments listed under exploration and mining have become quite considerable. In the case of Mali, there are currently 6 active mines (Sadiola, Morila, Yatela, Kalana, Loulo and Tabakoto), with one more slated to begin operations soon (Syama). Annex 4 summarizes information on these mines¹¹⁵.

In Burkina Faso, the restructuring of regulatory and fiscal schemes has allowed for the training of mining sector personnel, reinforcement in the sector's institutions, laboratory equipment, the creation of geological databases, the establishment of semi-automated mines, but most of all for the massive influx of international corporations. In light of the current state of development of the industry in Burkina, investment expenses have primarily been related to exploration up until 2004. Between 1995 and 2002, these investments totaled \$US88 million (45 billion Fcfa). (See Annex 5 a).

Overall, reserves of 160 tons of gold have thus far been uncovered. The discovery of these deposits has not yet had any impact on Burkina's gold production, as construction work in the Taparko, Kalsaka and Youga mines only began in 2005. (See Annex 5b). Mining these three deposits will mobilize roughly \$US75 million in investments, illustrating the rapid growth of investments in 2005.

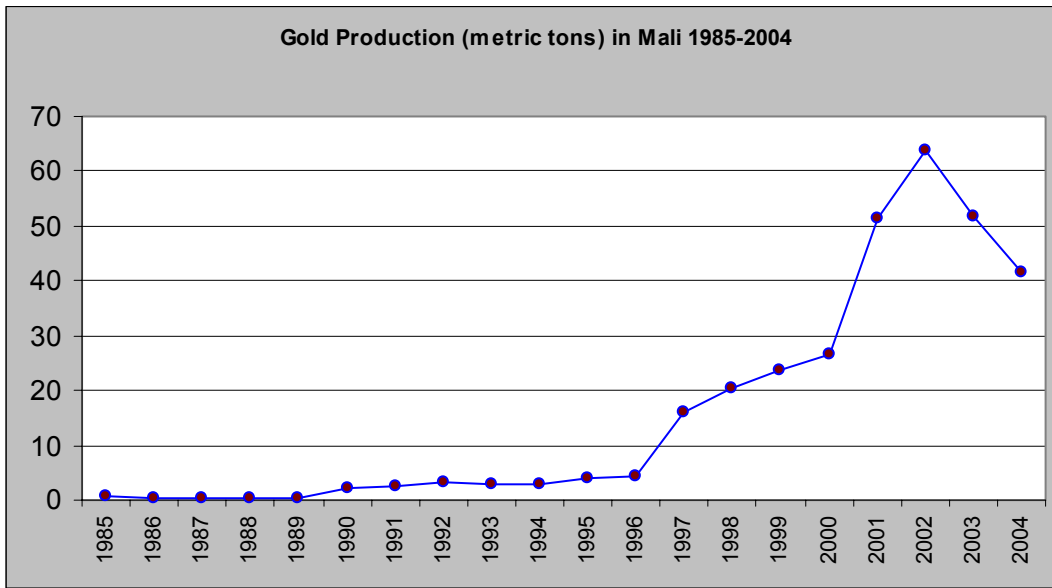
Production

Most of Mali's gold production is industrial. Production increased slightly in 1990 with the beginning of operations in the Syama mine, but it was not until the opening of the Sadiola mine in 1996 that production increased significantly. Production peaked in 2002 owing to the exceptional volume produced by the Morila mine since 2000.

¹¹⁴ National Directorate of Geology and Mines (DNGM). 2005. *Statistiques économiques sur l'industrie minière*, Based on documentation supplied by the DNGM, CD-Rom, Bamako. (*Economic statistics on the mining industry*)

¹¹⁵ Data on reserves and lifespan listed in the table are those obtained from the feasibility studies from each mine, carried out by the mining companies in compliance with mining codes.

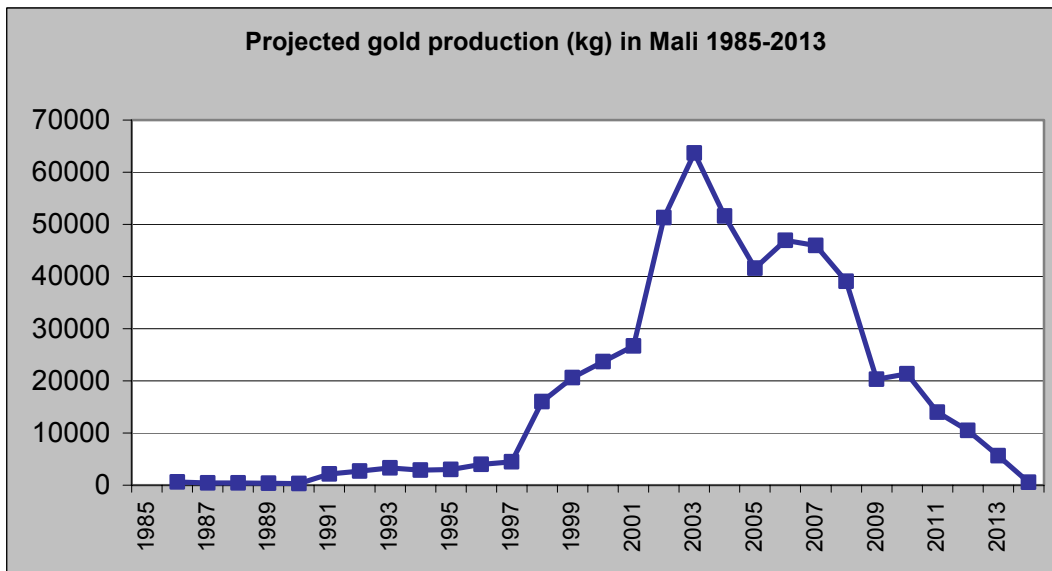
Figure 6: Gold production in Mali 1985-2004



DNGM, *Statistiques économiques sur l'industrie minière*, op. cit.

Production slowed down as of 2003, but it is expected that there will be a new increase when new mines come into operation. Mali's rank on the list of gold producers is therefore not threatened in the short term; it even expects to become the 2nd largest gold producer in Africa within the next 3 years, thanks to the Loulo, Kalana and Tabakoto mines. Projected production figures are listed in Annex 6. Bearing these projections in mind, gold production in Mali should evolve as follows:

Figure7: Projected gold production in Mali 1985-2013



DNGM, *Statistiques économiques sur l'industrie minière*, op. cit.

These forecasts are the estimates of the National Directorate of Geology and Mines and reflect a scenario of no new mines being opened by 2013. With only the 3 mines operating in 2005 (Sadiola, Yatela and Morila), gold production was expected to drop as shown in these figure. However, these forecasts do not take into account the Syama and Tabakoto mines which were going to start or to restart (in the Syama case) activity in 2006. Moreover, production forecasts are relative and subject to continuous variations depending on the price of gold or unpredictable discoveries. Intensive exploration currently underway by several companies suggests there may be more important discoveries. For instance, Estrucan Resources acquired 4 mining titles in 2005, enabling it to increase its exploration area by 1200 km².¹¹⁶

The situation is quite different in Burkina where much of the production is currently artisanal. In parallel with the legal reforms which were introduced, free-market policies have, via the World Bank's Precageme project, led to the complete withdrawal of the State from the mining sector, especially with respect to its monopoly on gold exports, for which the Comptoir Burkinabè des Métaux Précieux (CBMP) of the Ministère des Mines, des Carrières et de l'Énergie (MMCE), the Ministry of Mines, was responsible. Thus, in compliance with the 1997 declaration on mining policies, the CBMP lost its monopoly that year. Since then, a limited number of trading agencies have been allowed to operate: Buruji Kashamu, Cavor Sarl, Orcade Sa, Axelis et Terre Benite Sarl¹¹⁷. These trading agencies must provide an activity report to the Ministry of Mines every three months. They must also export annually a minimum of 200 kg of unrefined gold. They are under the control of the Ministry of Mines, and are subject to the common law tax applicable to all commercial enterprises¹¹⁸. However, these agencies do not report their operations to government, and hence quantities of gold produced are underestimated in statistical reports. There is therefore a general disorganization of the collection channels and an increase in fraud¹¹⁹. Since the liberalization of activities was introduced, the government represented by CBMP no longer has the possibility of coordinating the buying of gold from artisanal miners. When the CBMP had this monopoly, it was able to determine the price paid to miners, a situation which was advantageous to them. With liberalization, artisanal miners are obliged to sell gold through the new trading agencies which negotiate the price with each seller. This situation has resulted in a drop in gold selling records because artisanal miners sell gold elsewhere to local people or in border countries. However, since liberalization, fraud is associated to gold selling outside the channels of formal trading agencies.

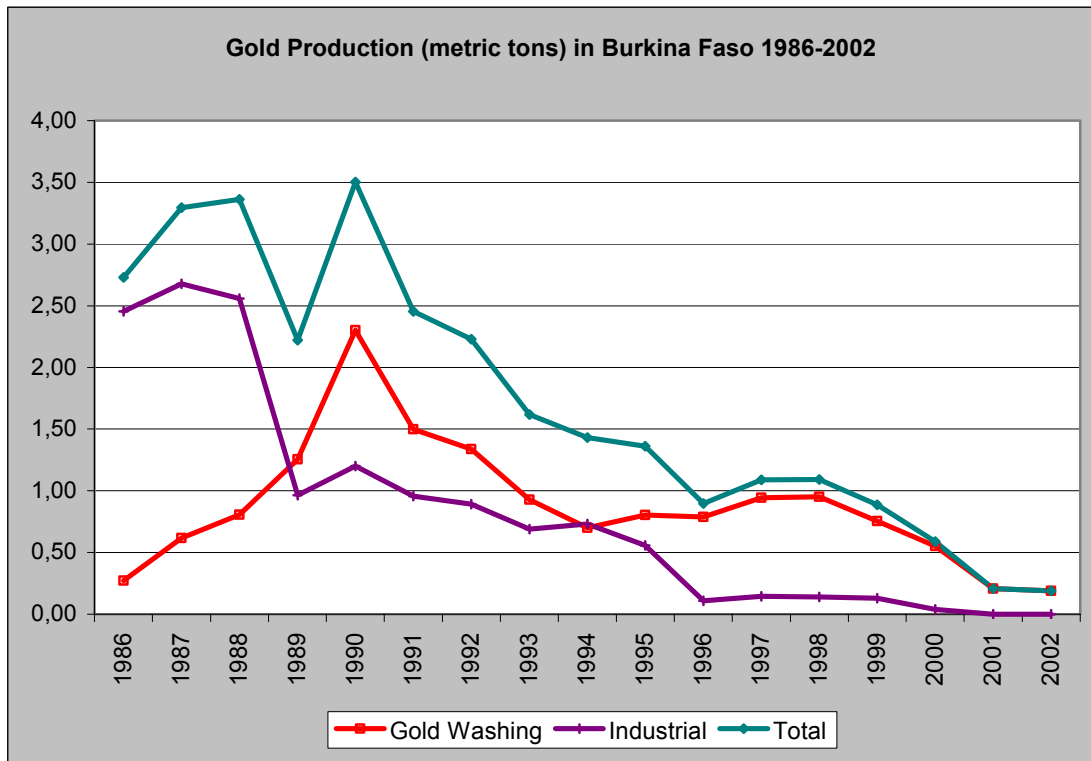
The following graph illustrates the tendency of gold production to decrease because of this situation.

¹¹⁶ Etruscan Resources Inc. 2004. *Annual report*, Windsor (Nova Scotia), Canada.

¹¹⁷ Ouédraogo, "Le secteur minier du Burkina Faso," *op. cit.*

¹¹⁸ Gueye, *Étude sur les mines artisanales*, *op. cit.* : 34.

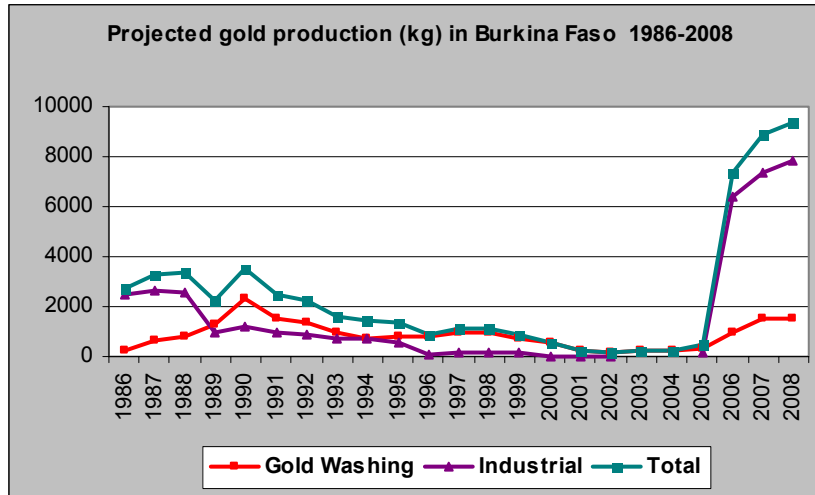
¹¹⁹ MMCE, *Politique minière du Burkina Faso*, *op. cit.* : 12.

Figure 8: Gold production in Burkina Faso 1986-2002

Ouédraogo, "Le secteur minier du Burkina Faso," *op. cit.*

After a peak in the 1990s, gold production in Burkina has been in steady decline, reflecting partly the closure of industrial (Poura) and semi-industrial (Essakane) mines, as well as difficulties associated with data collection on artisanal mining since the liberalization of gold trading. There has been a noticeable increase in both the number of gold washing/panning sites (from 21 to 67) and in the number of gold panners (from 140 000 to 180 000) between 2000 and 2004. Between the establishment of the CBMP and the end of its monopoly in 1997, Burkina Faso produced approximately 31.2 tons of gold. Artisanal production accounted for 44.19 per cent of gold production during this time. Since 1999, gold production has been entirely artisanal. However, with new mines and industrial production pending, Burkina expects to see a significant increase in gold production in the next few years (See Annex 7).

Figure 9: Projected gold production in Burkina Faso 1986-2008



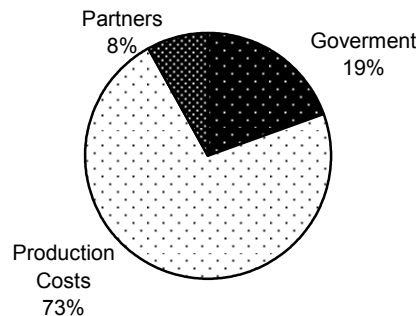
MMCE. 2005. *Situation des investissements et perspectives du secteur minier*, Burkina Faso, May. (Current status of investments and prospects in the mining sector)

With its new mines, Burkina Faso foresees the production of approximately 10 metric tons of gold in 2008. The country’s ultimate goal is to reach the rank of 4th largest gold producer in Africa, while increasing the mining sector’s contributions to the balance of trade and GDP.

Financial contributions to the national economy

In light of the magnitude of production, especially in Mali, revenue from taxes and royalties has been significant for the National Treasury. According to AngloGold, a corporation operating in Mali, for every ounce of gold sold, revenue is distributed according to the following scheme:

Figure 10: Distribution of revenue from gold sales in Mali¹²⁰



¹²⁰ AngloGold Ashanti. 2005. *Press conference on Semos/Yatela*, Sadiola, May 6.

The partners’ share is comprised of profits distributed to joint venture partners who invested the capital. As a partner, the State thus also receives a part of this 8 per cent. In 2003, the State share in Mali was 24.3 per cent. Idrissa Maïga. 2005. “Ministère des Mines, de l’énergie et de l’eau - Bilan 2004, perspectives 2005”, *Le Républicain*, Bamako, December 3 [online] http://www.malipages.com/presse/news_01_05/news_0005.asp.

In Burkina, taxes from artisanal gold washing/panning, which are collected through provincial budgets, are distributed equally between the State and local communities. Moreover, 20 per cent of the dues from mining title surface rights are returned to the community where the mine is located.

Proceeds to the Treasury

In the context of the sector's activities being centered on artisanal mining, proceeds to the State comprise mainly panning and agreement taxes, mining fees and dues on mining titles. In Burkina Faso, proceeds from mining have been relatively modest, in light of the lack of industrial mining and also the exemptions granted during exploration and preparatory activities (construction of facilities and equipment, etc.). Between 1994 and 2003, proceeds amounted \$US 5.5 million (to 2.8 billion Fcfa)¹²¹. With respect to artisanal mining only, the Treasury collected between 1986 and 2000:

- \$US 972,000 (498 million Fcfa) in washing/panning taxes (an equivalent amount was collected by provincial budgets);
- \$US 878,400 (450 million Fcfa) in mining royalties;
- \$US 2.6 million (1.350 billion Fcfa) in taxes on industrial and commercial profits.

In the case of industrial mines, proceeds to the State are comprised of taxes, mining fees, salaries to employees and contributions to social security. Contributions from the 3 mines operating in Mali since the mid-1990s are summarized in Annex 8.

Between 1995 and 2002, the three Mali mines contributed approximately \$US 232million (119 billion Fcfa) to the country's economy. This figure, however, is incomplete, as it does not include contributions from the Syama mine between 1995 and 2000 and the Kalana mine in operation since 2004. Complete data on the global contribution of mining to the economy are hard to find. Based on an AngloGold press conference in 2004, it is possible to estimate the contributions from the Sadiola and Yatela mines, from the beginning of operations up until 2004 (Table 2).

**Table 2 : Contributions from Sadiola and Yatela mines to the local economy
(millions of dollars [billions of Fcfa])**

	Sadiola (1995-2004)	Yatela (2000-2004)
Taxes and customs duties	\$US 254 million (136 Fcfa)	\$US 36 million (18.3 Fcfa)
Dividends	20.3	
Loan repayment	3.2	
Misc.	143.3	41.2
Total	302.8	59.5

AngloGold Ashanti. 2005. *Presentation at Mining Day*, Bamako, May 24-26.

¹²¹ MMCE and Burkinese precious metals' exchange (CBMP). 2004. "Le secteur minier burkinabé", Conference at the *Forum international sur le secteur minier guinéen 2004*, Conakry, October 11-13. (*The Burkinese mining sector*, presentation at the international forum on the Guinean mining sector).

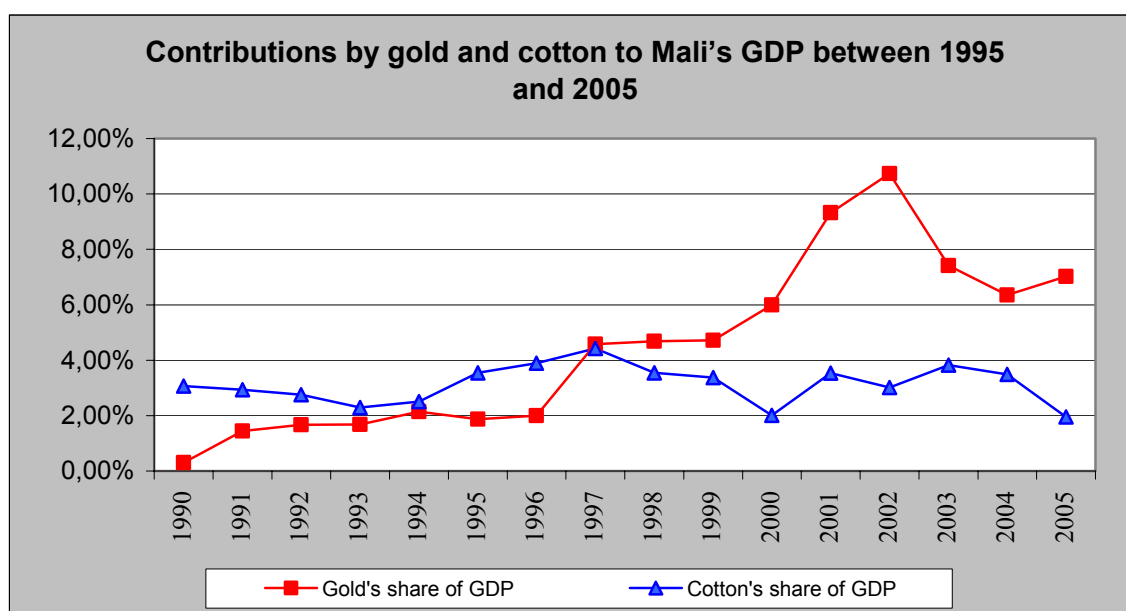
According to this source, between the two, these mines have brought 362.3 billion Fcfa to the Mali government since their opening.

Gold's share in the GDP

Gold's share in the Burkina GDP has thus far, been relatively small. Although it was as high as 5 per cent in 1994, it is now insignificant because of the informal nature of artisanal mining, compounded by liberalization and mismanagement.

In Mali, gold's effect on the GDP is significantly greater, and its contribution surpassed that of cotton in 1997. During a March 2005 press conference, the Minister of Mines estimated that the contribution of gold had reached 25 per cent¹²².

Figure 11: Contributions by gold and cotton to Mali's GDP between 1995 and 2005

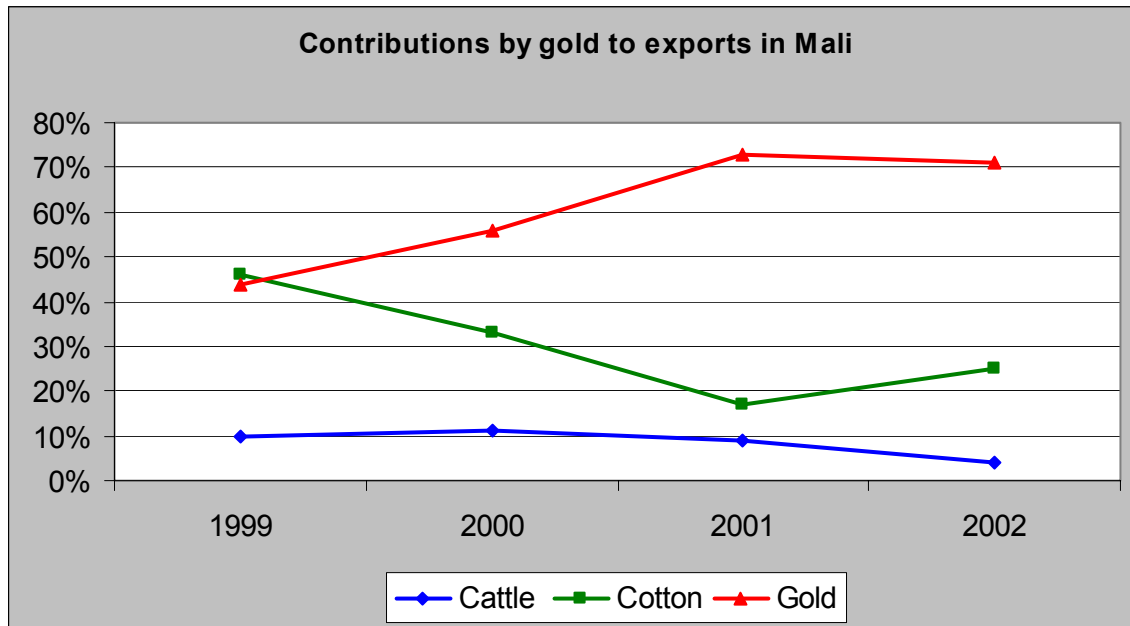


National directorate of statistics and information technology (DNSI). 2005. *Statistiques sur la composition du PIB malien*, Based on documentation supplied by the DNSI, CD-Rom, Bamako. (*Statistics on the structure and composition of Mali's GDP*)

Gold's share in exports

Over the last few years, gold has increasingly contributed to Malian exports surpassing, according to the source cited below, the contribution of cotton.

¹²² Maïga, "Ministère des Mines, de l'énergie et de l'eau", *op. cit.*

Figure 12: Contributions of gold to exports in Mali

CSA, *Audit technique et financier des sociétés d'exploitation minières au Mali, op. cit.*

Job creation and local trading

In the case of Burkina Faso, the number of jobs created by artisanal mining has been estimated at 200 000.¹²³ In Mali, the number of jobs created by industrial mining has been estimated at approximately 3400 over the last ten years. Of these, 3061 were for Malian employees, in other words amounting to 94 per cent local employment in industrial mining. These jobs contribute not only to salaries but also payments for social welfare such as health and education. Moreover, mining companies' trade with local suppliers which helps contribute to the development of the local market.

With respect to employment, mining companies are modifying their employment policies in order to progressively reduce expatriate personnel and replace it with domestic personnel.¹²⁴

Socioeconomic contributions in mining localities

As required by the Mali mining code, mining companies must set up a community development fund which is used to finance development projects in the mining localities. Moreover, individual mining directors have at their disposal discretionary funds for community development. Community and individual based projects have thus been developed in localities where mines are situated.

¹²³ MMCE and CBMP. 2000. "La mine artisanale," CBMP Contribution to a Seminar organized by the Paris École des mines, Burkina Faso. (*Artisanal mining*)

¹²⁴ DNGM. 2002. *Rapport de suivi et de contrôle des sociétés d'exploitation minière. Sadiola- Morila- Yatela*, Bamako, August. (*Follow-up and monitoring report on mining companies. Sadiola-Morila-Yatela*).

Table 3: Community expenditures for Sadiola and Yatela mines since commissioning

Activity	Expenses (US\$)
Agriculture	164 932,35
Construction / Establishment	6 684 415,26
Donations	193 334,37
Enterprise Development & Support	98 286,94
Health Care	209 643,09
Public Consultation and Disclosure	14 354,14
Staff appointed to support community development projects	6 545,45
Training and Education	75 815,50
Water Supply	203 624,38
Other	259,00
TOTAL SOCIAL EXPENDITURE	7 650 951,48

Anglogold Ashanti. 2005. *Statistiques sur le secteur minier du Mali*, Based on documentation supplied by Anglogold, CD-Rom.

Table 4: Community expenditures for Morila mine since commissioning

Activity	Expenses (US\$)
Health	220 628,98
Education	341 630,91
Agriculture	211 560,93
Art, Culture and Heritage	218 864,78
Other	414 100,36
TOTAL	1 406 785,96

Anglogold Ashanti, *Statistiques sur le secteur minier du Mali*, *op. cit.*

Moreover, since 2000, the mines have been paying the communities a mining patent (which is a tax on a title) which is applied after 5 years of exemption in the case of Semos and Yatela and 3 years exemption for Morila. The Sadiola and Yatela communities received \$US 1 948 000 between 1997 and 2005; in the Morila area, the patent amounted to \$US 1 611 024¹²⁵ for 2004 and 2005.

In general, returns for community development generated by mining projects are important because these communities benefit from services and infrastructure that were not previously provided by the State. The Kayes region, where the Sadiola and Yatela mines are located, has been hailed by many as the richest region in Mali since mining began there. However, increased wealth is limited to mining regions, and returns for other regions have been virtually non-existent. Affected populations have also suffered negative returns associated with mines. These concern above all an increasing population and the consequences of such increases (on ways of life and values, increasing risks of disease, etc), an increase in the cost of living and environmental impacts (dust, the noise and impacts of dynamiting on peoples homes), and the subsequent impacts on health, the abandonment of agriculture in favour of new jobs at the mine which are often very

¹²⁵ Anglogold Ashanti, *Statistiques sur le secteur minier du Mali*, *op. cit.*

precarious, the loss of fertile lands which are ceded to the mining companies, etc. In a context of increasing failure to monitor and follow-up on gold mining activities, these negative impacts have led to a problematic situation for populations living in proximity to mines.

Evaluating the objectives of implemented policies

The set of policies which has been implemented has had as its objective to attract foreign investors. So far, there have been reforms in the legal system, the introduction of regulations concerning environmental protection and investor contributions to local development. The implementation of these policies is largely dependent however, on the government's capacity to enforce regulations, to monitor this enforcement regularly and apply corrective measures if necessary. As will be seen, the manner in which the policies of liberalization have been implemented has not contributed significantly to the welfare of populations.

Maximization of economic returns: monitoring and follow-up

Because several years have passed since the introduction of liberalization measures in Mali, it is in this country that an evaluation can be done of the impacts of gold production. Over the past few years, after the remarkable boom in Mali's mining industry, the quantities of gold produced, its contributions to the Treasury, to the GDP and to exports, and the country's rank among producers of precious metals appear regularly in local newspaper headlines. There is increasing speculation however, in local newspapers, on the radio, in the media and public opinion more generally, regarding the industry's impact on the national economy and on the welfare of the Malian population. In addition, because of the deaths of animals and birds in 2002 and 2003 around the Sadiola tailings dam, there is currently a collective fear among the population affected by mining, as a result of these incidents.

This pressure has led Malian authorities to consider the quality of monitoring and follow-up of mining companies. Government authorities are aware of the limitations in the monitoring process, and some have claimed that Mali is currently in a "learning phase" regarding industrial mining. With these limitations in mind, technical and financial means will progressively be put in place by the government to address the shortcomings of monitoring procedures. Thus, a commission has been created to "determine appropriate ways and means of improving mining's contributions to the national economy as well as efficient methods to monitor and follow up on mining activities".¹²⁶ The commission has had very limited activities over the last three years because of the absence of funding. It has produced two ad hoc studies since its creation, one report to provide an overall evaluation of the activities of existing companies and the second to evaluate the Morila mine, whose projected targets had not been respected in 2002. The first report *Rapport de suivi et de contrôle des sociétés d'exploitation minières*, drafted in 2002, identified shortcomings related to three types of controls: technical control over gold's commercial

¹²⁶ DNGM, *Rapport de suivi et de contrôle des sociétés d'exploitation minière*, op. cit.

path, secondly over the environment¹²⁷, and finally financial and economic control. In an ongoing effort to strengthen monitoring and control, the Ministry for Mines, Energy and Water enlisted the help of a consulting firm (CSA Group Ltd) in 2004. Results from the two studies which they carried out, together with problems identified by government authorities, have enabled the identification and categorization of problems associated with gold mining in Mali following liberalization in 1991.

Technical control

Until 2002, there was no appropriate body within the mining administration in Mali dedicated to the monitoring and control of the activities of mining companies. Follow-up was carried out by administrators from the National Directorate of Geology and Mines (DNGM), who are also responsible for geological research. Monitoring of mining activity is a new task for this administrative body, however, and despite the increase in mining activity, the Directorate does not have increased resources to be able to carry out its new role. The consequence of this situation is that work loads are increased, workers are overworked and their responsibilities are multiplied. In spite of this, they are not given more time, or pay, or increased training to carry them out.

In this context, the DNGM faces major problems regarding the follow up of central mining activities such as monitoring the extractive process, environmental management or financial transactions within the industry. For this reason, it is difficult for those responsible to ensure the effective implementation of the mining code.

Gold extraction and production

One of the concerns is the possibility that mining companies may be deliberately increasing production in order to avoid taxation. From a technical perspective, in terms of extraction operations, it can be shown (See Table 5) that most mining companies are not complying with the extraction schedule outlined in their feasibility studies, causing the foreshortening of the lifespan of all Malian mines.

Table 5: Gold production discrepancies with the feasibility study

	1997	1998	1999	2000	2001	2002
Sadiola						
Quantity of ore mined	19%	38%	51%	54%	29%	87%
Quantity of gold produced	7%	36%	38.5%	68%	64%	52%
Yatela						
Quantity of ore mined					19%	- 22%
Quantity of gold produced					- 11%	18.4%
Morila						
Quantity of ore mined					82%	59%
Quantity of gold produced					6.5%	49%

DNGM, *Rapport de suivi et de contrôle des sociétés d'exploitation minière, op. cit.*

¹²⁷ Technical control refers to the various forms of control which require some technical knowledge regarding extraction or environmental management technologies for example. This kind of control is the responsibility of DNGM which must be able to check the accuracy of the mining company's reports. Consequently the person responsible for this type of control must have the necessary skills and technical knowledge to be able to do the job effectively. The commercial path refers to the circuit of gold from the Malian subsoil to South Africa (for refining).

Accelerated extraction is spurred on by fiscal exemptions offered in the mining code. The three mines discussed above are operating under the 1991 code, which allows 5 years of tax exemption from the first year of production. Intensifying extraction during these first five years reduces significantly the amount of taxes paid to the State by mining companies. Thus, during the 5 years of tax exemption, quantities of ore treated have exceeded projections foreseen in the feasibility studies. If one looks at the financial reports for these three mines (see Annex 8), it is easy to see how significant this lack of compliance has been for corporate returns (increased) and for State revenue (reduced).

Table 6: Costs incurred by mines in Mali

Mine	Year	Price obtained for gold \$/ounce	Cash cost \$/ounce	Cash cost \$/ton
Sadiola	2001	293	116.08	13.74
	2002	305	164.83	15.59
	2003	366	212.93	19.02
Yatela	2002	311	177.20	16.62
	2003	361	217.83	18.66
Morila	2002	308	73.65	28.34
	2003	345	109.06	26.57

CSA, *Audit technique et financier des sociétés d'exploitation minières au Mali, op. cit.*

Cash cost refers to the costs excluding investments. A quick analysis of these numbers indicates a correlation between low costs incurred and the period of intense mining in the Morila mine in 2002. Low costs associated with the tax exemption permit the maximization of returns for the mining corporation (see Annex 9).

This situation highlights the inability of the mining administration to insure the constant monitoring of mining operations in order to prevent trends that threaten economic returns from mining. In spite of exemptions, a plan for mine development spread over a sufficiently long period, when complied with, ensures the durable generation of profits from these non-renewable resources. In the reverse situation, an important disequilibrium occurs after the closure of the mine, especially when closing measures are not adjusted to take certain problems into account. These can involve financial deficits or the environmental problems often resulting from the closure of intensive mining activities.

As stated above, companies are able to produce more over a short period of time than the feasibility studies sometimes project. A feasibility study represents an agreement between the company and the government regarding the extraction plan and the returns for the partners during the mine's lifespan. Because it is difficult for the government to monitor the mining activity in order to ensure the enforcement of this agreement, mining codes should be adjusted in order to account of this concern. This could be done by reducing the duration of tax exemption periods which in the past have encouraged companies to engage in accelerated extraction. Moreover, in the case of the treatment of high grade ores, policies must foresee a method of calculation which is as favorable to both partners (the government and the company).

Environmental Management

The main environmental problem caused by mining in Mali is related to the use of cyanide for the treatment of ore. Given modifications in the extraction procedure at the Sadiola mine, a greater quantity of cyanide is being used there. The quantity of cyanide used increased from 500g to 1500g per metric ton, creating elevated concentrations of this chemical in tailings dams, which increased from 50mg/l (which is the maximum recommended by World Bank) to 150mg/l.¹²⁸ This situation has led to the death of animals in 2002¹²⁹ and of birds (107 deaths) in May 2003. Water samples collected during the same period revealed a cyanide concentration of 300mg/l when the maximum recommended is 50mg/l. The mining company is currently using detoxification reactants to reduce cyanide concentrations and is undertaking research into recuperation of cyanide and its impact on the death of birds, alone and in combination with other reactants.

Reports on water quality are contradictory. While a 2002 analysis done for the commission for the monitoring of mining companies suggests that well water consumed in Sadiola and Farabakouta contains arsenic levels in excess of accepted world norms, the CSA Group's report concludes that this water is of good quality. In Yatela, however, heavy metal concentrations (arsenic and lead) in excess of WHO norms have been measured in groundwater. At the end of 2003, an increase in arsenic concentrations was recorded at the Morila mine. Moreover, a cyanide tailings spill was reported at this mine in 2003, causing the death of a few animals.

Currently, several health problems (miscarriages, deaths) have been reported in studies by international NGOs and notably those of Les amis de la terre,¹³⁰ and Coalition dette-développement.¹³¹ However, to date no study has been undertaken at the national level to assess the impacts of water quality and the environment in general on public health. Two studies are currently underway: one socio-demographic, and the other epidemiological, both aimed precisely at identifying these impacts.

These studies have been financed by SEMOS and are being conducted by the Malian National Institute for Public Health Research. The first study, which was socio-demographic in nature, is now finished. This study focused on the perceptions of the communities regarding the impact of mining activities on their health. The study found that it is strongly believed by the population that the high proportions of miscarriages which have taken place recently in certain villages located in the mining area were caused by mining activity. In these areas, the highest proportion (0.8) has been found in the village of Yatela with 4 miscarriages for 5 pregnancies for the last five years. This must be compared to a proportion of 0.37 for the whole mining area (14 villages around Sadiola and Yatela) and a proportion of 0.36 for the control area (7 villages of a distance of at least 20 km from the mines). However, although the communities perceive health

¹²⁸ CSA Group, *Audit technique et financier des sociétés d'exploitation minières au Mali*, *op. cit.*

¹²⁹ DNGM, *Rapport de suivi et de contrôle des sociétés d'exploitation minière*, *op. cit.*

¹³⁰ Les amis de la terre. 2003. "La poussière c'est notre plat quotidien," September [online] http://www.amisdelaterre.org/article.php?id_article=677.

¹³¹ Coalition des alternatives dette-développement. 2003. "Les pollutions de la mine de Sadiola", *Penser pour agir* [online] http://www.penserpouragir.org/article.php?id_article=44&var_recherche=sante.

problems as being related to mining activity, only the second study which has as its objective to establish a medical diagnosis will permit confirming these presumptions.

Generally speaking, environmental regulations and the capacity of government authorities to enforce them have been insufficient with regard to mining activities. Thus, the use of cyanide in the extraction process has been taken into account neither by the mining codes nor by any specific regulations. Anglogold, the company running all three currently active mines, has taken this aspect into account by voluntarily adhering to the “International code for the management of cyanide”. Compliance with this code is being monitored by foreign external auditors, the State having no control over this aspect. Reports evaluating mining companies have recommended that the DNGM adheres to this cyanide code for monitoring all uses of cyanide in Mali.

It is important to note that this voluntary code does not take into account all the activities associated with safety or the environment during planning stages, during the construction of storage systems for residual products or during the long term closure and rehabilitation of the mine. Given problems associated with the increased usage of cyanide and acid mine drainage, plans for the closure of mines, notably Sadiola, have been revised. The CSA Group estimates that the costs of closure and long-term monitoring of this mine should be revised upwards because “acid mine drainage is likely to be a real problem over the medium and long term at Sadiola.”¹³²

Problems with mine closures have been particularly significant for the Syama mine, as no closure plan had been devised by its operating company, BHP. Randgold, which took over the mine, drafted a closure plan, but according to a 2004 report by the CSA Group :

- Tailings piles and the walls of the mine are unstable and dangerous
- Tailings dams show leaks and signs of water contamination
- Surface water monitoring is inadequate.

Moreover, the mine’s closure caused a deterioration in existing socioeconomic conditions through the closure of the clinic, the break in the water supply, interruptions in garbage collection, etc.¹³³ Since 2004, the Syama mine has been acquired by Resolute Mining and this company has committed itself to undertaking the progressive rehabilitation of the various areas of activity once the Syama mine becomes operational again.¹³⁴

From an environmental perspective, mining companies are conforming to the 1999 code, but without any national environmental norms. (See Annex 10). For example, Mali does not have any environmental norms regarding water quality, dust or air pollution. The country has environmental regulations which specify that companies must protect the environment and behave in conformity with “high international standards”. Consequently, mining companies use World Bank, World Health Organization or South

¹³² CSA Group, *Audit technique et financier des sociétés d’exploitation minières au Mali*, *op. cit.* : 94.

¹³³ Oxfam America, Foundation for the Development of the Sahel and Robert Moran. 2004. “Tarnished Legacy: a Social and Environmental Analysis of Mali’s Syama Goldmine,” *Oxfam America Research Paper*, Washington [online] <http://www.oxfamamerica.org/>.

¹³⁴ Resolute Mining Ltd. 2006. “Development overview : Syama,” August 21 [online] http://www.resolute-ltd.com.au/res_d/syama.html.

African norms for these different aspects of the environmental protection. No follow-up and, if necessary, corrective measures currently exist.

Financial and economic monitoring

Difficulties have also arisen in the context of the evaluation of financial data provided by mining companies, notably concerning investment figures, evaluation of production costs, mining fees and transactions in mining shares. As a result of the CSA study, a monitoring system has also been recommended at the gold refining stage. During this stage, an advance is paid by the refining company to the mining company, and the final balance is settled after the refining stage. These transactions occur between the mining company and the refining company; they are documented but these documents are not given to the administration, which thus has no control over this stage.¹³⁵ From a financial and economic perspective, the State must insure that its returns are determined in an appropriate manner, without excessive costs from the mining company, and without any preferential contracting by the company to its subsidiaries. In fact, it is difficult for the government to tract the costs of all the equipment, chemical products or other products imported by the mining companies. The costs of these products are nonetheless included in the operational costs and deducted from the benefits derived from the activity. High costs contribute to diminished dividends paid to government. Similar loses can be incurred by the government as a result of the signing of preferential contracts with a subsidiary.

Social Development

Despite the astonishingly rapid development of the mining industry in Mali, for many, “Malians are not noticing any change on their plates”. In reality, the standard of living of the population has not undergone any significant variation. This situation is due to several factors.

First, the country is not getting the maximum possible return from mining, given on the one hand the far reaching incentives introduced to attract investors and on the other, the shortcomings of the monitoring process required to ensure the enforcement of mining regulations. An analysis of the financial operations of the different mines clearly highlights this situation (Annex 8).

Second, economic returns from gold are primarily directed towards the national Treasury, which is a single fund geared towards financing government programs¹³⁶. In the context

¹³⁵ DNGM, *Rapport de suivi et de contrôle des sociétés d'exploitation minière*, *op. cit.*

¹³⁶ According to the Minister of public lands and property issues, national public opinion is concerned about the use of the State's share in the context of mining. She claims that between 2000 and 2004, the Malian State received \$US 281 million (144 billion Fcfa), paid to the national Treasury. According to Mrs Soumaré Aminata Sidibé, there are no separate treasuries in Mali and the single treasury system means that all the State's money is directed to it. For many, this explains difficulties in tracking the exact destination of gold, since funds for most government expenses come from the public Treasury, both for the functioning of public services and for investments. Excerpt from. Moussa Sow. 2005. “Mines d'or de Sadiola et Yatela: quel impact sur l'économie nationale?” *Nouvel Horizon*, April 9 [online] http://www.malipages.com/presse/news_05_05/news_0035.asp.

of Mali's recent and ongoing decentralization, redistribution to different regions of the country should have been done. However, as some interviewed administrators will admit, decentralization is still incomplete, because the transfer of responsibilities has not yet been accompanied by a transfer of resources. Although decentralization texts exist, they have not yet been put into action. Under these conditions, the mining sector's development has had a limited impact on social development, because of this poor distribution, combined with the social and environmental problems created by mining noted above.

Small mines and the liberalization of the mining sector in Burkina Faso

In Burkina Faso, the introduction of the 1997 mining code has not had the anticipated significant impact on the sector's development. Besides the incentives to attract investors in order to develop industrial mining, the country is also emphasizing support for small mines and artisanal mining. Since the 1980s, the government has been responsible for the organization of the sector, as seen by the creation of the CBMP. With the liberalization policies instituted in the early 1990s, very high hopes were raised concerning the future contribution of gold mining to national development. However, according to mining authorities, the drop in the price of gold in 1998, and other managerial difficulties resulted in a temporary slowdown in exploration activities dedicated exclusively to gold. For this reason, between 1995 and 2000, seven industrial mining projects were placed on stand by, and two mines were closed (Poura and Essakane). A mixed balance sheet after a decade of mining development led to the identification of causes underlying this situation and the search for potential solutions. Promoting the mining sector is aimed primarily at creating jobs and generating revenue.

The answer which has been proposed for the short and medium term has been the promotion of small scale mining. Indeed, according to officials from the Ministry for Mines, the size of deposits thus far uncovered in Burkina is particularly suited to this type of mining. Consequently, officials from the Ministry claim that: "small scale mining is an alternative to the decrease in mining activity. Nationals will be able to mine gold themselves"¹³⁷.

From a legal standpoint, it is important to establish a framework for artisanal mining in which work conditions and rates of product recovery can be improved, and in which a progressive transition towards small industrial mines can be made¹³⁸. A distinction has thus been introduced between these two types of activities and industrial mining. Artisanal mining is defined as "any operation that consists of extracting and refining minerals using traditional and manual methods, to produce goods for sale"¹³⁹. Small scale mining is defined as "any small-scale mining operation with a minimum number of permanent facilities, using industrial or semi-industrial methods and based on the prior existence of a deposit"¹⁴⁰. The 1997 mining code stresses the importance of artisanal

¹³⁷ MMCE. 2004. *Bilan des politiques du ministère des mines des carrières et de l'énergie. De 1998 au 1^{er} semestre 2004*, Burkina Faso, July. (*Progress report from policies of the MMCE, from 1998 to the first semester of 2004*).

¹³⁸ MMCE and CBMP, "La mine artisanale," *op. cit.*

¹³⁹ Gueye, *Étude sur les mines artisanales*, *op. cit.* : .7

¹⁴⁰ *Ibid.*

mining activities but it does not distinguish between the two types of mining. The 2003 code does make the distinction, which is important in so far as it introduces specific legislation for semi-automated mining¹⁴¹. Thus, in compliance with this code, small scale mine operators must obtain a permit for research and mining; but this is not mandatory for artisanal miners. In Mali, small scale mining is still contingent upon obtaining a mining authorization but not a permit. This innovation is designed to help national operators in their search for financing, as these mining titles “constitute genuine real estate titles which can be mortgaged or used as collateral”¹⁴². They also benefit from more flexible provisions than those offered to industrial operators. For instance, land fees are five times less for small mines than for industrial mines.

Gold washing/panning and small-scale mining have also been supported by multilateral projects. For example, one aspect of the World Bank’s Precageme project was the promotion of small and artisanal mining operations. The objectives were to improve artisanal mines and develop pilot mining treatment centers¹⁴³. Moreover, small mines have been eligible for support from the Highly Indebted Poor Countries (HIPC) fund since 2004. The amount of projected investments in small scale mining funds is 1.82 billion Fcfa for the period between 2004 and 2007, distributed as follows:

Table 7: Distribution of HIPC funds dedicated to small-scale mining

Year	2004	2005	2006	2007
Investments (millions)	\$US 0.43 (222 Fcfa)	\$ US 1.2 (628 Fcfa)	\$US 0.96 (492 Fcfa)	\$US 0.90 (460 Fcfa)

These funds are available to the Ministry of Mining in order to contribute to the development of small scale mines which are owned by nationals. It is still too early to evaluate their distribution and impact but in the case of Burkina Faso, it is possible to compare the amounts directed to small scale mining in the coming years with amounts accruing to other ministries receiving HIPC funds as of 2000.

¹⁴¹ Hatcher, *Les enjeux politico-économiques de l’activité artisanale*, *op. cit.*

¹⁴² Article 25 : MMCE. *Law No. 031-2003/AN on the Mining Code*, *op. cit.*

¹⁴³ Traoré, *Mining Sector Capacity Building and Environmental Management Project*, *op. cit.*

Table 8: Use of HIPC Resources (in billions of Fcfa)

Ministry	2000	2001	2002	2003	
				Est.	Actual
Mobilization of HIPC resources	7.1	26.5	20.8	28.6	24.7
Expenditure of HIPC resources (commitment basis)	-	6.8	28.2	1.0	29.8
Ministry of Employment, Labor, and Social Security		0.3	1.0	0.6	1.2
Ministry of Promotion of Women			1.7	0.9	1.1
Ministry of Health		1.9	10.0	9.7	9.5
Ministry of Social Action and National Solidarity			0.6	0.6	1.0
Ministry of Basic and Literacy Education		2.7	9.3	9.4	10.5
Ministry of Agriculture			1.7	2.1	0.9
Ministry of Animal Resources		0.1	0.7	1.1	0.7
Ministry of the Environment and Water			0.2	-	-
Ministry of Infrastructure, Housing, and Urban Development		1.9	1.8	2.4	2.3
Ministry of Information			-	0.2	0.3
Common interministerial expenditure			1.1	1.1	2.2

Source: TOFE, 2003 Budget Law

International Monetary Fund (IMF). 2005. "Mali poverty reduction strategy paper implementation report," *IMF Country report No. 05/439*, Washington D.C.

Because of these reforms, much hope has been placed on small scale mining. It is expected that production will increase by 15 per cent over the short and medium term.

In the case of Mali, small-scale mining has also been promoted in the context of the UNDP's Promotion of artisanal mining and environmental protection project (Pampe), the mining sector technical assistance project supported by the World Bank and the UN-ILO project aimed at the eradication of poverty and sustainable development in artisanal mining communities¹⁴⁴. Despite this support however, industrial mining is still experiencing, by very far, the most significant development.

Alternatives to gold mining contributions in both countries

In Burkina Faso and Mali the central concern is that regarding the impact of mining activities on the country's social and economic development. The choice of using the mining sector as the basis to promote development has so far produced only mixed results, particularly in Mali. Two types of solutions to this situation have been proposed by administrative officials who were interviewed during the research for this study: those which consider different approaches to mining sector development, and those which consider alternative sectors to mining, such as agriculture.

¹⁴⁴ Keita, *Étude sur les mines artisanales et les exploitations minières à petite échelle au Mali*, op. cit.

Development prospects in the mining sector

Although gold is currently the only ore being mined or planned to be mined on an industrial scale in both countries, the contribution to development of all mining activities are of interest to government authorities. Suggested alternatives are therefore based on the entire mining sector and on promoting resource diversification towards other minerals than gold.

As this study has made clear, in both countries efforts have been focused almost exclusively on the exploration and mining of a single ore: gold. For government policy makers, this approach contributes to the economy's vulnerability because the price of gold fluctuates. Evaluating other resources is part of the priorities of these countries. For instance, in Mali, part of the *ad valorem* tax (3 per cent) will be used to create a mining fund dedicated to evaluating other mineral resources¹⁴⁵. This investment in evaluation is all the more useful, because mines currently in operation were discovered in the 1970s in the context of bilateral and multilateral cooperation. With the State's withdrawal and the drastic reduction of public spending following liberalization and adjustment programs, geological and mining research is poorly funded in Burkina as well as in Mali¹⁴⁶.

Both governments are attempting to finance modest projects aimed at drawing attention to useful substances and construction materials that are integral to the mining sector. Resources such as manganese, phosphates, zinc, granite and clay minerals, etc, are used in numerous areas: construction, agriculture, ceramics, etc. According to Burkina authorities, a good policy permitting the development of these substances would improve yields in agriculture, for example through the use of phosphates, which would contribute to reaching food self-sufficiency. Moreover, such a policy would encourage the consumption of local materials and help to reduce the cost of construction materials¹⁴⁷. According to the Malian Ministry for Mines, Mali certainly has the potential for the development of a cement industry, but international operators are not interested. Both Mali and Burkina import their construction materials, even though their subsoil abound with them. With the financing of small-scale mines in the context of HIPC funds, Burkina Faso hopes to see its other useful mineral substances and quarries sector developed.

Table 9: Production of quarry substances

	2004	2005	2006	2007	2008
Phosphate (t)	1 095.75	1 105	1 110	1 120	1 135
Granite (m3)	6 689	18 000	25 000	50 000	100 000

MMCE, *Situation des investissements et perspectives du secteur minier*, op. cit.

¹⁴⁵ I. Renaud and A. Mora. 2003. "Faire de l'or un levier de développement du Mali," Interview with the Malian minister of mines, *Novethic*, March 5 [online] <http://www.novethic.fr/novethic/site/article/index.jsp?id=33195>. (*Turning gold into a lever for development in Mali*)

¹⁴⁶ Interviews conducted in June and July 2004 at the Ministry of Mines of Mali and Burkina Faso.

¹⁴⁷ MMCE. 2004. *Analyse sommaire de la situation du secteur minier burkinabé*, Burkina Faso, January. (*Summary analysis of the Burkinese mining sector*)

National involvement in the mining sector

If the mining sector is to play a significant role in driving development, it is undeniable that, for both countries, nationals must play a larger role in mining for mineral resources. It is with this prospect in mind that Burkina has included in its mining code, provisions favoring small-scale mining. If small and medium size mines are operated by nationals, returns will also be entirely national. This issue is stressed in both countries¹⁴⁸. It is this option which has led Burkina Faso to introduce the promotion of the small-scale mining sector on the agenda of the World Bank's project in this area. This has resulted in the opening of five small mines in the form of pilot projects¹⁴⁹. A project initiated by the Burkina government and the BRGM has identified 64 potentially interesting sites for developing small mines owned by national operators¹⁵⁰. Burkina Faso currently has seven small mines¹⁵¹. In addition to small mines, artisanal mining plays a role in creating jobs and generating important revenue for a significant part of the population. With each of Burkina's 200 000 panners estimated to support between 5 and 10 people, gold panning provides a source of revenue for 1 to 2 million people. In contrast, industrial mines in Burkina have in the past provided 1100 jobs. In light of health and safety problems associated with artisanal mining, the State has undertaken, through the CBMP, to supply materials, supervise, train and sensitize these miners in order to improve profitability and insure acceptable work conditions. However, the ongoing privatization of the CBMP will leave this part of the industry to its own devices. Whether for artisanal or small-scale mining (which requires more equipment and capital), difficulties encountered by nationals are mainly related to financing and risk taking, because mining requires large amounts of funds, while entailing high risks which nationals are not always willing or able to take. In addition to financing difficulties, there are supervision and training issues, because the mining sector requires special skills and adequate information concerning the operation, the risks and the opportunities in the mining industry. One Burkina high-ranking official maintains that the liberalization of the mining sector did not take into account this essential transitional step which would have been necessary to allow for a greater involvement of nationals. In the end, the blunt manner in which liberalization was introduced only favored the massive influx of foreign investors.

The state's role

The passage from small-scale mining to large industrial mines as is often the pattern in countries such as Mali and Burkina Faso, poses important financing problems. In Mali, while a very large majority, (90 per cent), of mining titles are initially allocated to nationals, national mining title holders usually associate themselves with junior companies (generally Canadian) in order to secure financing to pursue exploration or mining of deposits that turn out to be richer than initially projected. The increase in capital contributes to reducing that part held by the nationals, and the latter ultimately sell

¹⁴⁸ Renaud and Mora, "Faire de l'or un levier de développement du Mali," *op. cit.*

¹⁴⁹ Traoré, *Mining Sector Capacity Building and Environmental Management Project*, *op. cit.*

¹⁵⁰ MMCE, *Analyse sommaire de la situation du secteur minier burkinabé*, *op. cit.*

¹⁵¹ Ouédraogo, "Le secteur minier du Burkina Faso," *op. cit.*

their shares to foreign companies¹⁵². Mali's main gold mines were created in this fashion, on sites which were previously artisanally mined. In this country, mining operators have formed two associations: the Mali mining operators union (Union des opérateurs miniers du Mali, UNOMIN) and the National mining operators' council (Conseil national des opérateurs miniers, CNOM). These associations are seeking to create a chamber of mines attached to the chamber of commerce, which would contribute to solving problems encountered by operators. Due to a lack of resources however, this chamber does not yet exist.

Faced with this situation and the necessity to help finance mining by nationals, Burkina Faso is advocating for a re-involvement of the State, at least as far as financing is concerned. In its 2004 revision of mining policies, it is stated that:

The recent evolution towards liberalization in the mining sector has limited certain actions of the government. In fact, in spite of its limited financial means, the State could intervene directly to install pilot extraction and ore treatment units. It could create a support fund for the mining sector aimed at national investors. It could contribute financially to studies on certain deposits in order to participate in their capital. It could take other initiatives to directly support the sector by financing certain infrastructures.¹⁵³

Such a position clearly calls into question the liberalization programs that insisted upon the stringent withdrawal of the State, and it reaffirms the need to redefine its role in determining and implementing development policies.

¹⁵² Interviews conducted in July 2004 at the Ministry of Mines of Mali.

¹⁵³ MMCE, *Politique minière du Burkina Faso, op. cit.* : 12.

6. Conclusion: Towards more developmental outcomes of agricultural and mining reforms

Agriculture has been central to development in Africa for decades. A wide set of factors suggest however, the difficulty of this sector to adapt to new forms of globalisation. In the face of this, the tendency has been to look to new leading sectors and notably to minerals. Yet as this study shows, given the constraints currently facing African countries, mineral extraction and notably gold production may be very far from assuring the developmental potential it is sometimes assumed to have and which is clearly present in agricultural production.

Both Mali and Burkina Faso are still traditionally agro-pastoral countries. Even though in the case of Mali the contribution of gold to export receipts has exceeded that of cotton, the mining industry is still seen as marginal in so far as its returns to local development are very limited. The mining sector and gold in particular, employ very few people compared to agriculture. Moreover, its economic returns are not generally reflected in the standard of living of the local population. For this reason, certain public officials believe that various means of reinforcing agriculture must be found in order to ensure food security.

Even though the cotton sector has experienced recent difficulties, including American and European cotton subsidies for their producers, many consider its potential returns to be immediately tangible for a very large number of producers. Moreover, it is widely recognized that cotton production has the potential to contribute to food security if an integrated approach is taken to agricultural production.

However, current reforms are not oriented in this direction. Quite the contrary. In the context of discussion to encourage diversification and alternatives to gold mining, the IMF has been encouraging Mali to turn to oil exploration and to this end, the country introduced a petroleum code in 2003 specifically designed to attract foreign investors.¹⁵⁴

As noted in the introduction, in the new policy framework that has emerged, the Millennium Development Goals provide the targets and National Poverty Reduction Strategies represent the vehicle supported by associated direct budget support mechanisms for meeting these objectives. The question raised is whether these frameworks, targets and programmes are at the height of the challenges facing the countries concerned. The comparative study presented here suggests that most likely they are not.

This study raises several elements which might improve the likelihood of the development strategies currently on the table to lead to better developmental outcomes. Some of these recommendations are specific to either cotton or gold, as presented in Box 1. More importantly, however, these case studies suggest several common ways of improving the developmental outcomes of current reforms which are relevant beyond cotton and gold, as discussed below.

¹⁵⁴ IMF. 2005. "Mali Poverty Reduction Strategy Implementation Report," *IMF Country Report*, No. 05/439, IMF, Washington D.C.

BOX 1. Towards more developmental cotton and gold reforms**Cotton**

Account for crop interdependency. Cotton sector reforms need to account for the interdependence of cotton and other crops, including food crops that benefited from the integrated nature of extension services in the past. Dismantling extension services which have been central in the integrated approach to cotton production in Mali and Burkina Faso threatens food crops and risks increasing the incidence of poverty.

Support local transformation. In addition to improving cotton productivity, donors and governments should encourage greater local transformation of local cotton fibre to strengthen the resiliency of producers to fluctuations in the world price of cotton.

Gold

Maximization of economic returns. Mining development should favor the retention of greater economic returns in the host country, including through reducing incentives offered to foreign investors and greater support of inter sectoral linkages.

Development of small-scale mines and the involvement of nationals. Involving nationals has been recognized as a critical condition for maximizing mining returns to the population of the countries concerned. One option is to promote the development of small mines accessible to nationals via the creation of funds financed by external creditors. Governments and donors also need to enforce better working conditions of artisanal miners.

Diversification of mined substances. In order to maximize mining returns to the local population, other types of ores and substances available in these countries should be considered, including exportable substances (zinc, manganese), as well as locally usable substances (phosphates, granite).

Foreign investment and policy coherence. Financial institutions and governments need to assure that current mining legislation in Africa which aims to encourage foreign investment be more compatible with social, economic, and environmental development goals.

1. **Questioning the export-led growth hypothesis.** Current policy recommendations are based on the hypothesis that export led growth in a leading sector will bring growth to the rest of the economy which will, in turn, reduce poverty. This study suggests the need to question this hypothesis. Failing this, the danger is that recommendations will move in the undesirable direction noted in the Report of the Commission for Africa,¹⁵⁵ with a sequence from the promotion of products like cotton, to gold, to the search for petroleum as gold reserves become depleted. Inevitably, food security and the well being of local populations worsen, increasing the risk of social and political instability.
2. **Increasing policy space for national governments.** Donors should increase the space for countries to put forward policy priorities and options to meet social and economic objectives. The issue is not one of choosing a particular sector over another, but rather reducing conditionalities and allowing for a better understanding and the emergence of the strategies available to meet development objectives and the conditions enabling their introduction and successful implementation. Engagement of local stakeholders is key in this process.

¹⁵⁵ Commission for Africa. 2005. *Our Common Interest*, London, March : 160.

3. **Improving PRSPs.** Just as important, many PRSPs have failed to offer innovative approaches to agricultural support or to mining sector development in Africa. In the case of the two countries studied, there appears to be a need to revisit these documents and the strategies they propose in order to better take account of past successful experiences of cotton production, notably through an integrated approach which embraced food crops and cattle raising and contributed to poverty reduction. Furthermore, there is need to examine the extent to which the design of proposed institutional changes, macro-economic reforms and notably those which encourage further liberalization in both sectors are, under present circumstances, likely to enhance or rather to impede the conditions contributing to employment creation, a more equitable distribution of incomes, food security and poverty reduction. Policy space must be created and remain open in order to allow for corrective measures in the area of poverty reduction should these be considered necessary.
4. **Being open to innovative policies.** Even if commodity markets were in the future to offer African producers a more favorable outlook, policies are still needed to address structural constraints that have hindered diversification of the economic base of African countries. To this end, and in order to keep space open for alternative policy options, there is a need to ensure the renewal of thinking and the emergence of more appropriate development strategies, notably to promote African agriculture and minerals through the construction of innovative public policies.
5. **Pacing liberalization.** Instead of the rapid liberalization observed across the cases studied, such processes need to be preceded by a transition period that would have allowed both countries – the state as well as local private actors – to better train and prepare for participation in the sector concerned. Hasty liberalization leaves countries without the necessary human and financial resources and prone to the issues discussed in the above analysis. In the mining sector, the state's systematic withdrawal has brought negative results with respect to gold washing/panning and small-scale mining development in Burkina Faso. In the cotton sector, the dismantling of the parastatals formerly responsible in this area appears to have been proposed in the absence of the identification of a set of policies capable of ensuring a coordinated and orderly approach to cotton production and its potential contribution to integrated rural development.

Liberalization programs should therefore be reviewed in order to first ascertain their relevance and to ensure that their implementation is compatible with poverty reduction programs. There is need in this regard for a renewal of thinking and policy design in order to maximize local value added through a revisiting, on the one hand, of the fiscal incentives proposed to attract foreign investment in mining and on the other, through greater processing and local transformation of cotton products.

6. **Promoting diversification, local value added and policy coherence.** To promote social and economic development, policies need to build internal cohesion and eventually regional cohesion through economic development as opposed to the current overriding and one-sided emphasis of greater integration into world markets. The hypothesis with regard to the development of industrial gold production in West Africa appears to be that growth resulting from this export sector, driven by foreign investment, would of itself bring sustainable development and a reduction of poverty. In the mineral rich countries of Africa, as the Malian experience illustrates, this has not happened. While economic growth is clearly necessary, further conditions are essential. And in order to reinforce sustainable patterns of growth, foreign investment must be compatible with and reinforce local development strategies. In this regard there is a need for diversification of the mineral substances which are to be developed and transformed and much greater attention placed on the capacity of the mining sector to build inter sectoral links though backward and forward linkages and notably through national processing and procurement.
7. **Promoting regional cohesion.** Greater attention needs to be placed on regional approaches notably with regard to such issues as:
- to local transformation, quality control and pricing of exports such as cotton;
 - to new safety and environmental standards in mining;
 - to building local capacity to regulate and monitor mining operations, etc.
8. **Rethinking the state.** As noted in the Report of the Commission for Africa,¹⁵⁶ since the 1980s and 1990s, donor thinking about agriculture in Africa has focused on “getting the state out” and “getting prices right.” This approach has translated into policies of liberalization, privatization, and a reduced role for state, including of input subsidies. Results have been mixed at best. Poorer farmers have lost the support of parastatal marketing boards and government research and extension systems, but have rarely gained new support, markets or production opportunities. The consequence has been increased impoverishment and growing inequalities among farmers.
9. **Improving analytical tools.** Rather than an expert-driven, technocratic and crop specific approach to agricultural reform, a more politically nuanced stance is required. A new emphasis therefore needs to be placed on understanding and influencing processes of innovation, intervention and policy, not just their technical content. Such an approach requires a cross-disciplinary approach- bringing the best of economic and technical analysis together with insights from the socio-cultural and political analysis. It requires a thoroughly grounded approach, rooted in context specific constraints analysis, allowing for scenarios and options to be elaborated and debated by multiple stakeholders involved in the future of agriculture development in the countries concerned.¹⁵⁷

¹⁵⁶ *Ibid.* : 4.

¹⁵⁷ From : “Introduction : New Directions for African Agriculture” in Scoones, Devereux and Haddad, “New Directions for African Agriculture,” *op. cit.* : 11.

10. Strengthening domestic capacity. A reassessment of the role of the state and a rethinking of public policy alternatives appear essential if it is recognized, as suggested in this study, that state-backed institutional arrangements are necessary for making markets work and public policies are required to address structural constraints. For this to happen however, there needs to be increasing space for setting policy priorities and alternatives. Recent reforms of the cotton sectors of Mali and Burkina Faso suggest that agricultural policy reforms should be carefully sequenced and complemented with state-backed institutional arrangements for making markets work. While this perspective is not a plea to return to former state lead policies, it does underline the need for rethinking and innovation in the construction of public policies to promote African agriculture. In the mining sector, it is equally important that multilateral financial institutions and bilateral development agencies recognize the long term benefits of reinforcing the legitimacy and capacity of African countries to apply existing regulations, to monitor and to enforce and to this end, determine to work with local governments and other actors concerned (private enterprises or non governmental organizations, etc) to mobilize the financial and technical resources necessary to ensure that states can effectively be responsible for ensuring well being and development of their people.

Annexes

ANNEX 1

Burkina Faso: Surfaces cultivated, yield per hectare and production figures of seed cotton 1961-2004

Year	Surfaces cultivated (Ha)	Yield per hectare (Hg/Ha)	Production (Mt)
1961	22 925	1 026	2 352
1962	36 600	1 809	6 621
1963	45 800	1 757	8 048
1964	52 500	1 671	8 774
1965	49 720	1 501	7 463
1966	52 355	3 113	16 297
1967	65 408	2 641	17 275
1968	71 648	4 470	32 027
1969	84 976	4 266	36 247
1970	80 557	2 915	23 484
1971	74 056	3 798	28 126
1972	70 058	4 650	32 574
1973	66 601	4 004	26 668
1974	61 520	4 968	30 563
1975	68 005	7 455	50 695
1976	79 225	6 974	55 253
1977	68 767	5 532	38 043
1978	71 714	8 361	59 957
1979	82 030	9 450	77 520
1980	74 948	8 344	62 538
1981	65 240	8 819	57 534
1982	71 970	10 500	75 572
1983	76 213	10 320	78 649
1984	82 300	10 709	88 134
1985	94 625	12 205	115 491
1986	126 850	13 341	169 227
1987	170 268	8 693	148 015
1988	170 008	8 581	145 879
1989	162 169	9 397	152 389
1990	166 274	11 399	189 543
1991	242 700	9 979	242 200

Year	Surfaces cultivated (Ha)	Yield per hectare (Hg/Ha)	Production (Mt)
1993	119 928	9 569	114 764
1994	198 800	8 910	177 127
1995	145 418	10 346	150 451
1996	200 768	10 093	202 630
1997	276 911	12 390	343 106
1998	334 770	9 695	324 557
1999	211 931	12 132	257 121
2000	209 113	10 164	212 545
2001	345 578	11 431	395 031
2002	412 138	10 657	439 200
2003	460 000	9 783	450 000
2004	550 000	10 455	575 000

FAO, *FAOSTAT*, *op. cit.*

Mali:
Surfaces cultivated, yield per hectare and production figures of seed cotton
1961-2004

Year	Surfaces cultivated (Ha)	Yield per hectare (Hg/Ha)	Production (Mt)
1961	42 565	2 819	12 000
1962	50 440	2 447	12 342
1963	57 049	2 763	15 763
1964	67 589	3 221	21 772
1965	56 228	2 878	16 184
1966	48 080	4 520	21 731
1967	58 839	5 080	29 888
1968	70 977	5 761	40 889
1969	51 783	8 046	41 666
1970	65 703	8 030	52 762
1971	77 332	8 785	67 939
1972	77 390	8 552	66 182
1973	69 456	7 323	50 861
1974	68 058	8 990	61 181
1975	87 411	11 828	103 391
1976	107 309	11 078	118 875

Year	Surfaces cultivated (Ha)	Yield per hectare (Hg/Ha)	Production (Mt)
1978	113 069	11 293	127 690
1979	118 612	12 692	150 542
1980	102 352	10 557	108 052
1981	79 163	12 185	96 464
1982	97 868	13 038	127 601
1983	104 459	13 462	140 625
1984	119 554	12 067	144 261
1985	145 927	11 999	175 092
1986	151 812	13 283	201 652
1987	149 526	13 301	198 887
1988	189 335	13 154	249 056
1989	188 090	12 270	230 795
1990	205 331	13 443	276 023
1991	215 266	12 656	272 430
1992	246 472	12 960	319 424
1993	200 368	11 990	240 244
1994	269 362	10 878	293 021
1995	336 224	12 073	405 907
1996	420 359	10 754	452 046
1997	497 650	10 507	522 903
1998	504 397	10 278	518 415
1999	482 293	9 533	459 792
2000	227 805	10 657	242 772
2001	532 164	10 736	571 335
2002	449 164	9 790	439 722
2003	550 000	11 545	635 000
2004	540 000	11 111	600 000

FAO, *FAOSTAT*, *op. cit.*

ANNEX 2

Mining potential in Mali

Substance	Region	Location	Reserves (tons)
Gold		Sadiola	140
		Médinandi	4
		Morila	160
		Yatela	48
		Loulo	120
		Banankoro	
		Kodaba	
		Kalana	44
		Kodiéran	44
		Kalanako	
		Balé	
		Kolenda	
		Traoréla	
Diamonds		Kéniéba and Adrar des Iforas	Eight kimberlitic diamond-bearing pipes
Iron	Kayes	Diamou, Djidian and Balé, south of Kita	1.36 billion
Bauxite	Kayes		1.2 billion
Manganese	Gao	Tassiga, Tondibi, Agaula and Ofalikin, south-east and south-west of Ansongo	100 billion
Uranium	Kayes	Faléa and Loulo in the Samit, north-east of Gao	5,000 of U ₃ O ₆ 200 of U ₃ O ₂ at 0,085%
	Gao		
Phosphates	Gao.	Tilemsi valley, north of Bourem; Tamaguilelt	20 million
Limestone	Kayes	Goundam and	122 million
	Tombouctou	Hombori	
	Mopti		
	Koulikoro		
Marble	Kayes	Bafoulabé, Sélinkégni and Madibaya	60 million
Lead-zinc	Sikasso	North-east of Bougouni	1.7 million of ore at 5-10% Zn,
	Gao	Fafa, south-east of Ansongo	2% Pb and 1 gram/ton gold.
	Kidal	Tessalit	

UNCTAD. 2004. *Guide de l'investissement au Mali. Opportunités et conditions*, United Nations; New York and Geneva. (*Investment guide for Mali: Opportunities and conditions*); S.Diakité and B. Sidibé. 2002. "L'impact de l'exploitation aurifère sur le développement socio-économique du Mali", Masters thesis, Bamako University. (*The impact of gold mining on socio-economic development in Mali*) – all measurements are metric.

ANNEX 3

Mining potential in Burkina

Minerals	Location	Reserves (million tons)	Ore concentration (%)
Gold	Poura	1,6	10,8 g/t
	Taparko	0,000 036 of metal gold	
	Bomboré	37	"
	Essakane	20	"
	Bouda	15 to 20	"
	Belahouro	15	"
	Youga	20	"
	Kalsaka	17	"
	Mana-Fobiri et Kona	25	"
Bouroum	14	"	
Manganese	Tambao	19	55% Mn
	Kiééré	0,6	43-55% Mn
Phosphates	Kodjari	63	25,5% P ₂ O ₅
	Aloub-Djouana	Not evaluated	
	Arly	4	
Copper	Gaoua	24	0,8% Cu and 0,5% Mo
	Wayen	45	0,25% Cu
	Goren	40	0,35% Cu+Mo
Limestone	Tin Hrassan	6,3	44,1% CaO
Zinc	Perkoa	5,6	18,2% Zinc
Bauxite	Kongoussi	1,5	60 à 75% Al ₂ O ₃
Antimony	Mafoulou	0,035	
Sand	Bobo-Dioulasso	3,7	

Ouédraogo, "Le secteur minier du Burkina Faso," *op. cit.*

ANNEX 4

Gold mines in Mali

Description	Kalana ¹⁵⁸	Syama	Sadiola	Morila	Yatela	Loulo	Tabakoto
Geographical location	Yanfolila	Kadiola	Kayes	Bougouni	Kayes	Kéniéba	Kéniéba
Cost of previous work		US \$1.7M	US\$14.5M		US\$14.7M		
Feasibility study	1999	1989	1993	1999	1999	2002	2002
Establishment convention			1990	1992	1994		
Type of mining	Underground	Open Pit	Open Pit	Open Pit	Open Pit	Open Pit	Open Pit
Reserves (tons)	29	120	116	103	40,33	42	80
Lifespan of the mine (years)	12	20	13	10	6	6	5
Mining Permit	1999	1989	1994	1999	1999	1989	1998
Operating Company	SOMIKA SA	SOMISY SA	SEMOS SA	MORILA SA	YATELA SA	SOMILO SA	TAMIKO SA
Creation	2003	1989	1994	1999	1999	1989	1999
Shareholders	- Avnel Gold 80% - State of Mali 20%	- Resolute 80% - State of Mali 20%	- AngloGold 38% - Iamgold 38% - State of Mali 18% - SFI 6%	- AngloGold 40% - Randgold 40% - State of Mali 20%	- AngloGold 40% - Randgold 40% - State of Mali 20%	- Randgold 80% - State of Mali 20%	- Nevsun 80% - State of Mali 20%
Operator	Avnel Gold	Resolute	AngloGold	AngloGold	AngloGold	Rangold	Nevsun
Activities							
Investments ¹⁵⁹			US \$280M		US \$77M	US \$90M	
Beginning of project	January 2004	January 1990	December 1996	October 2000			
Date of first production	March 2004		March 1997		May 2001		
Remaining reserves in 2005		156 tons	132,8 tons		29,7 tons	150 tons	

¹⁵⁸ Data on this mine are those obtained after Somika took it over, following the closure of Sogemork in 1991

ANNEX 5 A

Permits granted and investments in Burkina 1993-2003

Years	Number of permits	Number of artisanal mining permits	Investments in millions of Fcfa	Investments (US Dollars)
1993	7	n/a	n/a	n/a
1994	29	13	1 964	3.83
1995	51	3	2 713	5.30
1996	57	5	9 082	17.73
1997	53	9	15 606	30.46
1998	49	1	7 467	14.58
1999	10	3	10 195	19.90
2000	11	3	5 137	10.03
2001	7	16	4 116	8.03
2002	7	21	1 367	2.67
2003	24	33	1 494	2.92
2004	74	16	4263	8.32
2005	n/a	n/a	7 527 ¹⁶⁰	14.69

Banque Mondiale. 2004. *Les mines comme source de croissance. Étude Prospective sur le secteur minier au Burkina Faso*, Département Hydrocarbures, Mines et Industries Chimiques, World Bank, Washington D.C., December; MMCE, *Analyse sommaire de la situation du secteur minier burkinabé*, *op. cit.*

ANNEX 5 B

Gold Deposits in Burkina Faso

	Youga	Taparko	Kalsaka	Essakane	Mana Fobiri and Kona	Bomboré
Reserves	20 tons	36 tons	20 tons	20 tons	25 tons	40 tons
Lifetime	7 years	8 years	5 years			
Mining consortium	Burkina Mining Company	Mining corporation of Taparko (SOMITA)	Kalsaka Mining SA	Coronation (currently undertaking research)	Semafo	Orezone (exploration by Channel resources)
Operator	Estrucan Resources ¹⁶¹	High River Gold	Cluff Mining			
Mining Permits	March 2003	June 2004	June 2004			
Projected investments	US \$34,66 million	US \$46 million	US \$19,41 million			

¹⁶⁰ This number is an estimate based on the feasibility study of the three mines whose opening is planned for 2005.

¹⁶¹ AngloGold Ashanti, which carried out the exploration, transferred their shares over to Etruscan resources for mining.

ANNEX 6

Projected gold production in Mali (kg)

Years	Sadiola	Yatela	Morila	Kalana	Loulo	Tabakoto	Total
2005	16,660	6,657	12,525	720	7,742	2,619	46,923
2006	16,660	5,627	12,440	845	6,969	3,425	45,966
2007	16,660		11,460	818	6,474	3,646	39,058
2008			10,055	677	6,400	3,195	20,327
2009			10,166	531	6,874	3,805	21,376
2010			9,376	538	4,098		14,012
2011			9,958	537			10,495
2012			5,069	595			5,664
2013				544			544
Total	49,980	12,284	81,049	5,805	38,557	16,690	204,365

DNGM, *Statistiques économiques sur l'industrie minière, op. cit.*

ANNEX 7

Projected gold production in Burkina (kg)

Years	Gold washing/panning	Industrial	Total
2003	246		246
2004	230		230
2005	300	200	500
2006	1,000	6,390	7,390
2007	1,500	7,380	8,880
2008	1,500	7,870	9,370
Total	4,776	21,840	26,616

MMCE, *Situation des investissements et perspectives du secteur minier, op. cit.*

ANNEX 8

Financial operations in Mali's three mines (Sadiola, Yatela et Morila)¹⁶²

State of operations in Sadiola mine

	Unit	1997	1998	1999	2000	2001	2002	2003
Gold produced	kg	11,921	15,741	17,586	19,018	17,234	15,429	14,526
Gold sold	kg	11,752	15,731	16,967	16,051	19,615	14,824	14,086
Gross revenue	US\$	138,279,000	158,778,000	167,002,000	159,671,122	184,409,451	145,411,361	166,109,925
CPS and Ad valorem tax	US\$	7,705,000	9,504,000	9,995,000	9,556,243	11,056,685	8,704,306	9,950,342
Net revenue	US\$				148,518,168	171,805,663	135,252,914	154,498,484
Operating costs	US\$				61,839,257	63,805,018	72,132,657	93,259,155
Amortization		24,989,000	30,698,000	31,947,000	32,877,878	33,523,527	36,536,517	39,830,190
Profits before taxes	US\$				73,691,023	63,563,931	32,924,277	30,591,567
Provision for taxes	US\$	0	0	0	0	0	8,573,176	11,353,204
Profits after taxes	US\$				73,691,023	63,563,931	24,351,101	19,238,363

CSA Group, *Audit technique et financier des sociétés d'exploitation minières au Mali, op. cit.*

State of operations of the Yatela mine

	Unit	2001	2002	2003
Gold produced	kg	4,891	8,634	6,780
Gold sold	kg	4,624	8,248	6,892
Gross revenue	US\$	40,973,750	82,453,891	79,693,660
CPS and Ad valorem tax	US\$	2,452,195	4,936,743	4,790,372
Net revenue	US\$	37,978,702	76,457,617	73,912,908
Operating costs	US\$	22,928,581	44,248,691	53,549,226
Amortization	US\$	6,979,422	16,877,694	22,410,440
Profits before taxes	US\$	8,940,631	13,460,378	6,336,404
Provision for taxes	US\$	0	0	0
Profits after taxes	US\$	8,940,631	13,460,378	6,336,404

CSA Group, *Audit technique et financier des sociétés d'exploitation minières au Mali, op. cit.*

¹⁶² These data were compiled for this study based on reports from mining corporations

State of operations of the Morila mine

	Unit	2002	2003
Gold produced	kg	32,746	24,750
Gold sold	kg	32,738	24,749
Gross revenue	US\$	328,586,988	273,930,546
CPS and Ad valorem tax	US\$	19,699,105	16,386,644
Net revenue	US\$	305,625,306	254,810,854
Operating costs	US\$	69,384,844	86,721,077
Amortization	US\$	17,788,450	20,995,955
Profits before taxes	US\$	221,494,773	158,128,028
Provision for taxes	US\$	0	0
Profits after taxes	US\$	221,494,773	158,128,028

CSA Group, *Audit technique et financier des sociétés d'exploitation minières au Mali, op. cit.*

ANNEX 9**Financial contributions from gold mines to Mali's economy (millions of Fcfa)**

	Sadiola (1995-2002)	Morila (2000-2002)	Yatela (2000-2002)	Total
IGR (ITS) salaries	11,495.601	2,109.524	299.114	13,893.239
CFE/salaries	3,401.289	597.487	104.242	4,103.211
BIC Tax	532.482			532.482
VAT collected	8,498.827			8,498.827
CPS and <i>ad valorem</i>	34,513.194	15,763.659	3,379.224	53,656.823
IRVM	1,127.112	347.887		1,474.999
Insurance tax/contract	262.521			262.521
Patent	913.500			913.500
IRF	206.551			206.551
Registration fees	239.622			239.622
Stamp duty	0			0
Customs duty	9,142.957	6,481.113	491.094	16,115.164
Dividends	8,336.512	5,408.458		13,744.97
Debt repayments	3,160.344			3,160.344
INPS		2,066.402	337.050	2,403.452
TFP		14.658		14.658
Other taxes		1.859		1.859
Subcontractors		2.627		2.627
Total	81,830.513	32,427. 791	4,610.724	118,869. 028

DNGM, *Rapport de suivi et de contrôle des sociétés d'exploitation minière, op. cit.*

ANNEX 10

Environmental assessment requirements of Malian mining codes

<i>1991 Mining Code</i>	<i>1999 Mining Code</i>
<p>Article 79 : Mandated agents must be allowed onto a site to carry out their inspections</p>	<p>Article 117 : Research permit holders and holders of prospecting authorizations must :</p>
<p>Article 83 : Permit holders must produce monthly and annual reports</p>	<ul style="list-style-type: none"> - carry out restoration work and make mining site safe [...].
<p>Article 85 : Rehabilitation work must be done as soon as there exists an environmental threat to health and public safety</p>	<ul style="list-style-type: none"> - provide the mining Administration with an activity report summarizing research work performed, any associated environmental impacts, and restoration and mine safety tasks accomplished [...].
<p>Article 86 : The appropriate authorities must be informed in case of an accident or a serious impact on the environment.</p>	<p>Article 118 : Mining permit applicants must submit to the mining Administration, in support of their application, an environmental impact study, whose content is outlined in the application decree.</p>
<p>Article 118 : All appropriate measures must be taken to insure the safety of workers and public health</p>	<p>Article 119 : Mining permit holders must :</p>
<p>Article 124 : Extraction rules, including environmental management procedures, are stipulated in the establishment convention of each mining operation</p>	<ul style="list-style-type: none"> - carry out the environmental impact assessment defined in Article 118 and include it in the annual report to the mining Director. - guarantee, in the form of a deposit in an internationally recognized bank, the execution of restoration and mine safety work as planned in the environmental impact assessment.

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While poverty reduction is at the forefront of the World Bank's mission, some of its policies require substantial trade-offs between economic growth and poverty reduction. This paper argues that World Bank policies promoting privatization of the cotton sectors while encouraging the expansion of gold mining across Mali and Burkina Faso may undermine poverty reduction efforts in both countries. Even though gold now generates more export revenues than cotton in Mali and is destined to do so in Burkina Faso, cotton generates substantially more benefits to poor sectors of the population than gold. Cotton sustains well over five million people in both countries, strengthens food security, and generates strong backward and forward linkages to the rest of the economy – contributions unmatched by gold mining. However, current reforms are undermining the cotton sector, while promoting the expansion of mining without the institutions to ensure that, at a minimum, local communities do not bear the costs of environmental degradation. Findings suggest caution in assuming the link between export-led growth and poverty reduction and stress the benefits of continued policy space for national governments and of pacing liberalization.

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