# Chapter 4 Quality Control Circles in Burkina Faso: Lessons Learned and Implications for Other Developing Countries

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# **4-1. Introduction**

Burkina Faso, a small land-locked state in West Africa, was the first Sub-Saharan country to implement Quality Control Circle (QCC), an aspect of Japanese-style management (*kaizen*),<sup>2</sup> by donor support. Since 1989, the use of QCC has greatly contributed to improving individual and organizational capacities in the major private and public enterprises and enabled them to survive the harsh economic conditions that followed liberalization and privatization in the 1990s.

In this process, the Burkinabé Association for Quality Management (Association Burkinabé pour le Management de la Qualité: ABMAQ),<sup>3</sup> a non-profit association, has been playing a key role in diffusing the QCC and other quality improvement techniques in Burkina Faso and in neighboring countries. ABMAQ has adopted the following principles for QCC and has been helping develop the *kaizen* culture in Burkina Faso for over twenty years since its introduction.

- Stimulating the motivation and participation of members
- Respecting individual autonomy and voluntarism
- Cultivating open mindedness and creativity
- Respecting group dynamics
- Highlighting roles of individuals in the organizations
- Providing training for members
- Promoting exchange between different circles

The objective of this chapter is two-fold: (i) to summarize the achievements and challenges of QCC in Burkina Faso and (ii) to draw some implications for other developing countries willing to introduce QCC and *kaizen*. Most of the information came from field surveys conducted in November 2009 and January 2011 at Ouagadougou and Bobo-Dioulasso, complemented by a literature review.

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<sup>&</sup>lt;sup>2</sup> The Japanese word *kaizen* refers to a wide range of activities aimed at improving quality and productivity such as the 5S, just-in-time production and suggestion systems etc. *Kaizen* is also one of the basic concepts of the Toyota Production System (TPS). See GRIPS Development Forum (2009), Chapter 1, for details.

<sup>&</sup>lt;sup>3</sup> The ABMAQ is an organization created in 2002 from the former Association Burkinabé des Cercles de Qualité (ABCERQ: Burkina Faso QCC Association), which was established in 1992. In this chapter, we will use the name ABCERQ for the activities of the organization during the 1990s and the name ABMAQ for its activities in 2002 and later. The expression ABCERQ/ABMAQ will be used for overlapping periods.

# 4-2. What is QCC?

# 4-2-1. QC circle (QCC)

QCCs are small groups engaged in quality improvement activities in the same workplace. As a part of company-wide quality improvement, QCC aims to foster self- and mutual education by helping all members participate in the continuous improvement of their products and services.

QCC has its origin in the United States (US); the original model aims to reduce the percentage of defective products by using a set of simple statistical analysis tools. At the time of its introduction to Japan in the 1950s, the Union of Japanese Scientists and Engineers (JUSE) <sup>4</sup> had revised the imported quality control methods and tailored them into a unique model. While the use of statistical tools is a common feature between US and Japanese models, one of the major differences is the level of worker participation. In Japan, individual workers have the responsibility and are allowed to take the initiative in solution of their own problems, with the assistance of management and technical personnel. This degree of worker responsibility and cooperation appears to be the unique contribution of Japanese management and workers to the process (JETRO, 1981).

The advantages of QCC are summarized in Table 4-1 below. QCC activities contribute not only to increasing profitability but to bringing changes in organizations as a result of work-process improvement and empowerment at the individual level.

Individual level	Increased confidence; better relationships with colleagues and with management; customer orientation (New discoveries through creative activities; understanding of the basic approach and procedures for solving problems; ability to maintain the high quality product and service for the benefits of society)
Management level	Reduction in time required for shop floor supervision; establishment of smooth work procedures; improvement of the labor-management relationship, etc. (QCCs provide an important means of human resource development and skills training; raise the cost awareness; facilitate the sharing of problems and improve abilities to solve them)
Organization level	Improvement in the quality of products and services, productivity, competitiveness and profitability

### Table 4-1. Advantages of QCC Activities

Source: Based on the information provided on the JUSE website.

As for their impact on the overall quality of management, while QCC has significant effects, it is generally centered on solving "many trivial problems" (Lillrank and Kano, 1989). Meanwhile, based on their case study on QCC at the Nippon Steel Corporation Kimitsu Works (QCC was called "JK (*jishu kanri, self-management*) activities" in Japanese), Nonaka and Yonekura (1984) analyzed some

<sup>&</sup>lt;sup>4</sup> JUSE was established in May 1946. In 1962, it was reorganized and authorized as the foundation of a juridical body by the Science and Technology Agency (reformed Ministry of Education, Culture, Sports, Science and Technology) of Japanese government. The QCC Headquarters of Japan is located within JUSE, and 9 regional offices to facilitate and assist QCC throughout Japan.

key features that promoted the organizational learning in the company and suggested that JK activities had innovative effects on the shop floor organization, which far exceeded mere improvement of the working environments.

Although QCC or *kaizen* activities are normally introduced by the decision of top management, national promotion organizations also play crucial roles in promoting these activities. In Japan, the role of JUSE was particularly important, as there were hardly any recognition for quality and productivity in the country at the time of introduction in 1950s. Lillrank and Kano (1989) assessed that "it (JUSE) has served as the main agent of change and innovator for QC and related management systems. … it has been able to establish neutral discussion forums, where companies, even competitors, can come together and learn from each other.…" Since 1962, JUSE has been providing numerous manuals and trainings to the member companies throughout Japan and organizing the annual quality awards at national and international levels.<sup>5</sup>

Thus, establishing a national infrastructure (policy and/or organization) that supports QCC (or *kaizen* activities) at the national level is crucial, to support and complement the multilayered efforts in the individual companies. (Figure 4-1)



### Figure 4-1. Systems and Organizations Supporting QCC

Source: Lillrank and Kano (1989).

A large number of studies are available on factors that facilitate the establishment of QCC. Recently, using case studies of Chinese companies, Zhang (2009) grouped these factors into three categories: (i) support system, (ii) activation system and (iii) production system or work system.<sup>6</sup> Major factors pointed out by Zhang are shown in Table 4-2 below.

<sup>&</sup>lt;sup>5</sup> The latest International Convention on QCC was organized in Yokohama, Japan in September 2011, gathering 152 QCCs from 13 countries, including India, Singapore, Malaysia, Indonesia, Thailand and others. Zambia was the only participant from Sub-Saharan Africa (QCC is being promoted by the Japan International Cooperation Agency (JICA) project).

<sup>&</sup>lt;sup>6</sup> Since past studies mainly focused on Japanese companies, Zhang's classification includes personnel management systems as a fourth category, which is omitted since it is irrelevant to the subject matter of this chapter.

Support system	<ul> <li>A clear vision</li> <li>Company-wide support system</li> <li>Division of roles and guidance by staff members</li> <li>Training (management, engineering) to workers</li> </ul>
Activation system	<ul> <li>Balance between organizational coercion and individual initiative</li> <li>Support by staff organizations</li> <li>Creation of opportunities for exchange</li> <li>Incentive system</li> <li>Assessment and feedback</li> <li>Sharing and standardization of results</li> </ul>
Production system or work system	<ul> <li>Delegation of authority and workers' participation in designing and planning processes</li> <li>Exchange of information between departments</li> </ul>

# Table 4-2. Factors that Facilitate the Establishment of QCC

Source: Adapted from Zhang (2009).

Table 4-3 and Figure 4-2 show the functions and roles of different elements and actors within an organization. Various manuals<sup>7</sup> have been created to specify the procedures required to organize QCC in organizations.

# Table 4-3. Functions and Roles at Different Levels

	HARDWARE	SOFTWARE	HUMANWARE
ТОР	Basic investment of money, time and facilities	Establish a QC policy and organization	Encouragement, Example, Enthusiasm
MIDDLE		Maintain the promotion organization	Management Support
FACILITATOR			Promotion style: Advice and help to QCC

Source: Lillrank and Kano (1989).



# Figure 4-2. QCC within an Organization

Source: Fukui et al. (2003).

<sup>&</sup>lt;sup>7</sup> For details, see the Japanese manual (published by JUSE) and the English manual (Fukui *et al.*, 2003) created based on the experience in Burkina Faso and Asian countries.

### 4-2-2. Applicability for developing countries

Since 1970s, an increasing number of Japanese firms expanded their business overseas, and inspired by their successes, QCC were successively introduced in other countries. According to JUSE, QCC was introduced in over seventy countries, mainly in developed countries and Asian countries.<sup>8</sup> The spread of QCC to developing countries was not predicted in early years and there were skeptical views that its introduction to other countries would be impossible because of cultural barriers and level of development. However, Wilson et al. (1995) points out that these Japanese continuous improvement (*kaizen*) are suitable also for developing countries, as it is "primarily an endogenous form of progress," since "managers and workers of the firm are the driving force for most improvements," thus "the production system is gradually tailored to suit the firm's need and the local environment." It also "offers opportunity for capital savings that would not be realized through alternative forms of technical progress." Another aspect is the similarity with the Japanese economy at the time of introduction. Japan was still poor and Japanese companies did not have enough financial and human resources to assign quality control nor to discard large amounts of defective products (Lillrank and Kano, 1989).

Many studies on *kaizen* activities were conducted from the late-1980s to 1990s,<sup>9</sup> and initial concern was focused on its transferability at firm-level.<sup>10</sup> Subsequently the focus was turned to examine a wider range of aspects, including socio-cultural factors.<sup>11</sup> For example, in his study on the possibility of introducing the Total Quality Management (TQM) system into low-income countries (Sub-Saharan African countries in particular), Perry (1997) argued that despite some similarities found between the traditional collectivism in Africa and the TQM system based on small-group activities, it was difficult to transplant the system into Africa in its original form, thereby suggesting the need to reorganize the TQM system to match the socio-cultural context in Africa.

#### 4-3. Introduction of QCC to Burkina Faso

#### 4-3-1. Overview of the society and economy of Burkina Faso

Burkina Faso is a small land-locked country in West Africa, with a population of fifteen million, an area of 274,000km<sup>2</sup> and per-capita GDP of USD517 (2009).<sup>12</sup> It is one of the poorest countries in the

<sup>&</sup>lt;sup>8</sup> http://www.juse.or.jp/e/qc/01\_qc.html

<sup>&</sup>lt;sup>9</sup> For examples in Asian countries, see Ichimura (1988) and Umeda ed. (1996); for examples of development support projects for transfer to Latin American and Asian countries, see GRIPS Development Forum (2009) Chapters 3 and 5.

<sup>&</sup>lt;sup>10</sup> According to Wilson *et al.* (1995), who examined examples of the *kaizen* (continuous improvement) system applied by UNIDO in companies in developing countries, the most serious impediment to the adoption of the *kaizen* system was company-level (management-level) factors.

<sup>&</sup>lt;sup>11</sup> See Cole (1989) or Lillrank and Kano (1989) for details.

<sup>&</sup>lt;sup>12</sup> Figures cited are from *Burkina Faso At A Glance* issued by the World Bank.

world; 44.8% of its population living below the poverty line and the country ranks 177th among 182 countries in the Human Development Index (2009). The agricultural sector accounts for 33.3% of its GDP, the industrial sector 22.4% and the service sector 44.4%. Due to a decrease in cotton production and world economic downturn, GDP growth rate of Burkina Faso remained at 3.5% in 2009.<sup>13</sup> In the industrial sector, manufacturing accounts for 13.6% of GDP. The main manufactured goods are foods, cigarettes, textiles and tires, made in Ouagadougou or Bobo-Dioulasso and most of them are sold in domestic market.<sup>14</sup> A total of 11.5% of its labor force is engaged in business in the informal sector, with the percentage of workers employed in the formal sector remaining at a very low level (2.8%).<sup>15</sup>

Burkina Faso's population is composed of more than sixty ethnic groups, including the Mossi (48%), who hold the leading role in the country's politics and economy, followed by the Peul and the Bobo. Despite its complex ethnic composition, there are no ethnic conflicts in Burkina Faso observed in other African countries. People are generally well mannered and industrious. The greatest asset of Burkina Faso, an inland country with scarce resources, is its people.

Burkina Faso became independent from France in 1960, and from 1983 to 1987, radical socialist policies were implemented by then President Thomas Sankara, who seized power through a coup. The Sankara government took the initiative to reorganize the economic management system and adopted drastic policy measures aimed at reducing the functions of government agencies and allocating surplus to villages.<sup>16</sup> However, dissatisfied groups became stronger as well, which finally led to the assassination of Sankara in 1987. Since then, the country has been governed under the stable leadership of the current President Blaise Compaoré, who came into power after the assassination of the former president. In 1991, Burkina Faso accepted the structural adjustment policy of the World Bank and the International Monetary Fund (IMF) and changed its direction from socialism to liberalization. Against this backdrop, QCC were introduced to the country as a pilot project by the World Bank, so as to mitigate the impact of economic liberalization on local firms.

# 4-3-2. Transfer of QCC

#### 4-3-2-1. Overview of the support program of the World Bank in the 1990s

Having adopted the structural adjustment policy, the Burkinabé government had to undertake drastic economic reorganization by streamlining and privatizing state-run companies whose inefficient

<sup>&</sup>lt;sup>13</sup> Burkina Faso is a member of the West African Economic and Monetary Union (Union Economique et Monetaire Ouest Africaine: UEMOA) and its monetary and industrial policies are decided at the UEMOA level. The local currency of Burkina Faso is the CFA franc (FCFA) and its exchange rate is fixed at: 1 euro = 655.957 FCFA.

<sup>&</sup>lt;sup>14</sup> Of 506 private companies, 155 are manufacturers (World Bank, 2006, Table 19).

<sup>&</sup>lt;sup>15</sup> World Bank (2006)

<sup>&</sup>lt;sup>16</sup> For this reason, Burkina Faso had a very low foreign debt ratio compared with other countries and continued to object to the adoption of the structural adjustment policy.

management imposed a heavy burden on its fiscal base. The local private firms were also being exposed to a competitive environment, and they needed to strengthen their capacities.

QCC was thus introduced into the country to improve the productivity of local companies and to provide them with a means of surviving difficult economic times. The project also aimed to establish a special organization (initially named ABCERQ, currently ABMAQ; see 4-3-2-2 for details) to promote QCC, thereby developing local human resources. It started as a pilot project in 1989,<sup>17</sup> and in response to the great enthusiasm of the Burkinabé government and pilot firms, scaled up to technical cooperation attached to the first Structural Adjustment Loan by the World Bank in 1991. The Policy and Human Resources Development (PHRD) Fund, contributed by the Japanese government, was used to support the project. Table 4-4 provides a summary of the support programs.

It was a long-term technical transfer from 1989 to 2000, during which two Japanese experts of JUSE (Mr. Ichiro Miyauchi from 1989 to 2000 and Mr. Noriharu Kaneko from 1995 to 2000) regularly visited Burkina Faso (four visits for a total of eight weeks per year) to provide skills training and seminars for managers and workers. The unique characteristic of the skills training of Mr. Miyauchi, an experienced expert in introducing QCC overseas, was "not to teach answers, but to give workers tools and methods to sort out the problems by themselves." Although it was a very time-consuming approach, his method brought a change in the way of thinking, and convinced workers and managers that solving problems by themselves was the best way to improve productivity and product quality. It was a real eye-opener for many of the Burkinabé people who had been used to calling for outside experts and supplies (often expensive foreign technicians and imported goods) to solve problems. This explains why some companies are still actively engaged in QCC even after the completion of the project in 2000.

<sup>&</sup>lt;sup>17</sup> QCC practices are not common at the World Bank and its introduction to Burkina Faso was more or less accidental. It was initiated by Mr. Hiroaki Suzuki, Japanese World Bank staff, who visited Burkina Faso in 1987 on a mission to reform state-run companies (Mr. Suzuki was in charge of the African region at the time). Mr. Suzuki was invited by a staff member of the counterpart organization, the Ministry of Industry, to a volleyball game, which was held as a recreational event attended by all members of the ministry. Watching members, both management and staff, enjoy the game regardless of rank, Mr. Suzuki thought of introducing QCCs to develop a participatory management approach in Burkina Faso.

Period	Support program	Major events
Pilot phase (1989 to 1991)	1989–1990: USD50,000 funded by the Special Project Preparation Facility (SPPF) of IDA/World Bank (1) Seminars on QCC; and (2) Introduction of QCC into five pilot companies	<ul><li>1990:</li><li>QCC Promotion Unit established</li></ul>
	<ul> <li>1990–1991:</li> <li>USD250,000 funded by the SPPF</li> <li>(1) A QCC promotion unit created within the Ministry of Export Promotion;</li> <li>(2) Training (in Japan and Burkina Faso);</li> <li>(3) On-site skills training in pilot companies;</li> <li>(4) QCC newly introduced into five companies; and</li> <li>(5) Preparations for introduction into public organization, including creating manuals</li> </ul>	<ul> <li>1991:</li> <li>Adoption of the structural adjustment policy by the Burkinabé government (transition to liberalization policy)</li> <li>First QC convention held in Burkina Faso</li> </ul>
Phase 1 (June 1991 to 1998) Technological transfer to local companies and organizational reinforcement	<ul> <li>USD1 million funded from the Japanese PHRD Fund as technical cooperation to complement the first Structural Adjustment Loan of the World Bank June 1991 to February 1993:</li> <li>(1) Support for the QCC Promotion Unit within the Ministry of Industry, and establishment of the ABCERQ;</li> <li>(2) Training (in Japan and Burkina Faso);</li> <li>(3) On-site skills training in nine companies;</li> <li>(4) QCC newly introduced into companies and a pilot project for public organizations;</li> <li>(5) Analysis of socio-cultural and organizational aspects related to the introduction of QCC into Burkina Faso;</li> <li>(6) Creation of manuals designed for introduction into other African countries in the future; and</li> <li>(7) Seminars</li> </ul>	<ul> <li>1992:</li> <li>ABCERQ established</li> <li>1994:</li> <li>Currency devaluation (50%)</li> <li>Mid-1990s to mid-2000s:</li> <li>Privatization of major state-run companies</li> </ul>
Phase 2 (November 1998 to June 2000)	USD700,000 funded from the Japanese PHRD Fund as technical cooperation to complement the second Structural Adjustment Loan (1) On-site skills training for private companies; (2) Introduction into public organizations; and (3) Enhancement of the capacity of the ABCERQ	<ul><li>2000:</li><li>Introduction of UEMOA extra-territorial customs</li><li>Formulation of the PRSP</li></ul>

# Table 4-4. Overview of Support by the World Bank, Japanese PHRD Fund and JUSE

Source: Compiled by author, based on Suzuki (1993).

#### 4-3-2-2. Impact at the firm level

Table 4-5 lists companies that adopted QCCs. Most of the supported companies were state-run enterprises to be privatized or private large manufacturing companies. Except for SOFITEX, a (then) state-run company engaged in the production and processing of cotton, the production volume of targeted companies accounted for a very small percentage of GDP. However, they had important effects on the formal economy; four pilot companies accounted for more than 50% of the production in the industrial sector.<sup>18</sup>

<sup>&</sup>lt;sup>18</sup> These formal sectors provide employment for only 4% of the labor force and private companies employ only 1.5% (World Bank, 2006).

Organization	Project	Pilot phase 1989 to 1991	Phase 1 1991 to 1998	Phase 2 1998 to 2000	2001 to present (2009)	
Norld Bank/JUSE	Financial and technical support	Skills training for 5 companies, QC conventions, overseas training	Skills training for companies, establishment and ToT of secretariat (ABCERQ), QC conventions, overseas training	Technology transfer to ABCERQ and skills training for companies		
Sovernment	Implementation	Pilot CP	Support for the establishment of the ABCERQ		I	
ABCERQ/ABMAQ	Project period (1992 to present)	ı	Functions transferred gradually to holding QC conventions, etc., after the establishment of the ABCERQ in 1992	Training for member companies, holding QC conventions, etc.	Reorganized and renamed as ABMAQ in 2002, training, holding QC conventions, ISO training started in 2006	
Manufacturing ndustry	Sector					Current status of QCC
SAP Olympique (private)	Manufacturing of tires				2004 -	•
SIFA (govt→private)	Manufacturing of motorcycles		1993 -		QCC suspended in 2007 Went out of business in 2009	ı
SN-CITEC (govt→private)	Manufacturing of soap, etc.		Not activated; changed to FasoPlast		Currently ISO	1
SAVANA	Beverage manufacturing			Shutdown in 1999?		
<sup>=</sup> aso Fani (govt→private)	Textiles	1990 -			Went out of business in 2001	
<sup>=</sup> aso Plast (govt→private)	Plastics			ند	2001 - TQM; QCC suspended in 2007	
NB (govt → private)	Printing	🖾 1990: training	not activated			
SN-SOSUCO (govt→private)	Sugar refinement		1994 -			٥
Ninner Industrie (private)	Chemicals					•
SOFITEX (govt→semi-govt)	Production and processing of cotton	1990			2003 -	•
ЗАРНҮТО	Manufacturing of insecticide			1998 -	52	
CIMAT (govt→private)	Cement manufacture			1998 - 📼	52	
MEDIFA	Medical products			52		
Public organizations	Sector					
ONF-YO	Local hospital					ı
CARFO	Pension for government officials		1992 - 1000			
CNSS	Social security		1992 - Introduced through a pilot project 1995 - company-wi	ide development	2008 - QCC activated Quality improvement policy formulated in 2009	۲
DNATEL (2006 private)	Telecommunications corporation		1995 - 20000 - 20000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2	Activities suspended in 1997		$\nabla$
<u>ISC</u>	Medical service				QCC suspended in 2006	
SONABEL	Electric power corporation		1992 -		QCC suspended in 2006; 2008 - ISO	0
SONAPOST	Postal corporation			Adopted but not established on a permanent basis	2008 - Quality improvement policy formulated	ı

Table 4-5. List of Companies that Have Adopted QCC

Source: Based on the interviews conducted in 2009 and 2011. Note: Companies where interviews were conducted in 2009 and 2010 are underlined. There are other govt. organizations which have introduced QC Circle activities on a pilot basis. However, these organizations have practiced QC Circle activities only for a short period and are omitted from the table.

#### (1) Initial assessment in 1990s

Initially, there were many concerns and impediments at the shop floor level. At first, many thought that the introduction of Japanese-style quality control would not be feasible in a low-income country with such a different cultural and social setting. However, Burkina Faso (like its neighbors) has a socio-cultural background that facilitates participatory activities in small groups; for instance, Dia (1996) showed similarities between Naam activities (mouvement Naam) developed in rural areas and QCC. More recently, Illa et.al. (2009) argues that the fundamental principles of QCC have much in common with the African traditional belief, "Ubuntu," which can be translated as "unity."

The evaluation by the Burkinabé government and the ABCERQ also revealed that the expected concerns were not posing serious impediments to the introduction of the new practices (Sanou, 1995). At first, the relationship between labor and management was deteriorating and the ABCERQ had a difficult time reassuring workers who had been fears about QCC as a new means of exploitation by management. However, labor unions in Burkina Faso were too weak to boycott the activities. There were also concerns that workers' education level might affect the daily QCC activities. However, their education level did not have any serious effects on the project as was initially expected; 80% of the workers at the pilot companies (SIFA, SAP, CITEC and SAVANA) were illiterate, but some companies (e.g., SIFA) provided reading lessons. Another concern was about ethnic conflicts, but ethnic differences did not constitute major impediments in Burkina Faso.

Meanwhile, learning the 5S, the fundamental principles of QCC and *kaizen*, required a considerable amount of time. For instance, although the Burkinabé people are orderly and have well-developed sanitation habits, it took three years for workers to understand and practice *seiketsu* (cleanliness). This is partly because of the poor access to water, but mainly because of the difference of standard of cleanliness with the Japanese people, who has passion for cleanliness. Under such circumstances, it was necessary to devise ways to bridge those gaps, which were removed gradually by creating awareness for the required quality standard.

Suzuki (1993) cites seven factors as keys to the success of the QCC project in 1993. One was strong ownership by and commitment from the government. Although QCC was introduced by the World Bank, its nationwide development was made possible by the strong ownership of the government at the time. The other important factors were coherence and complementarity of the support with the structural adjustment loan. In addition, gradual approach and continuous advice by experts were critical in promoting and sustaining the QCC among the local firms. Giving stimulus to the members were also important, such as the participation to the QCC conventions and trainings (including training in Japan). Finally, periodic monitoring by the World Bank was crucial in ensuring the project implementation and making the needed adjustment to the local context.

### (2) Impact of QCC after twenty years

Now let us look at the impact of QCC on firm levels. As Table 4-5 shows, companies are grouped into three categories:

- Companies with successful QCC (marked with a double circle (☉) or a circle (○) in the table): Companies with active and successful QCC are SAP Olympique, SN-SOSUCO, SOFITEX and Winner Industrie. Their common characteristics are the commitment at management level and an effective incentive system. For instance, SOFITEX awards a training trip to Mali to circles that have won prizes at national QCC conventions. Another example is the company CNSS; as a result of the reassignment of quality control managers, QCC was recently activated and CNSS plans to start a more comprehensive quality program based on QCC experience. It also intends to rename its QCCs as "process teams (équipe de processus)."
- Companies and organizations where QCC are stagnant (marked with a triangle 'Δ' or a bar '-'
  in the table): The majority of the companies and organizations belong to this category. Many
  of them do not have policies on quality management and often adopt various approaches,
  causing confusion within their organizations. Common to these companies are a lack of
  commitment on the part of management and a lack of incentive (aversion to unpaid overtime
  work and lack of recognition by other people).
- Companies that had successful QCC but have gone out of business due to external factors (Faso Fani, SIFA)

After twenty years, QCC are still active in five out of about twenty companies. This number suggests that interest in QCC seems to have faded over time. It is partly because of the scope of the World Bank project; while the Japanese experts aimed at introducing TQM, training at the shop floor level took longer than expected and the project ended without scaling up to the managerial level. United Nations Industrial Development Organization (UNIDO) (2005) assessed that despite some important achievements and the important role played by the ABMAQ, the results of QCC varied between companies and were judged "mixed."

Yet some of the companies have scaled up QCC to TQM, a more comprehensive approach, or moved to International Organization for Standardization (ISO) certification. Another example is the now defunct SIFA,<sup>19</sup> which has performed knockdown production for Yamaha and other motorcycle

<sup>&</sup>lt;sup>19</sup> Experts from Yamaha were providing skills training at factories apart from the Japanese experts of JUSE.

companies and has won prizes at several QCC conventions, some workers and engineers have started their own businesses based on their QCC experiences. Now a number of firms and government agencies have realized the importance of quality and increased productivity to improve competitiveness (Sawadogo, publication year unknown),<sup>20</sup> yet many of them lack a clear guidance on its implementation.

Table 4-6 shows the current situation of companies and organizations belonging to category (1). Although small and medium-sized companies rarely become members of the ABMAQ due to the financial constraints, they are able to participate in training provided by the ABMAQ and other organizations. For comparison, we included small and medium-sized non-member companies (SODEPAL and UCOBAM) that are receiving support for quality improvement from other donors (European Commission (EC) and UNIDO). (see Table 4-7)

Given the very difficult economic conditions aggravated by the political turmoil in Ivory Coast and the low cotton price, all the managers highlighted the importance of quality and saw QCC as a means of survival. Currently many of them have undertaken the process for ISO certification along with QCC, making it easier than for other companies that have to start from scratch.<sup>21</sup> Meanwhile, they also raised the concern that insufficient commitment and support from top management is the biggest challenge, which could possibly undermine the future of QCC. In addition, the relationship between the QCC and ISO is blurry and has led to some confusion.

<sup>&</sup>lt;sup>20</sup> Case studies on companies such as Air Burkina and Burkina Bail.

<sup>&</sup>lt;sup>21</sup> Based on an interview conducted at SAP.

	Business overview	QCC	Other quality control approaches; support by other donors
SAP Olympique	Manufacture and sale of motorcycle tires (1974 to present) Capital: 980 million FCFA No. of employees: 150 regular employees plus about 200 seasonal workers Features quality of its products; has the largest domestic market share and exports products to neighboring countries	One of the pilot project companies (1989 to present); 13 QCCs active at present	A quality control division created in 1984 Company selected for the quality improvement program (for ISO 9001:2000) of the UEMOA since 2004
SN-SOSUCO	Sugar refinement (1972 to present) Capital: 6 billion FCFA No. of employees: about 4,500 (regular employees plus seasonal workers) Privatized in 1998; acquired by IPS (WA), a company group of the Aga Khan Foundation	Introduced QCC activities in 1994; 32 QCCs active at present (2009) Only company that has a special budget for QCC activities (ordinary budget for 2009: 12 million FCFA; investment: 4 million FCFA)	Company selected for the quality improvement program (for ISO 9000:2000) of EU, UNIDO and UEMOA (economic effects by obtaining ISO 9000:2000 estimated to be 2.8 billion FCFA)
SOFITEX	Production and processing of cotton (1979 to present) Capital: 4.4 billion FCFA No. of employees: 1,184 regular employees plus 2,522 seasonal workers Partially privatized in 1999 (government's stock share: to 35% from 65%); the cotton sector liberalized in 2004	Introduced QCC in May 1993; more than 1,000 staff members have received training (2003); 57 QCCs active (2005). The current ABMAQ president is the quality control manager of SOFITEX	Started an initiative aimed at obtaining ISO 9001/2000 in 2004
Winner Industrie	Production of battery and other chemical products (1973 to present)	Introduced QCC in 1999; 5 QCCs active at present (2009); 104 employees have received training in the past.	5S
SONABEL	Electric power corporation (1954 to present) No. of employees: 1,452	QCC introduced in stages since 1992; three-fourths of the staff members have received training; 7 to 8 QCCs active as of 2009	Activities aimed at obtaining ISO certification started in 2008/09
CNSS	Social security corporation (1955 to present) No. of employees: 849 regular employees plus 64 contract workers	Introduced QCC in 1992; stagnant for a while, but circles became active again in 2008 after replacement of the quality control manager; 39 QCCs active at present	Transition to a comprehensive approach (TQM) based on QCC activities with the aim of obtaining ISO 9001:2000; formulated quality improvement policies in 2009

# Table 4-6. Key Features of Companies with Active QCC or Kaizen

Source: Compiled based on Sanou (1995), Lim (1999), ABMAQ Annual Activity Reports (2004-2008) and company interviews conducted in 2009 and 2011.

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SODEPAL	Food processing industry (1978 to present) No. of employees: about 30 Non-member of the ABMAQ A company established by a woman entrepreneur, which manufactures bread, biscuits and dietary supplements; also develops CSR activities	Has not introduced QCC (received training provided by the ABMAQ through a support program of UNIDO)	5S, TQM, HACCP, etc.; quality competition held annually within the company; all employees receive quality management training Support by UNIDO (since 1997) and EC
UCOBAM	Production and export of agricultural products (1968 to present), agro-processing (fruit jam etc) Non-member of the ABMAQ Collects products (kidney beans, etc.) from rural areas and exports to EU markets	QCC partially introduced	Technological support based on the EC-ACP agreement (achievement of standards for products exported mainly to the EU market); Italy (fair trade)

# Table 4-7. Key Features of SMEs Implementing Kaizen

Source: Based on interviews conducted in 2009 and 2011.

# 4-3-2-3. Steps towards institutionalization (role of the ABCERQ/ABMAQ)

Numerous trainings and seminars in Japan and other East Asian countries (Singapore and Malaysia) inspired and convinced Burkinabé participants from public and private sectors to create their own national organization for promoting QCC. The creation of ABCERQ (Association Burkinabé pour les Cercles de Qualité et le Management Participatif, current ABMAQ) in 1992 (certified as a public corporation in 1995), was a first attempt in Sub-Saharan Africa and it played a key role in promoting quality improvement in Burkina Faso and neighboring countries. The upper portion of Table 4-5 shows the process of transferring knowledge and technology.

# (1) Initial stage of institutional building

Initially the process started with a three-person QCC Promotion Unit in the Ministry of Export Promotion, established during the pilot phase. This unit served as the focal point, taking an active part in the transfer of QCC with the support of the Ministry of Export Promotion, which later became the Ministry of Industry. During the subsequent phase 1, intensive efforts were made to train local personnel and to strengthen the firms. The ABCERQ eventually took over the task of the promotion unit. It was also inspired by the Japanese experience in 1950s, referred in section 4-2-1.

The ABCERQ was established as a non-government, non-profit association in order to provide trainings to private companies. Mr. Justin Bayili,<sup>22</sup> one of the first members in the Promotion Unit in the Ministry and the first (former) Secretary General of the ABCERQ/ABMAQ, or simply "Mr.

<sup>&</sup>lt;sup>22</sup> He is currently the director at the National Export Promotion Office of the Ministry of Industry and the president of the national pilot committee for quality improvement.

Quality" of Burkina Faso, recalls that Asian experiences offered a different and pragmatic perspective on institutional setting-up and insisted that running the association as a neutral, public-private body was crucial. This is why the president of the ABCERQ has been selected from among the quality control managers of member companies so as to reflect the needs of the private sector.

The principal task of the ABCERQ is to provide training. It has seven training instructors who received training in QCC in Japan and Asia in 1990s, and they provide training and undertake regular monitoring and follow-up among member companies. It also organizes a series of seminars and an annual QCC convention (*Journées de Qualité*) since 1991. The annual convention is the biggest event and invites the Ministry of Industry and other key stakeholders from public and private sectors to show off the achievements of member companies. A number of presentations are made by QCC members, and some outstanding QCCs are given awards as an incentive to workers who had been given no opportunity to show their work and achievements outside their factories and workplaces. During the 1990s, when companies and organizations were strongly committed to QCC, there were over six or seven hundred participants at the conventions, gathering a large part of the workers from the formal sector.

# (2) Challenges and steps towards institutionalization

The roles and functions of the ABCERQ and the government in promoting QCC have changed over the years. The ABCERQ reorganized itself in 2002 after the completion of the World Bank assistance and changed its name from ABCERQ, under which it had been focused on promoting QCC, to the current ABMAQ, to put more focus on management issues. Since 2006 the ABMAQ has been working to expand the scope of training such as ISO certification and quality management in collaboration with the national office for the Union Economique et Monetaire Ouest Africaine (UEMOA) regional quality program. At the same time, the organization expanded its outreach to small and medium enterprises (SMEs) and strengthened its collaboration with other donors and organizations. Table 4-8 shows the training program of ABMAQ.

1. Quality management	Top management and quality issues QC circle organization training (for facilitators at firms) ISO 9001:2000 certification training Project management training (PDCA) Quality management for service industries 5S training
2. Business management	Vision formulation training Strategy and plan formulation training

#### Table 4-8 Training Program of ABMAQ

The Secretariat has one permanent secretary general and a small administration team. Several instructors and around twenty registered private consultants are undertaking the trainings and annual

evaluation for member companies. Some experienced companies are able to do the basic training using in-house expertise (QCC facilitator/manager), yet many of them regularly send workers (especially new members) to the trainings and seminars at ABMAQ. Currently the ABMAQ has about fifteen company members (it had over sixty members in mid-90s), including companies and organizations shown on Table 4-5. Member companies are concentrated in Ouagadougou, the capital, and Bobo Dioulasso, an industrial city 500 km away from the capital. Despite the distance, QCCs are very active in Bobo Dioulasso, since the long-time quality manager of SOFITEX has been ensuring effective exchange of information among members as the president of the ABMAQ.

At the same time, the ABMAQ faces numerous challenges. First of all, ABMAQ has financial difficulties; the main sources of revenue for ABMAQ are membership fees and profits from training, yet the training business for private companies has been stagnant due to economic difficulties over the past couple of years, thereby seriously restricting the activities of the ABMAQ. For instance, the annual number of workers who received training was about 450 until 2005, but it decreased to between 250 and 300 in 2006 and to 154 in 2008, far below the target (350) for the year.

Another challenge is related to human resource management. For instance, Mr. Bayili, the former Secretary-General, was promoted to an executive position in the National Export Promotion Bureau (Office National du Commerce Extérieur: ONAC) of the Ministry of Industry in 2006. Although Mr. Bayili continues his commitment to and involvement with ABMAQ, the ABMAQ staff members and quality control managers of companies are being replaced by second-generation members who have not received skills training from Japanese experts.

The most serious impediment has been a lack of support from the government, particularly after the completion of the World Bank assistance. Although quality has been one of the key issues in terms of competitiveness and export promotion, the government was not seriously committed to creating a comprehensive policy nor institution to promote quality and productivity. As a result, there were proliferation of quality-related institutions without coordination. For instance, there were overlaps between the ABMAQ and FASONORM, one of the divisions of ONAC created in 1998 for the acquisition and authorization of international standards, and the Maison d'Entreprises du Burkina Faso (MEBF), a semi-governmental one-stop business service provider established in 2002 with support from the World Bank. There are also some public laboratories under the tutelage of the different ministries (i.e., agriculture, health, etc.), in addition to the private laboratories such as SOFITEX and others.

Against this backdrop, the ABMAQ together with the Ministry of Industry have been proposing a national quality policy and a national institutional body for implementation. Their long-term effort since 2000 has led to the drafting of a policy in the Ministry of Industry from 2008 and the hiring of an

international consultant funded by the African Development Bank. The policy was adopted at the ministerial level in 2010. Its overall goals are "(i) to establish a national coordinating body to promote quality, which is a key to increasing international competitiveness and (ii) to protect the lives and environment of Burkinabé citizens." Its action plans are centered on (i) setting up a National Committee for Quality (Comité Supérieur de Qualité) to coordinate the various institutions and activities and establishing a special fund for promoting quality, (ii) providing a wide range of capacity building to meet national and international quality standards (i.e., needs assessments, trainings, providing incentives for firms, etc.), and (iii) creating a national movement for quality (seminars and national quality awards, etc.). The National Committee for Quality will report directly to the Prime Minister's Office and be charged with leading the national movement, but its organization is still under discussion. In this process, the role and function of the ABMAQ as an institution that specializes in quality will be revised and strengthened.

#### 4-3-2-4. Overall assessment and lessons learned for developing countries

#### (1) Overall assessment

Table 4-9 summarizes achievements and challenges at individual, organizational and societal levels over the past twenty years.

While some of the problems at the individual and company levels are common to both advanced and developing countries, problems at the organizational and societal levels are more or less specific to developing countries. Despite the quality improvement measures implemented to meet the European Union (EU) export standards, agricultural products from Burkina Faso have caused health problems and were banned in EU markets and neighboring Mali. It will take considerable time to strengthen Burkina Faso's capacity to produce better-quality products. In this context, recalling Japanese history might be useful; when a new quality control approach was first introduced from the US in the 1950s, Japan was regarded as a supplier of cheap, low-quality products and it took several decades before Japanese products earned international recognition for their quality. This is a reminder that quality and productivity improvement require long-term efforts at the national level. In this context, the implementation of the new policy in Burkina Faso is a right move and should be continuously supported by the government, private sector and donors as well.

	Achievements	Challenges
Individual level	<ul> <li>96.8% of respondents were satisfied with QCC (Sanou, 1995). Our field surveys confirmed the previous results in the 1990s.</li> </ul>	<ul> <li>Unpaid overtime work</li> <li>Lack of rewarding systems</li> <li>Confusion with new initiatives (ISO, etc.) in the field</li> </ul>
Organizational level	<ul> <li>Changes in the labor-management relationship; improvement in the communication between supervisors and workers</li> <li>Assignment of personnel to the position of quality control division manager by the introduction of QCC and spread of quality management training (initially, SAP was the only company that had a quality control division)</li> <li>Improvement in productivity and financial conditions</li> <li>Example: Decrease in the percentage of defective air chambers for motorcycle tires to 3.56% from 6.55% in half a year and reduction in annual costs by 22 million FCFA (SAP)</li> <li>Example: Amount of time between application and the provision of benefits reduced to one month from six months (CNSS)</li> <li>Example: Preventive measures implemented to reduce causalities to zero, based on the analysis of the causes of annual casualties on the pilgrimage to Mecca; the Burkinabé government was awarded a testimonial from the Saudi Arabian government (OSG)</li> </ul>	<ul> <li>Lack of commitment on the part of management</li> <li>Lack of incentive, including rewards</li> <li>Improvement in financial conditions due to increase in productivity partially offset by increase in costs, including power costs (need to adopt measures to improve competitiveness, including infrastructure development)</li> <li>Clarifications of the relationship between QCC and new standards (ISO 9001:2000)</li> <li>Inability of companies (especially SMEs) to cover costs required to improve quality and productivity</li> </ul>
Government and societal level	<ul> <li>Development of local human resources and knowledge through the promotion organization (ABCERQ/ABMAQ)</li> <li>Foundation provided for improvement in quality and productivity in major industries and government organizations</li> <li>Effects on neighboring countries (especially Mali) and scaling up to UEMOA local quality programs</li> </ul>	<ul> <li>Review of government organizations related to quality management, including the ABMAQ</li> <li>Lack of government support (quality management is not a high priority, excluding export)</li> <li>Training of personnel and improvement in the level of knowledge and skills</li> <li>No recognition of the importance of quality among consumers and a general lack of interest in product quality as a result of the low consumption level</li> </ul>

# Table 4-9. Achievements and Challenges of QCC in Burkina Faso

Source: Compiled based on Sanou (1995), Lim (1999) and company interviews.

The experience with QCC in Burkina Faso has also brought a new perspective to business management in Africa. Professor Honorine Illa at Ouagadougou University made comparisons between the Western business management approach adopted by many African countries and the Japanese management approach in a couple of West African countries. She concluded that the latter is more suitable to the organizational culture in African countries, emphasizing the need to develop an

African model by combining the two approaches.<sup>23</sup> Focusing on the process of introducing and localizing QCC in Burkina Faso and Senegal, Professor Illa argues that while the internalization was promoted in Burkina Faso through skills training by Japanese experts, the development of a local model was hindered in Senegal due to the uniform application of parent (French) companies' policies (Illa and Karsten, 2009). Although the African model (Ubuntu) is as yet an abstract notion and needs further clarification in the future,<sup>24</sup> it is worth noting as an attempt to develop an African model that reflects local values and knowledge.

#### (2) Lessons learned for developing countries

The example of Burkina Faso shows that the Japanese *kaizen* approach can be introduced into a developing country with a difficult economic environment. Critical situations often push people to unite amongst themselves and to work together to overcome difficulties.

The Burkinabé experience also shows that QCC are transferable to both private and public organizations. Since private firms are more likely to gain visible financial benefits from QCC, they have greater incentive to adopt it than government organizations. At the same time, they are often unable to afford it because of financial difficulties due to poor economic conditions and institutional environments. In addition, when the economic perspective is uncertain due to layoffs, workers are not motivated to participate in QCC. In contrast, while the government organizations in general lack financial or non-financial incentives and have greater difficulty in motivating their members, their stable economic conditions often allow them to undertake QCC. In fact, QCC has increasingly been adopted in government organizations in recent years.

#### **Role of the government**

In Japan and many Asian countries, as well as Burkina Faso to some extent, governments were committed to quality and productivity improvement and created special organizations to accumulate skills and diffuse knowledge. This aspect is particularly important when the country lacks the basic understanding and infrastructure for quality and productivity. In Burkina Faso, the ABCERQ/ABMAQ has been playing a key role in creating and leading the national movement for quality, and it has greatly contributed to developing human resources and accumulating knowledge and experience in the country. It owes much to the leadership of Mr. Bayili, who has been engaged in the promotion of QCC for over twenty years with an extensive network of contacts in both the public and private sectors. The fact that the project was staffed by a competent leader over a long time was one of the keys to its success.

<sup>&</sup>lt;sup>23</sup> Similar views were expressed by quality control managers of SONABEL (electric power corporation). ("The participatory approach, which was different from the traditional Western approach, was particularly suited to African companies.")

<sup>&</sup>lt;sup>24</sup> See Luts (2009), and Karsten and Illa (2005) for details of Ubuntu and African-type management.

Furthermore, the special organization should be small and flexible so that close collaboration between public and private sectors can emerge. Governments should give various incentives to encourage the private sector to engage in improving quality and productivity. For instance, the organization of national events such as "Quality Day" has been playing a crucial part in motivating companies. This type of event not only provides opportunities for companies to make their efforts known to a wider public but also has a long-term educational effect on the citizens.

Pragmatism is also needed; for some countries with scarce human and financial resources, launching an ambitious program for quality and productivity improvement is just unrealistic. While it is tempting to include micro and small enterprises in the scope of the project, most of them do not have the necessary resources to invest in these costly activities.

QCC and *kaizen* methods are basically acquired through on-the-job training. However, in many developing countries, workers do not have the basic education to apply the *kaizen* method at their workplaces. This is why the governments should raise the level of secondary education and improve the Technical and Vocational Education and Training (TVET) program (such as adding introductory courses on statistics and analysis methods to the curriculum).

### Involving and motivating the top management is key

The cases of Burkina Faso and other countries confirm that improving quality and productivity requires a deep and sincere commitment from management. Comprehensive improvement requires not only bottom-up QCC, but also top-down initiatives on quality management. Because of this deep commitment in some companies, QCC has somehow survived in Burkina Faso without government support. Yet, where small-group participatory activities are not common, it would be better to initiate pilot QCC at the factory level where tangible results can be obtained, while developing longer-term initiatives at the same time.

Even if a country has opted for a new approach, resistance within organizations (especially at management level) may provide a serious impediment to a *kaizen* project; this is not unique to developing countries. In Burkina Faso, as the majority of executives and managers are educated in French systems, they feel more familiar with French-style administration and business management. In this context, they tend to see QCC, a bottom-up approach, as a threat; one of the guiding principles of QCC is to allow workers to state their opinions and make proposals for management to consider, thereby developing a different work style from the conventional process. This can cause managers to fear that their authority may be undermined. To overcome this resistance, it is crucial to place QCC within the company-wide programs, such as TQM, and have all members understand that these activities bring benefits to both workers and management.

In addition, frequent personnel changes are often cited as one of the reasons for failure of QCC in Burkina Faso.

### Adjustment to the local context

There are still skeptical views that because of cultural differences, transferring the Japanese business management approach to other countries would be impossible. However, as far as QCC is concerned, the socio-cultural factors do not play a decisive role in determining the success or failure of projects. Rather, success depends on the degree of the adjustment made to the local context, or the localization. For instance, QCC is undertaken most often as unpaid overtime in Japan. However, in developing countries, it is generally difficult to ask workers to do voluntary overtime work, despite the importance of voluntarism highlighted in the original QCC concept. Companies that were unable to promote QCC cited "unpaid voluntary work" as one of the reasons for their failure, while successful organizations have made small adjustments to reflect the local context. Whatever their origin, the imported systems should be tailored in accordance with the circumstances and the capacity of the country, by examining its difference and complementarity with existing values and approaches.

### Long-term capacity building and institutional building

Tailoring to each country's context requires long-term, continuous assistance. First, it requires long-term assignment of competent personnel to the promotion organization. Since it takes a considerable amount of time before quality and productivity improvement practices take root in a country and trained personnel become available, governments and donors should plan to work together to provide continuous support over a long period of time. Asian experiences suggest that it takes a decade to establish a functioning institution and establish a pool of resources.

### Annex: Activities of Other Donors Supporting Quality and Productivity Improvement

The experience of QCC also served to create a basis for the support of other donors, especially the EC and UNIDO, for quality and productivity improvement. In 1990s, UNIDO made an attempt to introduce the Japanese management approach into developing countries and regards continuous improvement (*amélioration continue* in French), which is a translation of the word *kaizen*, as the basic compoment of the comprehensive programs for quality and productivity improvement (industrial capacity development program).

UNIDO's quality improvement programs in Burkina Faso are implemented to support UEMOA regional programs for West African countries. Major quality improvement programs include the following: (i) a program (1999 to 2003) aimed at improving quality and safety standards of SMEs engaged in food processing in Burkina Faso and Mali; and (ii) support (2007 to 2010) for a program funded by the EC and implemented by UNIDO which is aimed at improving the quality of local products in West Africa.

The program in the above (i) consists mainly of training for 11 food-manufacturing companies including SN-CITEC, which was one of the pilot companies for the QC circle program, in addition to SODEPAL and UCOBAM. There were 36 training sessions, including sessions on sanitary standards, ISO certification and TQM, attended by a total of 776 workers. The ABCERQ is commissioned to provide training in TQM. Training in TQM consisted of 18 sessions held over a period of 75 days and attended by 385 participants. The ABCERQ is in charge of (a) executive training in strategy formulation and quality management; (b) personnel policy and motivation training for middle management; and (c) quality improvement training for workers. These sessions were attended by a total of 275 participants (UNIDO, 2005). The Burkina Association for the of Promotion Quality Assurance in Food Industries (*Association Burkinabé pour la Promotion de l'Assurance Qualité dans les Entreprises Alimentaires*: ABPAQ-EA) is reported to have been established by a group of quality control managers of the relevant companies based on the results of UNIDO's support programs. This association was formed following the example of the ABMAQ. (We were unable to obtain the information on the state of the ABPAQ-EA as of 2011).

The predecessor of the program in the above (ii) was a program for the improvement of local products in the UEMOA region (2001 to 2005), which was developed for UEMOA countries based on the experience of the ABMAQ. A total of fourteen million euros was provided for the eight UEMOA countries to provide support mainly for the food processing industry to help obtain ISO certification. SAP and SN-SOSUCO, which adopted QCC, are also included as companies eligible to receive support. The scope of the program has been expanded to include fifteen West African countries (ECOWAS countries), including Anglophone countries, along with Mauritania in order to provide support mainly for producing products that meet export standards. The ABMAQ is commissioned to provide training as part of these programs, as was mentioned above. According to a review of support programs performed at the end of 2009, only a few of the companies succeeded in obtaining ISO certification. Therefore, results have not always been successful. At the same time, however, there are companies that have obtained ISO certification among those that are not receiving support from the EC or UNIDO, which makes it difficult to attribute the cause of failure merely to the lack of capacity of companies in Burkina Faso.<sup>25</sup>

<sup>&</sup>lt;sup>25</sup> Based on a field interview with the person in charge of the UEMOA Burkina Faso program.

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