PREPARATORY SURVEY REPORT
ON
THE PROGRAM OF QUALITY IMPROVEMENT ON HEALTH SERVICES BY 5S-KAIZEN-TQM

March 2011

JAPAN INTERNATIONAL COOPERATION AGENCY

FUJITA PLANNING CO.,LTD.

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SUMMARY

Executive Summary

Health facilities in developing countries, especially those in African countries are suffering from various problems such as lack of resources, namely medical human resources such as doctors and nurses, medical equipment and materials, medicines, and the monetary fund for operating the facilities, additionally to the lack of information such as patients records, clinical indicator data, and epidemiological data. Such situation is combined with the resignation of the health professionals, the insufficient knowledge and acknowledgement towards the safety of and the rights for the patients on the health professionals' side, resulting in not being able to provide the health services at a desirable level.

In order to address such situation, JICA has launched "Program of Quality Improvement of Health Services by 5S-KAIZEN-TQM" (Hereinafter called "the Program") in 15 African countries (8 Countries in Group1: Eritrea, Kenya, Madagascar, Malawi, Nigeria, Senegal, Tanzania and Uganda, 7 countries in Group 2: Benin, Burundi, Burkina Faso, Democratic Republic of Congo, Mali, Morocco and Niger) since 2007 to improve the functions of the health facilities by utilizing the Japanese-style quality control method (5S-KAIZEN-TQM) which was developed in the Japanese industrial domain and which is utilized in Japanese hospitals and hospitals in other Asian countries such as Sri Lanka.

JICA has been currently implemented the survey "Preparatory Survey on the Program of Quality Improvement of Health Services" (Hereinafter called "the Survey") for strategic expansions of 5S-KAIZEN-TQM approach.

The Survey has implemented the activities related with those described below;

1) Review the results from the cooperation projects conducted to date. (To review the Program, and extract successful examples, challenges, effectiveness and improvement of the seminars implemented by the Program)
2) Systematize and provide information on the findings obtained through training sessions and the implementation of the Program by, for example, creating texts and setting up websites; and examine and verify the possibility of mutual supplementation with other methods used to improve health service quality.
3) Provide assistance in planning a region-wide program, by compiling the directions and activities of the Program.
4) Provide assistance in efforts to implement the current projects and to formulate projects in all the participating countries.

Following are the outline of the Survey results;

- Regarding collection of baseline and review information, the pilot hospitals had collected the required information based on the existing data such as those saved in their health management information systems, etc., being able to provide the information related to the number of services provided. However, many countries did not have any data accumulated for information regarding the safety level of the hospitals, and in many cases.
- The strategic papers created by various countries are already put into practice, where the subject countries are starting to establish the strategies for expanding the 5S activities and for improving the quality of the health services. Tanzania, Nigeria and Uganda have proceeded onto the KAIZEN stage, and Madagascar and Senegal are also implementing trial activities for the KAIZEN stage.
- As a result of a cross-sectional analysis of the results gained from the monitoring check sheet, it can be seen that Group 1 has been able to make relatively steady progress for Sort (S1) to Shine (S3) under the strong leadership, but the variance in the progress for Standardize (S4) and Sustain (S5) has become larger. Although Group 2 countries were making steady progresses for the 5S activities under the strong leadership, there is significant variance between the progresses of each country. It can also be analyzed that standardized monitoring method for utilizing the monitoring check sheet prior to making the survey, the variance in the survey results has become smaller.
- Although many had replied that it is easy to apply what he/she has acquired to his/her organization, such achievements are not making much contribution for ensuring the finance required for implementing 5S, and many had indicated that they feel more familiar with Sri Lanka's experiences than those of Japan's.
- It has been confirmed that some of the international institutions and other aid agencies such as WHO are working upon the improvement of the quality of the health services, and strong interest was shown towards this approach, too.
- The activities such as holding open seminars, preparing technological documents, releasing newsletters, and holding SBW a the GHWA Global Forum have widely introduced the approach to the domestic researchers on international health, to those implementing the approach, and to the international institutions, and have also enabled to make them fully familiarized with the uniqueness of the approach.

Summary

1. Introduction and Background

In developing countries, poor quality of health services is one of the factors which increase death cases of pregnant and parturient women and newborn babies, and improving the quality of and ensuring safety for the health services are two of the most important issues which the health services in the developing countries are facing today.

Especially health facilities in African countries are suffering from various problems such as lack of resources, namely medical human resources such as doctors and nurses, medical equipment and materials, medicines, and the monetary fund for operating the facilities, additionally to the lack of information such as patient records, clinical indicators, and epidemiological data. Such situation is combined with the resignation of the health professionals derived from the fact that he/she is unable to provide health services at a sufficient level due to the lack of resources, the fact that no support is made for ensuring safety for the patients, and the undeveloped acknowledgement towards the rights for the patients on health professionals' side, resulting in not being able to provide health services at a desirable level. In order to work upon such situation, Sri Lanka is working upon improving the quality of the hospital services by utilizing the 5S, KAIZEN, and the Total Quality Management (TQM) methods and approaches which are being applied in the Japanese industrial area.

Japan International Cooperation Agency (JICA) inaugurated an Asia-Africa Knowledge Co-creation Program (AAKCP) in 2005, with a view to the "promotion of Asia-Africa cooperation," an initiative launched by the Government of Japan (GoJ) in the Tokyo International Conference on African Development (TICAD) III held in 2003. The agency embarked on "Program of Quality Improvement of Health Services by 5S-KAIZEN-TQM" (Hereinafter called "the Program") through "TQM for Better Hospital Services" as a sub-program of the AAKCP in March 2007. The sub-program aim to improve health services with the use of a Japanese-style quality management method, so called 5S-KAIZEN-TQM. AAKCP "TQM for Better Hospital Services" includes both the policy establishment level (health administrative institutions) and the work site level (medical institutions) into this target, and therefore expects for the synergetic effect of the activities such as making the activities implemented in the pilot hospitals based on the support provided by the MOH in a smooth manner, and deploying the activities implemented by the MOH to a nation-wide level by showcasing the pilot hospital. By having divided the target countries into 2 groups (8 countries in Group 1: Eritrea, Kenya, Madagascar, Malawi, Nigeria Senegal, Tanzania, and Uganda; 7 countries in Group 2: Benin, Burundi, Burkina Faso, Democratic Republic of Congo (DRC), Mali, Morocco, and Niger), it is aimed to have healthy competition encouraged between the peer groups, and to brew the mutual supplementary acts between them.

JICA has conducted the "Preparatory Survey on the Program of Quality Improvement of Health Services" (Hereinafter called "the Survey") and sent a mission to the 15 African countries participating in the sub-program for two purposes: (i) to review the current situation of and outcomes from "TQM for Better

Hospital Services" in order to boost the AAKCP further, and (ii) to systematize the results from the efforts to implement the 5S-KAIZEN-TQM method, so as to roll out both the current and new programs.

2. Preparatory Survey on the Program of Quality Improvement on Health Services by 5S-KAIZEN-TQM

(1) Purposes

Based on the results of the Indicators shown below, the survey team will explore a directionality of Japan's future assistance based on the 5S-KAIZEN-TQM concept and share the results with the counterparts of the participating countries.

1) Review the results from the cooperation projects conducted to date. (To review the Program, and extract successful examples, challenges, effectiveness and improvement of the Seminars implemented by the Program)
2) Systematize and provide information on the findings obtained through training sessions and the implementation of the Program by, for example, creating texts and setting up websites; and examine and verify the possibility of mutual supplementation with other methods used to improve health service quality.
3) Provide assistance in planning a region-wide program, by compiling the directions and activities of the Program.
4) Provide assistance in efforts to implement the current projects and to formulate projects in all the participating countries.

At the same time, the Survey aims to ensure that the significance of 5S-KAIZEN-TQM will be verified based on rationale collaborating with counterparts' collaboration.

(2) Outline of the Survey

Below are the four main fields conducted on the Survey;

1) Review of the outcome of the Program: Supervisory Trip and Review/Baseline survey
   a. 1st supervisory trips/Review surveys: January to April, 2010 (Group 1)
   b. Supervisory trips/Baseline surveys: January to March, 2010 (Group 2)
   c. 2nd supervisory trips: November 2010 to January 2011 (Group 1)
2) Accumulation and systematization of knowledge and dissemination: Publication of the 5S-KAIZEN-TQM approach
   a. Holding Public Seminar: June, 2010
   b. Creating technical materials for 5S-KAIZEN-TQM approach
   c. Issue of Newsletter

d. Holding Skill Building Workshop (SBW) at GHWA Global Forum

3) Support for the current programs and project formation: Coordination of the supporting structure for the Program

a. Capacity building training (for nurturing experts): August 2010

b. Preparation of the 5S-KAIZEN-TQM textbook

c. Support for the Group 1 JICA Training and Dialogue Programs ”Quality Improvement on Health Services by 5S-KAIZEN-TQM” : June to July, 2010

d. Group 2 Wrap-up Seminar: October, 2010

e. Holding a Joint Workshop with Group 1 and 2: January, 2011

4) Provide assistance in planning a region-wide program, by compiling the directions and activities of the Program.

a. Writing Final Report for the Preparatory Survey

3. Survey Results

(1) Status of Data Collection for Baseline information / Review survey

The survey team explained purposes of the survey such as (1) purposes of the supervisory trip and the baseline survey for KAIZEN, (2) purposes and the significances of the questionnaire format and the time study, (3) definitions and purposes of evaluation items to the MOH and directors and 5S committees in the pilot hospitals and ask them to submit replies for the questionnaire and cooperate with the time study.

The pilot hospitals had collected the required information based on the existing data such as those saved in their health management information systems, etc., being able to provide the information related to the number of services provided. However, many countries did not have any data accumulated for matters such as average length of tenure, the number of stockout days of medicines and reagents (inventory control status), and information regarding the safety level of the hospitals, and in many cases, the data for these matters had been newly collected for this survey. Many of the hospitals had systematically gathered the information related to their financial status and health services, but not many had gathered the information that would be useful for evaluating effectiveness of the 5S activities on a regular basis such as those related to the hospital administration status and the safety level of the hospital.

(2) Progress Status of the “Action Plan” for AAKCP’s TQM for Better Hospital Services

The countries in Group 1 are steadily expanding 5S based on the action plan prepared in July 2010. Some of the countries have revised their strategic papers according to the progresses of the pilot hospitals. However, some activities were unable to be executed due to not matching with the existing schedule for the health policy. Tanzania, Nigeria, and Uganda have proceeded onto the KAIZEN stage, and Madagascar and Senegal are also implementing trial activities for the KAIZEN stage.

The countries in Group 2 have started their efforts for expanding 5S based on the action plan prepared in

August 2009. Although only some of the countries were implementing their activities according to their schedule at the point of the supervisory trip in 2010, many countries had officially started implementing the 5S activities at the point of the wrap-up seminar in 2010, working upon expanding the activities.

(3) Monitoring Results Gained through the Monitoring Check Sheet

The countries in Group 1 were evaluated by using the monitoring check sheet during the 1st and 2nd supervisory trip. As a general trend, the countries which had gained relatively higher scores for the 1st survey had also gained higher scores for the 2nd survey, and vice versa. As a result of a cross-sectional analysis of the results gained from the monitoring check sheet, it can be seen that Group 1 has been able to make relatively steady progress for Sort to Shine (S1 – S3) under the strong leadership, but the variance in the progress for Standardize (S4) and Sustain (S5) has become larger. It can also be analyzed that by having standardized the method for utilizing the monitoring check sheet prior to making the survey, the variance in the survey results has become smaller.

The countries in Group 2 made self evaluations using the check sheet during the 1st supervisory trip and as a preliminary exercise for the wrap-up seminar held in October 2010. The results proved that unlike the countries in Group 1, some countries were showing both higher scores and lower scores for different items. Although Group 2 countries are making steady progresses for the 5S activities under the strong leadership, since there is significant variance between the progress of each country, those countries showing slower progresses may require some additional opportunities for reviewing how to implement the approach and for the definition of 5S all over again. On the other hand, since it is assumed that the monitoring procedures were not standardized to a sufficient level and had therefore resulted in the variance gained in the evaluation results, it is important to clarify the definition of each item and the criteria for the scores for the monitoring check sheet in order to consolidate the procedures for implementing self evaluation.

(4) Trend in the MOH

In Group 1, Kenya, Tanzania, Eritrea and Senegal were having supports provided by JICA and other aid agencies for establishing policies for improving the quality of the health services and for expanding the policy to a nationwide level, whereas Malawi and Uganda were planning to have support provided in the near future. Additionally, Malawi and Nigeria have started preparing the establishment of the department responsible for improving the quality of health services within the MOH. As for deploying the activities to a nation-wide level, 5S activities are implemented in 9 hospitals in Eritrea, 4 hospitals in Madagascar, 3 hospitals in Malawi, 38 hospitals in Tanzania, and 6 hospitals in Uganda.

As for Group 2, many countries were showing superior commitment for AAKCP "TQM for Better Hospital Services" at the health administrative level, and were starting to reflect the 5S activities into the quality control policy for the health services. However, no country had started working upon expanding

the activities to a nation-wide level.

(5) Identification of Good Practices

The matters confirmed as the good practices for the hospitals were mainly regarding Standardize (S4) and Sustain (S5) for both Group 1 and 2. The Group 1 countries were reviewing their structures to one where the activities would be able to be implemented in a smoother manner considering the physical and practical aspects of their organizations. Additionally, some efforts were being made for the KAIZEN activity on a trial basis following JICA Training and Dialogue Programs regarding KAIZEN, and in consideration of the 3M (Muri: overdoing, Mura: unevenness, and Muda: wastefulness). Some of the Group 2 countries were being reported as having implemented activities equivalent with KAIZEN, such as implementing employees and patients satisfaction surveys or implementing active efforts for improving the service quality as the hospitals' original activities.

As for the efforts made by the MOH, those in Group 1 countries had implemented more practical activities for enabling deployment of the approach to a nation-wide level such as establishing the national guideline or coordinating structures at the level of the MOH. Although the Ministries of Health in Group 2 countries are also showing high interest, only a year has passed since the pilot hospitals had started their activities, and therefore they have not been able to establish any national policy which takes the achievements gained from the activities into consideration. This has resulted in having most countries merely showing their commitment for working upon 5S-KAIZEN-TQM, or implementing the activities in a limited area.

(6) Effects Gained through the Trainings for the Program

When the effects gained from the seminars held for AAKCP "Total Quality Management (TQM) for Better Hospital Services" and region focused training courses, many had replied that it is easy to utilize the achievements gained from the seminars, but such achievements are not making much contribution for ensuring the finance required for implementing 5S, and many had indicated that they feel more familiar with Sri Lanka's experiences than those of Japan's. Many had the opinion of having more practical seminars held and to be able to communicate with members from other countries.

Although the seminars held within the range of this course (region focused training courses, wrap-up seminars, and joint workshops) had achieved their individual purposes, some challenges were identified as described below.

- The necessity for understanding the Japanese health system
- Implementing seminar operation in a smooth and consistent manner
- Providing support according to the progress in each country

・ Establishing the objective monitoring and evaluation method

(7) Research on Trends of the International Organizations and Other Assistance Organization to Improve Quality of Health Services

As for the survey results of the internal and external assistances, it was confirmed that some of the international institutes and assistance organizations – mainly WHO – are working upon the improvement of health services, and they had shown significant interest towards our approach as well. It has also been confirmed that the achievements gained from the 5S-KAIZEN-TQM approach can be utilized for Performance-Based financing (PBF).

(8) Trends of JICA Programs/Projects except the Program Relating to Quality and Safety for Health

Eritrea, Burundi, and Nigeria are having Technical Cooperation Projects related with this case implemented. Additionally, in Tanzania, a project utilizing this approach has started from 2010, and such project shall be launched in Uganda and Senegal. Alignment with JOCV is ensured as well.

(9) Advertisement of 5S-KAIZEN-TQM Approach

The activities such as holding open seminars, preparing technological documents, releasing newsletters, and holding SBW a the GHWA Global Forum have widely introduced the approach to the domestic researchers on international health, to those implementing the approach, and to the international institutions, and have also enabled to make them fully familiarized with the uniqueness of the approach.

(10) Coordination of a support system for the Program

Since human resources have been nurtured for this approach via the capacity building training course, we will move onto the stage where utilization of such human resources is considered. The textbooks are expected to be fully utilized in order to enable the participants to learn and understand the basic concept of the approach.

Abbreviation

Abbreviation	Original
AAKCP	Asia-African Knowledge Co-Creation Program
ABMAQ	Association Burkinabé pour le Management de la Qualité
AFD	Agence Française de Développement (French Development Agency)
CQI	Continuous Quality Improvement
DANIDA	Danish International Development Assistance
DFID	Department for International Development
DRC	Democratic Republic of Congo
EC	European Commission
FHI	Family Health International
GHWA	Global Health Workforce Alliance
GIZ	Deutshe Gesellschaft fur Internationale Zusammenarbeit
GTZ	Deutshe Gesellschaft fur Techniche Zusammenarbeit
HIV	Human Immunodeficiency Virus
HOMEL	Hôpital de la Mere et l'Enfant Lagune
ICU	Intensive Care Unit
ISO	International Organization for Standardization
JOCV	Japan Overseas Cooperation Volunteers
KQAMH	Kenya Quality Assurance Model for Health
MOH	Ministry of Health
PBF	Performance-based Finance
QC	Quality Control
QI	Quality Improvement
QIST	Quality Improvement Support Team
QIT	Quality Improvement Team
QMT	Quality Management Team
RCQHC	Regional Center for Quality Health Care
SBW	Skill Building Workshop
SIDA	Swedish International Development Cooperation Agency
SQI	Systematic Quality Improvement
SWAp	Sector-wide Approach
TICAD	Tokyo International Conference on African Development
TOR	Terms of Reference
TOT	Training of Trainers
TQIF	Tanzania Quality Improvement Framework
TQM	Total Quality Management
USAID	United States Agency for International Development
WHO	World Health Organization
WIT	Work Improvement Team

INDEX

Executive Summary i

Summary iii

Chapter 1 Introduction and the Background 1

1-1 Current Status of Health Services in Developing Countries 1

1-2 5S-KAIZEN-TQM Approach 2

1-3 Quality Improvement of Health Services by 5S-KAIZEN-TQM 5

1-3-1 Outline of Quality Improvement of Health Services by 5S-KAIZEN-TQM 5

1-3-2 Outline of the “TQM for Better Hospital Services” Phase 1 8

1-3-3 Outline of “TQM for Better Hospital Services” Phase 2 9

Chapter 2 Preparatory Survey on the Program of Quality Improvement of Health Services 11

2-1 Outline 11

2-2 Purposes 11

2-3 Basic Policies concerning the contents of the survey 12

2-4 Contents of the Survey and Methods 13

2-4-1 Supervisory Trips (Including Preparatory Survey) 13

2-4-2 Advertisement of the Approach 19

2-4-3 Coordination of the supporting structure 21

2-4-4 Support for establishing Region-wide Programs 27

Chapter 3 Survey Results 29

3-1 Outline of the Survey Results for Each Country 29

3-1-1 Group1 29

3-1-2 Group 2 89

3-2 Progress Status of the Program 117

3-2-1 Data Collection Status of Baseline Information 117

3-2-2 Progress Status of the 5S-KAIZEN-TQM “Action Plan” 123

3-2-3 Results Gained through the Monitoring Check Sheet 126

3-2-4 Trend in the Ministry of Health 133

3-2-5 Identification of Good Practices 139

3-3 Effects Gained through the AAKCP 5S-KAIZEN-TQM Seminars for the Program (Outcomes) 144

3-3-1 The ex-post evaluation for the seminars held in 2010 and before 144

3-3-2 Effects (Outcome) of JICA Training and Dialogue Programs 153

3-3-3 Outcomes of Wrap-up Seminar 156

3-3-4 Outcome of the Joint Workshop within the Global Forum for Workforce Alliances 161
3-4 Research on Trends of the International Organizations and Other Assistance Organization to Improve Quality of Health Services 163
3-5 Trends of JICA Programs/Projects regarding quality and Safety for Health.................................... 168
3-6 Advertisements of the 5S-KAIZEN-TQM Approach.. 171
3-6-1 Holding the Public Seminar 171
3-6-2 Prepare the technical document related with 5S-KAIZEN-TQM (leaflets, materials, etc.) 174
3-6-3 Releasing of the newsletter 174
3-6-4 Holding a workshop in the GHWA Global Forum 175
3-6-5 Training results for health professionals through AAKCP and 5S-KAIZEN-TQM Seminars ... 175
3-7 Coordinating the supporting structure.. 176
3-7-1 Capacity building training course (for nurturing experts).. 176
3-7-2 Preparing the textbook... 177

Attachment
1: Monitoring Check Sheet
2: Materials for Preparatory Survey
2-(1): Questionnaire for 1st Supervisory Trip
2-(2): Questionnaire for 2nd Supervisory Trip
2-(3): Questionnaire on Trainings
2-(4): Operational Manual for Time Survey

Chapter 1　Introduction and Background

Chapter 1 Introduction and the Background

1-1 Current Status of Health Services in Developing Countries

In developing countries, poor quality of health services is one of the factors which increase maternal and infant mortalities, and improving quality of and ensuring safety for the health services are two of the most important issues which the health services in developing countries are facing today. Health services in developing countries face many issues listed below.

(1) Serious shortage in resources

The developing countries are facing serious shortage in the health professionals, medicines, facilities, and information required for the existing number of patients waiting for some form of treatment, and the quality of those which are being supplied is far worse than what is required. Private medical institutions set their target patients to those in the wealthy class only and are mostly located in urban regions, which means that the treatment opportunities provided for those in the poor and middle class populations are limited to those provided by the public medical institutions where such serious shortage in the required resources is prominent. Those people have no other choice but to receive the limited treatments provided by such public medical institutions.

(2) Difficulties of accesses to health services

There are only a limited number of medical institutions available within the living area of the patients, where even some of the regions do not have any medical institution at all. Additionally, transportation infrastructure such as roads poorly maintained and therefore patients have faced bad access to health services available.

(3) Shortage of financial resources

Most of the patients do not earn enough to be able to pay for treatments. Since patients are not able to pay for health services, shortfalls are often paid by public funds – tax income. However, in many cases the governments do not make the payments in an appropriate manner both in amount and in the payment timing, which becomes cause for shortages of financial resources for medical institutions both in nation-wide level and in individual medical institution level.

(4) Fatigue of health professionals

Due to serious shortage of the health resources, health professionals are unable to make appropriate diagnoses and treatments for each individual patient, which deprives of the motivations of the health professionals as a result. Additionally, most of the hospital staff members are public servants and some of them lack the required sense of responsibility due to their low salaries. To make the matter worse, many countries allow health Professionals to do side business which results in having staff members more dedicated to the activities for profitable private or personally-owned medical institutions, and therefore not make sufficient efforts for the works at public hospitals.

(5) Transition of the disease structure from infectious diseases and injuries to lifestyle-related diseases (epidemic change)

The global trend in the medical domain shows a change in the disease structure from infectious diseases to lifestyle-related diseases, and the disease structure in developing countries show that both types of diseases are widespread. This means that developing countries would require medical resources to be able to address both types of diseases, making the matter worse in terms of shortage of the financial resources.

(6) Low awareness of patients' rights

Since health Professionals tend to lack awareness towards patients' rights, they do not pay sufficient attention for patients' human rights, and often do not treat each patient as an individual person, sometimes behaving violently towards him/her. One of the reasons for health Professionals not respecting the human rights of the patients is the fact that patients are not able to pay for their medical treatments. The patients themselves are also in no position of being able to demand his/her own right as patients due to not being able to make the payment, or they are not aware of such rights in the first place. Additionally, since they have not many choices for the medical institutions apart from public hospitals, they would either have to visit a hospital where his/her own human rights are not respected or decide to give up receiving any medical treatment altogether.

Based on the facts listed above, in order to improve the medical services provided in the developing countries, it would be required to utilize limited resources, maintain motivations of health Professionals, and ensure appropriate quality and safety of medical practices. In order to address this situation, the Director of the Castle Street Hospital for Women in Sri Lanka has utilized the 5S[1], KAIZEN[2], and TQM[3] methods and approaches which are often utilized in Japanese industrial businesses, and has been successful in improving quality of services provided by the hospital.

1-2 5S-KAIZEN-TQM Approach

5S, KAIZEN, and TQM can be described as listed below in general, and are utilized in various different areas such as the industrial area. The characteristic of this 5S-KAIZEN-TQM approach is that these 3 management methods are "implemented in a phased manner".

- Step 1 "5S": Improvement of the environment of the work place by ensuring Sort (S1), Set (S2), Shine (S3), Standardize (S4), and Sustain (S5)

[1] 5S: A methodology utilized for improving the work environment where the 5 Ss stand for; Sort, Set, Shine, Standardize, and Sustain.

[2] KAIZEN: A methodology for improving business operations where the word "Kaizen" means "improvement" in English. The actual methodology continuously improves business operation processes by repeating the cycle of Plan – Do – Check – Act with participatory manner..

[3] TQM (Total Quality Management): A methodology where the management and operation of the hospital are considered at the entire hospital-wide level in order to implement systematic operation where the hospital would be able to provide services that are satisfactory for both the patients and the staff members.

- Step 2 “KAIZEN”: Participatory problem solving method based on the reasons provided by the service providers.
- Step 3 “TQM”: A comprehensive quality control management which utilizes the overall capacity of the organization at its maximum.

In the first 5S activities, the efforts will be focused onto improving the environment of the work place as a preliminary stage for ensuring the improvement of the productivities as the hospital and various departments (Step 1). Once the 5S activities are thoroughly ensured, the target will gradually shift to solving the problems regarding quality and safety (Step 2), and finally, will shift to realizing and maintaining the organizational TQM (Step 3). In Japan, these 3 approaches are often implemented independently. This approach will not start directly from KAIZEN, but will start from implementing 5S. The reasons are that; 1) all staff members will be able to easily understand 5S, 2) the achievements for 5S can be visually confirmed, 3) the activities for improving the environment of the work place will brew the positive mind and relationship of mutual trust among the work place, and 4) the intermediate management members and staff members at the sites can be fully utilized. Implementing this step would require “positive mindset” and “strong leadership”. In the developing countries, it is important to start from ensuring improvement for the staff members (internal customers) in order to develop such “positive mindset” and “strong leadership”.

The origin of this approach is the Japanese-style management method which had been implemented in the Japanese industrial community (such as Toyota and other companies), whose very roots lie within the Japanese traditional culture, the art of “tea ceremony”, and the concept of “warm hospitality”. This step-wise method was developed due to the implementation of the method originally utilized in the industrial community to the Castle Street Hospital for Women in Colombo, the capital city of Sri Lanka by its Director, Dr. Karandagoda in 2000. Director Karandagoda succeeded in implementing the 5S activities, and then expanded the activities to the entire hospital, and then established the structure for this approach where the entire process would be to implement 5S first, then KAIZEN, and finally TQM.

The goal for the 3-stages approach of implementing 5S-KAIZEN-TQM is not simply to implement 5S or KAIZEN into the hospitals, but is to enable the hospital to reform its own management style or organizational culture, and therefore become enabled to provide the medical services with the focus always placed onto “being outcome-oriented” and onto “being centered onto the patients”. By accumulating small success cases within the daily business via this approach, the atmosphere of participating in such activities would become widespread regardless of the class or business type among the hospital staff members, and therefore lead the hospital to be reborn as “a merely existing organization” to “an organization which generates values”. By utilizing this step-wise approach, “team-building” would become available in all departments within the hospital through providing high quality care and by

ensuring patients / employee satisfaction, and "team-building" would be possible to be ensured between the patients and the medical providers.

In Step 1, the 5S approach, in order to firmly ensure the acts for improving the environment of the work site, an organization for promoting the 5S activities within the hospital (the organization later referred to as Quality Improvement Team: QIT) would have to be established. Establishment of Work Improvement Team: WIT within each department needs to be ordered in a top-down approach. WIT is a small group consisted of the volunteer staff members within each department, and is expected to promote the 5S activities for each individual work site in order to reduce the inconveniences at each department. At the initial stage of the implementation of this approach, WIT does not need to be approved as an official organization within the hospital; the volunteer members can form the WIT first, and be trained for the basic techniques for 5S.

Once 5S are firmly established within each department in the hospital, the next stage would be KAIZEN. In the KAIZEN stage, the training targets would shift to enhancing the abilities of the WIT members and intermediate managers such as the top managers of the diagnosis and treatment departments, the inspection managers, and chief nurses, additionally to having the 5S activities continued by WIT, which therefore would strengthen each individual department.

In the TQM stage, the achievements gained during the KAIZEN stage would have to be accumulated in order to improvement entire management of the hospital, additionally to solving various different problems. In TQM, it would be necessary to enhance the management abilities of the hospital top management such as the hospital director and the top officers of the hospital.

In order to deploy this 5S-KAIZEN-TQM method to a nation-wide level, the following 2 tracks will be required to be implemented;

Track 1: Proceeding of the efforts implemented within the hospital in the order of 5S-KAIZEN-TQM

Track 2: Deployment of the approach from the pilot hospital to a nation-wide level

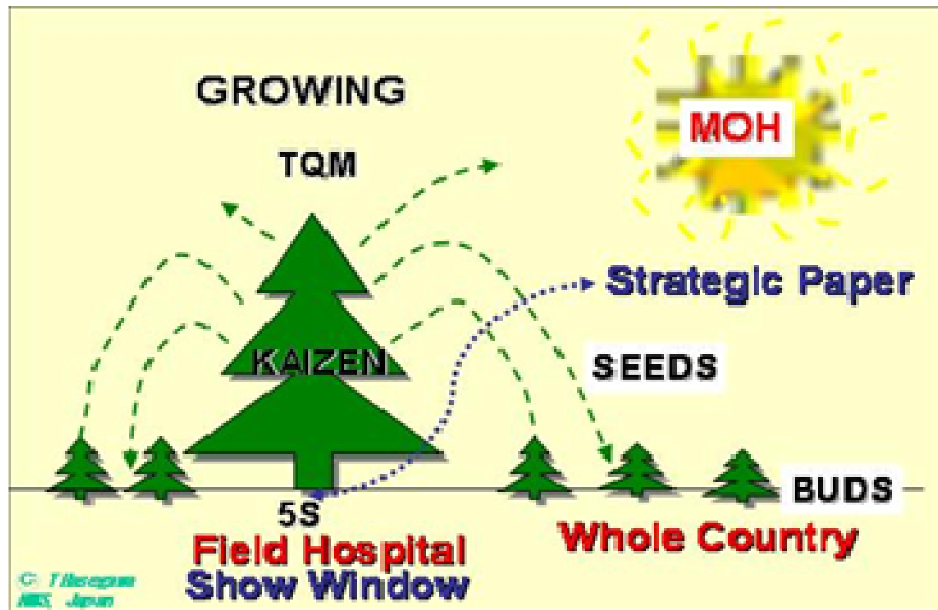

Figure 1-2-1 tracks for Nation-wide expansion of the step-wise approaches

Track 1 sets its target to have the “TQM tree” grow within the pilot hospital (the Center of Excellence), which would become the model hospital for all of the other hospitals in the same country, and during this stage, it would be important for the responsible department within the Ministry of Health (MOH), etc. to provide appropriate support for the activities implemented within the pilot hospital. When the achievements within the pilot hospital are confirmed, the track will move onto Track 2 where the responsible departments within the MOH, etc. would establish the appropriate strategies and guidelines based on the knowledge gained through the successful completion of Track 1 and other activities, and deploy the approach to other medical institutions at a nation-wide level based on such strategies and guidelines. In order to deploy the medical service quality improvement activities utilizing 5S-KAIZEN-TQM to a nation-wide level, it would be necessary to functionally blend Track 1 with Track 2.

1-3 Quality Improvement of Health Services by 5S-KAIZEN-TQM

1-3-1 Outline of Quality Improvement of Health Services by 5S-KAIZEN-TQM

Japan International Cooperation Agency (JICA) The agency embarked on "Total Quality Management (TQM) for Better Hospital Services"(Hereinafter the Program) as a sub-program of the AAKCP in March 2007. The sub-program aims to improve health services with the use of 5S-KAIZEN-TQM, the Japanese-style quality management method by utilizing the insights gained through the activities implemented in the Castle Street Hospital for Women in Sri Lanka described above.

This training assistance has so far been rendered to Group 1 (8 countries: Eritrea, Kenya, Madagascar, Malawi, Nigeria, Senegal, Tanzania and Uganda from March 2007 to November 2008) and Group 2 (7 countries: Niger, Benin, Burkina Faso, Burundi, Democratic Republic of Congo (DRC), Mali, Morocco

and Niger from March 2009 to November 2010.) The former Group 1 has completed its implementation of the 5S activities at the final seminar[4] held in November 2008, and has made a progress onto the KAIZEN level activities.

JICA decided to send a mission to the 15 African countries participating in the sub-program for two purposes: (i) to review the current situation and the progress status of the Program in order to boost them further, and (ii) to systematize the results from the efforts to implement the 5S-KAIZEN-TQM method in order to utilize the learning gained through the results for the past activities for rolling out new programs.

Table 1-1-1 List of 15 countries participating in AAKCP "TQM for Better Hospital Services" Program

Group 1			Group 2	
Eastern part of Africa	Western part of Africa	Southern part of Africa	Western part of Africa	Northern part of Africa
Uganda Eritrea Kenya Tanzania	Senegal Nigeria	Madagascar Malawi	Niger Burkina Faso Burundi DRC Mali Benin	Morocco

Group	Contents	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Group 1	5S	2007			Introduction Seminar				Interim Seminar					
		2008											Final Seminar	
	KAIZEN	2009										Seminar		
		2010	Consultation Study					Seminar					Consultation Study	
		2011	Consultation Study											
Group 2	5S	2009			Introduction Seminar					Interim Seminar				
		2010	Consultation Study									Final Seminar		

Figure 1-3 Schedule of the AAKCP "TQM for Better Hospital Services"

The sub-program is characteristic in, among all, that it looks at both the policymaking level, i.e., administrative organizations in charge of health services, and the working level, i.e., actual medical institutions. This perspective produces synergy effects in the activities. More specifically, the sub-program intends to bring about

Outline of the AAKCP
Policy Level
Problem
Solution
Resources
Discrepancy
Consideration
Estimation
Strategic plan
Generation
TQM
5S
Pilot project
Hospital Level
Implementation, penetration
Modeling of the pilot project
Planning
Problem-solving
Evaluation

Figure 1-4 Outline of the AAKCP Total Quality Management

[4] The designation of the final seminar has been changed to the Wrap-up seminar for the Group 2.

synergy effect both in the working level and in the policymaking level where the top-level officials in charge of healthcare understand the effects of adopting the 5S-KAIZEN-TQM concept and develop a strategic plan for deploying the concept to a nation-wide level, building on effectiveness of the 5S-KAIZEN-TQM activities proved during the implementation of the pilot project at a core hospital of the country.

Table 1-2 (1) Information of the Pilot Hospitals of the Group 1

Country	Hospital name	Number of beds	Department	Level
Eritrea	Orotta General Hospital	189Beds	Emergency, Surgery, Internal Medicine	Tertiary
	Halibet Hospital	250 Beds	Internal Medicine, Surgery, etc.	Secondary
Kenya	Mazali Hospital	750 Beds	Psychiatry	Tertiary
	Coast Province General Hospital	700 Beds	General Hospital	Secondary
Madagascar	CHU Mahajanga	392Beds	General Hospital	Secondary Tertiary
Malawi	Dowa District Hospital	144 Beds	Surgery, Internal Medicine, Obstetrics, Pediatrics etc.	Secondary
	Mzimba District Hospital	290 Beds	General Hospital	Secondary
Nigeria	Lagos Island Maternity Hospital	184 Beds	Obstetrics and Gynecology, Newborn, Antenatal Care, Emergency Obstetrics	Secondary
Senegal	Tambacounda State Hospital	135 Beds	General Hospital	Secondary
Tanzania	Mbeya Referral Hospital	477 Beds	General Hospital	Tertiary
Uganda	Tororo General Hospital	210 Beds	Internal Medicine, Surgery, Obstetrics, Pediatrics	Secondary

Table1-1-2 Information of the Pilot Hospitals of the Group 2

Country	Hospital name	Number of beds	Department	Level
Benin	Lagune Maternal and Child Hospital (Hôpital de la Mère et de l'Enfant Lagune)	220 Beds	OB/GYN, Neonatal, Pediatrics	Tertiary
Burkina Faso	Banfora Regional Hospital Center (Hôpital de la Banfora State)	104 Beds	Emergency, Pediatrics, Internal Medicine, Obstetrics, Surgery	Secondary
Burundi	Prince Regent Charles Hospital (Hôpital Prince Regent Charles)	495Beds	General Hospital	Secondary Tertiary
DRC	Ngaliema Clinic (Clinique Ngaliema)	250Beds	General Hospital	Secondary
Mali	Nianankoro Fomba Hospital (Hôpital Nianankoro Fomba de Segou)	139 Beds	General Hospital	Secondary
Morocco	Sale District Hospital	169 Beds	OB/GYN,	Secondary

Country	Hospital name	Number of beds	Department	Level
	(Hôpital de Sale)		Traumatology, Internal Medicine, Pediatrics, Emergency, ICU	
Niger	Lamorde National Hospital (Hôpital de Lamordé de Niamey)	253 Beds	General Hospital	Tertiary

1-3-2 Outline of the "TQM for Better Hospital Services" Phase 1

The Agency has been implementing the Asia-Africa Knowledge Co-creation Program (AAKCP) from 2005, with a view to the "promotion of Asia-Africa cooperation," an initiative launched by the Government of Japan (GoJ) in the Tokyo International Conference on African Development (TICAD) III held in 2003. The agency embarked on "Total Quality Management (TQM) for Better Hospital Services" (the Program) as a sub-program of the AAKCP in March 2007. The sub-program aims to improve health services with the use of 5S-KAIZEN-TQM, the Japanese-style quality management method by utilizing the insights gained through the activities implemented in the Castle Street Hospital for Women in Sri Lanka described above.

The Program includes the training of health policymakers of African countries (several countries at a time) and of the related persons within the health facilities selected as the pilot hospitals, aiming to make them able to formulate action plans with an adequate understanding of the concept of 5S-KAIZEN-TQM and higher levels of knowledge and understanding on the method. In the sub-program, the policymakers draw up plans as part of the training, bring them home, and carry out the planned activities at pilot hospitals in their own countries. Through this process, the sub-program helps the target countries introduce and penetrate the 5S-KAIZEN-TQM method.

The Phase 1 of the Program is introduction and settlement of the 5S activities. Main activities made for Phase 1 of the Program are to hold seminars at the 3 levels of Introduction, Interim, and Final (Wrap-up) seminars. The Introduction seminar requires the persons responsible for health services in the MOH to develop action plans at the nation-wide level, the interim seminar requires them to identify specific activities at the pilot hospitals, and the final seminar is held based on the results of the supervisory trip made by the resource persons where the outcomes of the activities made in are reported and the insights gained and the future prospects are shared among the participants.

Table 1-1 Major activities of the AAKCP "TQM for Better Hospital Services" Phase 1

Seminar	Participants	Contents of Seminar
Introduction Seminar	MOH Director level of the Pilot Hospitals	Concepts, methods and effects of 5S-KAIZEN-TQM Observation of organizations introducing 5S-KAIZEN-TQM Formulation of the National Action Plan
Interim Seminar	Management level of the Pilot Hospitals	Concepts, methods and effects of 5S-KAIZEN-TQM observation of organizations introducing 5S-KAIZEN-TQM Formulation of the Action Plan in the Pilot Hospitals

Final Seminar (Wrap-up Seminar)	MOH Director level of the Pilot Hospitals	Presentation of their outcomes of 5S activities Share of the process of policy making Observation tour of TQM activities in Japanese Companies Sharing prospects for next steps

1-3-3 Outline of "TQM for Better Hospital Services" Phase 2

After completing the Phase 1 of the Program, the participating countries have been expected to transfer KAIZEN activities aimed at process improvement. These participating countries have been supported continuously through phase 2 of the Program. Main activities for the KAIZEN Program are 1) presenting solutions for bottlenecks on 5S settlements, 2) gaining understanding of KAIZEN concepts, procedures and processes. Main components of the Program are 1) Region-Focused Training Program, 2) Supervisory Trips by Resources Persons, 3) General Support Budget. Thematic training sessions are held so that the participants can learn the concept of the KAIZEN methodology during the first year of the activities and then establish an action plan for deploying both the KAIZEN and 5S activities to a nation-wide level. Additional seminars and supervisory trips will be implemented during the entire 3-year duration of the activities.

Chapter 2 Preparatory Survey on the Program of Quality Improvement of Health Services

Chapter 2 Preparatory Survey on the Program of Quality Improvement of Health Services

2-1 Outline

JICA has been providing support by implementing the 5S-KAIZEN-TQM approaches mainly for "the Program of Quality Improvement of Health Services by 5S-KAIZEN-TQM", including AAKCP "TQM for Better Hospital Services" (Hereinafter called "the Program") described above. However, these programs and activities have been implemented in each individual country, and no systematic report has been made for the overall outcomes or the learning gained through them. Therefore the aims of this survey are to confirm the current statuses and progress statuses of the activities which have already been implemented, to confirm their outcomes, and then create a systematic report on them so that we will be able to utilize the outcomes and the learning in the activities implemented in other countries, and also utilize them for establishing new programs and projects.

Additionally, although some outcomes of the activities utilizing 5S-KAIZEN-TQM have been reported, there has not been any report where we can clearly confirm outcomes of the methodology based on its academic evidences. Therefore, in this survey we will identify matters that can be considered as academic grounds for the outcomes from 5S-KAIZEN-TQM, collect information regarding these indexes from among the activities made for each program, and provide the evidences for this methodology.

2-2 Purposes

Based on the results of the Indicators shown below, the survey team will explore a directionality of Japan's future assistance based on the 5S-KAIZEN-TQM concept and share the results with the counterparts of the participating countries in the Program.

1) Review the results from the cooperation projects conducted to date. (To review the Program, and extract successful examples, challenges, effectiveness and improvement of the Seminars implemented by the Program)
2) Systematize and provide information on the findings obtained through training sessions and the implementation of the Program by, for example, creating texts and setting up Websites; and examine and verify the possibility of mutual supplementation with other methods used to improve health service quality.
3) Provide assistance in planning a region-wide program, by compiling the directions and activities of the Program.
4) Provide assistance in efforts to implement the current projects and to formulate projects in all the participating countries.

At the same time, the preparatory survey aims to ensure that the significance of 5S-KAIZEN-TQM will be verified based on rationale collaborating with counterparts' collaboration.

2-3 Basic Policies concerning the contents of the survey

(1)Formulating strategies as a region-wide cooperation program for Africa

Improving health service quality and hospital management is a common issue shared by all African nations. The Program aims to evolve the effort to raise health service quality levels through the introduction of 5S-KAIZEN-TQM in the target area, incorporate and institutionalize the 5S-KAIZEN-TQM method in government policies concerning health service, and roll out the method to other parts of the continent.

The Program is based on an approach to enhance the effectiveness of assistance through supplementing each other with other schemes and programs. Therefore, the survey team will exchange opinions with international institutions with respect to the characteristics of the Program, in order to obtain their understanding and cooperation on the program as an effective initiative for improving health service quality. In this sense, when drafting a strategy to promote a region-wide program for Africa autonomously based on the results from the field surveys, the survey team will incorporate perspectives of a) inter-scheme collaboration with the GoJ's Grant Aid Assistance projects on facility maintenance and development and others or with volunteers assigned to health institutions and b) creating collaborative relationship with local resources, such as research institutes, health worker training institutions and universities.

(2) Verifying the efforts to train health workers

As in the case of Tanzania, the Program is not limited to training at the pilot hospital. The assistance has a potentiality to expand the training (to foster health workers) to other hospitals across the country. Thus, the sub-program forms a pillar of one of the commitments the GoJ has made in Yokohama Action Plan (TICAD IV), "Train 100,000 health workers."

In terms of following up on the TICAD IV, the survey team will count the actual number of trainees as part of monitoring pilot projects in the target countries.

(3) Systematizing knowledge

The preparatory survey includes the organization of information acquired in the course of implementing training sessions and pilot projects in the Program. Based on the compiled data, the survey team will review on the outcomes from the sub-program and support to create materials to be appended to the texts on the improvement of health service quality using 5S-KAIZEN-TQM. The texts (English, French and Japanese) are to be prepared by a technical support committee of the Program. The texts and the

findings on the outcomes from the sub-program in a review survey will be released with the counterparts via Websites and open seminar and international symposiums, in hope of providing the foundation for the knowledge system to be effectively utilized as a means to improve health service quality.

(4) Assisting in the formulation of projects

Based on the strategies drawn up in Step (1) and the knowledge systematization in Step (3) above, the best way for implementing cooperation projects suited to each country will be examined. In this effort, the survey team will promote the implementation of strategic plans and action plans prepared by each participating country on the occasions of the thematic training session "Improvement of health service quality through 5S-TQM" provided to Group 1 in September 2009, and the interim seminar of the " TQM for Better Hospital Services" initiative held in August 2009 targeting Group 2.

2-4 Contents of the Survey and Methods

2-4-1 Supervisory Trips (Including Preparatory Survey)

(1) Positioning of the Supervisory Trips and Review/Baseline Surveys within the Preparatory Survey

The field survey to be conducted from January to March 2010 under the preparatory survey (Hereinafter called “the Survey) encompasses (i) a “Supervisory Trip” centering on resource persons and (ii) a “Review/Baseline survey” by the consultants. The former is designed primarily to monitor the progress of pilot projects and offer technical assistance to the implementing bodies and provide feedback to and discuss with the MOH as necessary.

The latter specifically includes (1) a review on 5S activities and the outcomes of the Program, (2) a baseline survey for 5S activities targeting Group 2 countries and (3) information gathering on counterpart organizations. The survey team will visit the 15 states that take part in the AAKCP’s sub-program “TQM for Better Hospital Services” to confer with the personnel in charge of the initiative at the MOH and the pilot hospitals with respect to the current status of and challenges faced in their activities. Based on the results from the discussions, the survey team will support the Program to accelerate the progress. At the same time, the team discuss with the MOH about consistency of the Program with the National Policy and possibilities to adopt concepts of 5S-KAIZEN-TQM into policies of improving quality of health services. The team also ascertains how contents of the Seminars in the Program are effective for the participants and how participants put the learning through the Seminars to practical use for 5S activities in the Hospital, to improve qualities of future seminars. The team makes a review report, so that the findings in the Survey can be made use of in rolling out the Program further and forming and implementing relevant projects in the future.

Table 2-1 (1) Target Countries, Survey Periods and Persons in charge of the Field Survey (Group 1)

Group 1				
Country	Survey period		Supervisory trip	Baseline survey
Malawi	1st	Jan. 18 to 23 2010	Hisahiro Ishijima (Megumi Masui) (Tomomi Ito)	Hiromi Suwa
	2nd	Jan. 17 to 21 2011	Hisahiro Ishijima	Hiromi Suwa (Hirofumi Tsuruta)
Kenya	1st	Jan. 23 to Feb. 3 2010	Hisahiro Ishijima (Tomomi Ito)	Hiromi Suwa
	2nd	Jan. 11 to 15 2011	Hiromi Ando	Hiromi Suwa (Hirofumi Tsuruta)
Uganda	1st	Feb. 1 to10 2010	Hisahiro Ishijima	Akiko Niwa
	2nd	Jan. 3 to 7 2011	Hisahiro Ishijima	Shuichi Suzuki
Senegal	1st	Feb. 3 to 12 2010	Yujiro Handa	Hiromi Suwa
	2nd	Nov. 1 to 9 2010	Noriaki Ikeda	Kanako Tanigaki
Tanzania	1st	Feb. 21 to 27 2010	Hisahiro Ishijima Hiromi Ando (Tomomi Ito)	Shiho Sasada
	2nd	Jan. 10 to 14 2011	—	Shiho Sasada
Madagascar	1st	Feb. 28 to Mar. 5 2010	Toshihiko Hasegawa (Masanori Abe)	Shiho Sasada
	2nd	Nov. 11 to 19 2010	Noriaki Ikeda	Kanako Tanigaki
Eritrea	1st	Mar. 16 to 25 2010	Yujiro Handa Yoshihide Miura (Rie Hirai) (Taro Kikuchi)	Hiromi Suwa
	2nd	Jan. 25 to 28 2011	Yoshihide Miura	Kanako Tanigaki
Nigeria	1st	Apr. 11 to 19 2010	Shuichi Suzuki	
	2nd	Nov. 1 to 5 2010	Shuichi Suzuki	

Table 2-1 (2) Target Countries, Survey Periods and Persons in charge of the Field Survey(Group 2)

Country	Survey Period	Persons in Charge	
		Supervisory Tour	Baseline Survey
Niger[5]	Jan. 4 to 8 2010	Yujiro Handa	(Kanako Tanigaki)
Burundi	Feb. 1 to 5 2010	Noriaki Ikeda	Kanako Tanigaki
DRC	Feb. 8 to12 2010	Noriaki Ikeda	Kanako Tanigaki
Mali	Feb. 15 to 19 2010	Yujiro Handa	Kanako Tanigaki
Benin	Feb. 21 to 27 2010	Shuichi Suzuki (Yoshitaka Inagaki)	Shuichi Suzuki
Burkina	Feb. 28 to March 6 2010	Shuichi Suzuki	Shuichi Suzuki

[5] The team visited Niger in January 2010 for supervisory trip and was supposed to visit in March 2010 for baseline survey. However, due to the coup occurred in Feb. 2010, the baseline survey was canceled and data were gathered through JICA Niger Office.

Country	Survey Period	Persons in Charge	
		Supervisory Tour	Baseline Survey
Faso		(Yoshitaka Inagaki)	
Morocco	Mar. 8 to 12 2010	Toshihiko Hasegawa (Masanori Abe)	Kanako Tanigaki

(2) Survey Indicators and Methodologiesof the Supervisory Trips

The details of the survey indicators are as listed in Table 2-2. The specific survey methods for each item are listed in the next section.

Table 2-2 Contents, Subjects, and Methodologies of the Survey

Contents	Subjects	Methodologies
Confirmation of the implementation status of the Action Plans	Pilot Hospitals	Interview
Confirmation of the implementation status of the 5S activities	Pilot Hospitals	Conducting Supervisory tour based on the check sheet
Gathering information of the Questionnaire and conducting time study	Pilot Hospitals	Interviews, coordination, and gathering information from related parties based on the Questionnaire
Research on trends of the national policies to improve quality of health services	MOH, Administrative Agencies	Interview
Confirmation of effects of the Seminars conducted through the Program	Participants of the previous Seminars	Filling in the Questionnaire
Research on trends of the International Organizations and other assistance organization to improve quality of health services	Related Organizations	Interview

The implementation status of the activities' plan has been confirmed by making interviews mainly with the 5S committees (QIT) as for the progress statuses for the activities' plan established in the region focused training course held in Sep. 2009 and during Jun. – Jul. 2010 for the 8 countries in Group 1, and for the activities' plan established in intermediate seminar held in Aug. 2009 for the 7 countries in Group 2. As for Group 1, the implementation status for the proposals made during the 1st supervisory trip (which was held during Jan. – Apr. 2010) was confirmed during the 2nd supervisory trip (which was held during Nov. 2010 – Jan. 2011).

In the Survey, a monitoring check sheet (to be referred to as the check sheet hereafter). As for the contents, please refer to Attachment 2) was used for all the Survey target countries to assign scores for the achievement status of the 5S activities and to provide feedbacks to the MOH and the pilot hospitals. The check sheet was created by improving the one used for the hospital improvement activities implemented in

Sri Lanka, and the same one with what is currently used for monitoring 5S activities in Tanzania. By utilizing this check sheet, the Resource Persons, the related persons in the MOH, and the 5S committees made a tour in the pilot hospitals to confirm the progress status of the 5S activities. The Group 1 countries had opportunities for monitoring at the two supervisory trips conducted from January to April in 2010 and from November 2010 to January 2011. The monitoring check sheet can be founded in the Attachment 1.

Prior to the field survey, a set of survey documents including the questionnaire format and operational manual for the time study (please refer to Attachment 3) was prepared for confirming basic information of the hospitals and efficacies and outcomes of the 5S-KAIZEN-TQM activities and was distributed to the MOH and the pilot hospitals via the JICA office, to request them to provide necessary information in advance.

Among the set of survey documents, the questionnaire format is mainly targeted for collecting statistical information and the existing data related to the 5S activities. Additionally to this questionnaire format, a manual had been prepared which describes the specific methods for implementing the time study, and was distributed to the pilot hospitals prior to the field survey. During the field survey, the replies for the questionnaire format were collected wherever possible, and a time study was conducted together with the members of the 5S committee in the pilot hospital. These surveys were conducted not only for obtaining the index data which would enable us to confirm the outcomes for the 5S activities, but also for establishing a monitoring system for the 5S-KAIZEN-TQM activities within the pilot hospital through the implementation of the field survey so that the hospital staff members can have their awareness towards collecting such information on a continuous basis improved and be urged to maintain the system in an appropriate manner.

The evaluation indicators were selected based on the criteria of whether the resulting data would enable us to understand the operational status of the hospital and whether the subject matter was expected to be achieved through the implementation of this program. In an example in Sri Lanka where the 5S-KAIZEN-TQM activities had been successful, improvements in the work environment and business processes have been reported. The specific reports of the achievements were; “the space is now utilized in a more effective manner”, “the turnover rate of the employees has become lower”, “it is much more easier to take out the patient records”, “we have less nosocomial infection cases”, and so on. The evaluation indicators for this field survey have been determined based on these reports. The outline of the basic concept for selecting evaluation indicators and analyzing the results for them is as described in Table 2-3.

Table 2-3 Evaluation indicators of this survey and ideas to measure effects

Evaluation Indicators		Effects of 5S-KAIZEN-TQM
Indicators expected to improve for several years		
Financial Indicators	Income	Cost Effectiveness (Relationship between costs and quality of services)
	Expenditure	
Clinical Indicators	Major causes of death (Over 5 years old)	Quality of Health Services, Patients Satisfaction
	Major causes of death (Under 5 years old)	
	Number of General Out-patients	Quantity, Quality and Accessibility of health services
	Number of Inpatients	
	Average Lengths of stay	
	Bed Occupancy Rate	
	Maternity Record	
	Operations	
	Clinical Examination	
	X-ray	
	Referral from Lower Level Facility	Quantity, Quality and Accessibility of health services
	Referral to Upper Level Facility	
Hospital Administration	Number of Workers	Quantity, Quality and Accessibility of health services, Employee Satisfaction and Positive mindset
	Transition of number of workers	
	Average length of tenure	
	Number of days of pharmacy stockout	Quality and Quantity of Services, Stock Management
	Number of days of Laboratory stockout	
	Nosocominal Infection Mortality data Incidents/Accidents	Improvement of quality and safety of health services
Indicators expected to improve for short term		
Actual Measurement	Time study	Quantity of services, Efficiency of work, Employee Satisfaction

In this survey, some works were selected and measured actual operational time to confirm 5S-KAIZEN-TQM would be effective to shorten operational time. Table 2-4 shows evaluation indicators and effects expected through 5S-KAIZEN-TQM activities.

Table 2-4 Evaluation contents and expected effects by 5S-KAIZEN-TQM

		Evaluation Contents	Effects	Places to be improved
Waiting time for patients	1	From reception to consultation	・Review of the procedure flow ・Improvement of patients flow ・Sort of documents ・・Work simplification (Cutting waste)	Reception Reception of consultation
	2	From	Same as Time study 1	Reception

		Evaluation Contents	Effects	Places to be improved
		reception to obtaining laboratory results	・Improvement of the maintenance of Reagents and machines ・Systematization of work procedures	Laboratory Windows to return results to patients
	3	From reception to payment	Same as Time study 1	Reception Payment
Operating time	4	Duration to find patient record	Improvement of the storage of patients records ⇒ Classification of documents ⇒ Color cording	Storage of patient records
	5	Duration to prepare for appropriate drugs	・S1 and S2 of the drug storage ・arrangement considering work flow ・Strengthening inventory system and document control	Pharmacy Pharmacy Storage Inventory systems and orders
	6	Duration for sterilization and package of surgical instrument	・Review of work flow for sterilization ・Arrangement considering work flow ・Document Control ・Work simplification (Cutting waste)	Central Sterile Supply Department Surgical units

Prior to this survey, we have made a request to the persons responsible in JICA office to explain the purposes of this survey to related sections in the MOH and request for their cooperation. The Survey team visited the person responsible in the section related with health services in the MOH at the beginning of the field survey to describe the purposes and the methods of this survey, and then to have the Resource Persons to describe the concept of the 5S-KAIZEN-TQM methods so that the related persons within the MOH would gain sufficient understanding towards the survey.

A Set of 5 seminars for Group 1 and 2 seminars for Group 2 related to the "5S-KAIZEN-TQM" activities have been held via the Program. As part of this survey, we have provided a set of questionnaires to those who had participated in the seminars in order to verify the effect gained through these seminars. Some of the participants were no longer relevant with the program due to having resigned or having been relocated, and therefore there had been some cases where the questionnaire did not reach the target participants. Please note that since the field survey had completed in Malawi before the decision was made to implement this questionnaire, no questionnaire has been provided in the country.

At the beginning of the field survey, the team had interviews with persons responsible in the international organizations and other assistance organizations which are working on improving quality of health services provided in the country based on the information provided by the person responsible in the JICA office or in the MOH in the country.

2-4-2 Advertisement of the Approach

(1) Holding open seminars

For the purpose of sharing the achievements gained through making cooperation for improving the quality of the medical services by having implemented 5S-KAIZEN-TQM and therefore exchanging opinions with each other, JICA open seminar “Management too saves lives – Practice of 5S-KAIZEN-TQM approach in Africa” was held on Fri. Jun. 25, 2010 at the international conference hall in JICA Research Institute. Although the main target audience for the seminar had been Japanese people – those who were interested in JICA’s cooperation in medical matters, especially in the cooperation provided for improving the quality of medical services by implementing 5S-KAIZEN-TQM (consultants, members of the Japan Association for International Health, and former members of Japan Overseas Cooperation Volunteers), since the participants of the region focused training course in Group 1 had been participating in the seminar as presenters / guests, the seminar was made in English.

(2) Preparation of the technical documents related with 5S-KAIZEN-TQM (leaflets, textbooks, etc.)

Prior to the open seminar which was to be held in June 2010, a leaflet and a photo book were prepared (as a separate volume of the baseline survey report) and distributed at the open seminar to enable the seminar participants to visually understand the approach clearly, in addition to the field survey report documents (baseline survey report) and textbooks.

(3) Issuing newsletters

From July 2010, newsletters are being issued with their target readers set to those relevant with the Program once a month for the purpose of sharing information regarding the future activities. It had been determined to issue this newsletter since it was identified that an opportunity to share information not only among JICA HQ but also among the relevant persons in the Program participating countries is necessary.

(4) Holding a workshop at the GHWA Global Forum

1) Overview of GHWA and the Global Forum

World Health Organization (WHO) established Global Health Workforce Alliance (GHWA) in May 2006 for the purpose of nurturing or and improving the abilities of the medical related personnel in order to contribute for achieving the medical-related MDGs and for resolving the shortage in human resources for the medical area, which is an international problem as well.

As it is required to increase the amount of healthcare-related personnel and to improve the quality of such personnel at an international level as for the healthcare-related development aids, “the 1st Global Forum on Human Resources for Health” was held in Kampala, the capital city of Uganda in March 2008, and the “Kampala Declaration” and the “Agenda for Global Action” were adopted. The strategies for

the “Agenda for Global Action” are as listed below;

・ Nurturing of leadership at a domestic or global level in a consistent manner for the purpose of resolving the shortage in medical human resources
・ Enforcing of the policy implementation ability based on the information gained through evidences and joint learning
・ Expansion and improvement of education and trainings for health workers
・ Fair appointment of capable medical human resources which matches the needs and their firm settlement
・ Management of the impact implied from the pressure provided from the international medical human resources market and the relocation of the domestic medical human resources to overseas countries
・ Ensuring of additional and effective investment for developing medical human resources

The 2nd Global Forum on Human Resources for Health was jointly held by GHWA, WHO, and Prince Mahidol Award Conference in Thailand during Jan. 25 – 29, 2011 in Bangkok, Thailand.

The purpose of this forum was to confirm the progress status and achievements for the “Kampala Declaration” and the “Agenda for Global Action” by making assessments and reviews for them, and then to discuss the new challenges and commitments to be made regarding the medical human resources.

The forum was consisted of; the side session held on Jan. 25, site visit on Jan. 26, main conferences on Jan. 27 and 28 (plenary session and parallel session), and the wrap-up session, commendation ceremony, and closing session on Jan. 29. The side session is also referred to as the Skill Building Workshop (SBW), where applicants can hold workshops or seminars on the theme relevant with medical human resources.

JICA applied for SBW for this forum, and introduced this approach. The title of its SBW was as follows;

“**Management too saves lives through well-motivated human resource for health**

-Participatory Management Activities of 5S-KAIZEN-TQM for Promoting Mind-set Change and Leadership-“

2) The overview of the SBW

The SBW was held at Lotus Suite 3-4 located on the 22F of Centara World which was the venue for the Global Forum for 2 hours starting from 13:30 on Tue. Jan. 25, 2011.

The 2 hours were initially planned to be divided into 2 sections – the first 1 hour to be dedicated for a lecture-style session where the background, current status, and the good practices of the approach would be introduced, and the latter 1 hour dedicated for panel discussion and Q and A session; however, the panel discussion was not held after all due to the time restriction.

The participants of the workshop were 95 persons in total including 2 participants each from the 13

countries which are participating in this program (26 persons in total). More than 30 participants were related personnel for the program, guests invited by JICA who are not relevant with the Program, and general participants from Asian and African countries. Many of the participants belonged to MOH, other governmental agencies or university laboratories.

3) SBW's purposes and achievements

The SBW showed that the challenges regarding medical human resources are not only the shortage in the number of human resources, but also are the ensuring of the quality of the medical human resources, and therefore introduced this 5S-KAIZEN-TQM approach as an effective method for organizing the environment for enabling the medical human resources to provide high quality services. The specific purpose of the presentation was to enable the participants to understand that by utilizing the approach in a systematic manner, they would be able to improve the environment of the work site in the medical facility and medical services provided. By having introduced the approach in an international conference and therefore enabling the participants to understand its efficacy, it would be possible to have the idea that hospital management is especially important in the developing countries firmly widespread.

2-4-3 Coordination of the supporting structure

(1) Capacity building training (for nurturing experts)

Since AAKCP "TQM for Better Hospital Services" started for Group 2 from 2009, shortage in supporting resources for the program had often been discussed in the technical support committee, etc. In order address such situation, a capacity building training course "Enforcing the Health System by Implementing 5S-KAIZEN-TQM" was held during Aug. 16 – 20, 2010 for the purpose of nurturing human resources who will be able to implement the approach. (The first 2 days were jointly held together with the training course "Enforcing the Health System by Implementing the Preventions of HIV / AIDS")

The training course intended to train personnel to have immediately adaptable abilities for implementing the approach, and therefore was targeted for those personnel who are already thoroughly knowledgeable of the healthcare business area and the JICA businesses. Participants were 15 in total, where 5 among them were male, 2 among them had no experience in any business relevant with JICA, whereas most of the participants had some experience in participating in JICA-related business as experts or consultants, and even some of them had already been implementing 5S activities. The course contained lecture-style descriptions and exercise sessions using practical examples, where the focus was placed onto "enforcing the ability of sharing information as the catalyst" that would be required as an expert in the area, and therefore onto deepening the understanding for the approach and improving the information sharing ability of such knowledge.

The schedule for the training course was as listed in Table 2-5.

Table 2-5　Capacity Building Training for 5S-KAIZEN-TQM: Contents of Lecture and Lecturers

Date	Lecture Theme	Lecturer
8/16 (Mon)	Introduction to Health System/Capacity Development	Tomohiko Sugishita JICA Senior Advisor
	JICA 's Approach for Collaboration to Health	Kozo Watanabe Director Health Division 1, Health Group 1 Hunan Development Department, JICA
	Donor coordination in Health Sector	Motoko Seko Health Group 1 Hunan Development Department, JICA
	JICA Cooperation Scheme	Sonoko Takahashi Health Division 1, Health Group 1 Hunan Development Department, JICA
8/17 (Tue)	Situation of the JICA Cooperation for Health	Yojiro Ishii Senior Advisor, JICA (Course Adviser)
	Identification and Formulation of Heath Projects	Keiko Ozaki JICA Senior Advisor
	The latest trend of the International Health	Kenji Shibuya Professor, Department of Global Health Policy Graduate School of Medicine, Tokyo University
	Evidence for Health	Yusuke Kamiya Health Division 1, Health Group 1 Hunan Development Department, JICA
	Situation of acquiring human resources for JICA Health Projects	Sho Takano Division Human Resources for International Cooperation, Department of Human Resources for International Cooperation, JICA
8/18 (Wed)	Quality Improvement of Health Services by 5S-KAIZEN-TQM(Keynote Lecture)	Toshihioko Hasegawa Professor, Health System Management Department Nippon Medical School
	5S-KAIZEN Step and Methodology	Shuichi Suzuki Course Coordinator
	【TV Lecture】Success Cases in Sri Lanka	WIMAL KARANDAGODA Director of Lanka Hospital, Sri Lanka
	【TV Lecture】5S Method and Efforts to utilize this method in Africa	Hisahiro Ishijima JICA Expert, Tanzania Ministry of Health and Social Welfare
	Discussion for fostering Leadership for 5S-KIAZEN-TQM	Yujiro Handa JICA Senior Advisor (Visiting) Professor, School of Dentistry, Health Sciences University of Hokkaido
8/19 (Thu)	5S-KAIZEN-TQM and JICA Cooperation in Industry	Takafumi Ueda JICA Senior Advisor
	Implementation structure for 5S-KAIZEN-TQM	Shuichi Suzuki Course Coordinator
	TQM Activities in Iizuka Hospital	Hiromi Ando Vice-Director, Iizuka Hospital
	Practice 1：5S (Sort: S1, Set: S2, Shine: S3)	Shuichi Suzuki Course Coordinator
	Practice 2：5S (Standardize: S4 and Sustain: S5)	Shuichi Suzuki Course Coordinator
8/20 (Fri)	Practice2：5S (Standardize: S4 and Sustain: S5)Continued	Shuichi Suzuki Course Coordinator

Date	Lecture Theme	Lecturer
	Practice3：KAIZEN (Problem Analysis)	Shuichi Suzuki Course Coordinator
	Practice4：KAIZEN (Planning of Countermeasure)	Shuichi Suzuki Course Coordinator
	Presentation of the results Discussion: 5S-KAIZEN-TQM in JICA Cooperation	Yojiro Ishii Course Adviser Shuichi Suzuki Course Coordinator

The purposes and descriptions for the lectures made during the training course are as listed in Table 2-6.

Table 2-6 Purposes and description of the Lectures

Name of the Lecture and Lecturer	Purpose of the lecture	Lecture description
Quality Improvement of Health Services by 5S-KAIZEN-TQM(Keynote Lecture) Lecturer: Dr.Hasegawa	Understanding the overall image and the significance of the 5S-KAIZEN-TQM approach	The historical background, outline, and significance of the approach, and its relationship with the Japanese culture (tea ceremony, the mindset of hospitality)
5S-KAIZEN Step and Methodology Lecturer: Mr. Suzuki	Understanding the definition, process, and concept of 5S-KAIZEN	The definition of 5S and KAIZEN The difference between S3, S4, and S5 The two stages in KAIZEN The PDCA (Plan-Do-Check-Act) cycle and stories of KAIZEN
【TV Lecture】Success Cases in Sri Lanka Lecturer: KARANDAGODA	Understanding the current status for having implemented and deployed 5S in Sri Lanka	Comparison at Castle Street Hospital for Women between before implementing 5S and after having implemented 5S The efforts made for familiarizing the 5S activities in Sri Lanka Actual examples of KAIZEN activities implemented in Sri Lanka
【TV Lecture】5S Method and Efforts to utilize this method in Africa Lecturer: Hisahiro Ishijima	Understanding implementation of 5S in Africa	What is 5S? The efforts made in Tanzania (hospitals / MOH) Details of the supports to be provided as an expert
Discussion for fostering Leadership for 5S-KIAZEN-TQM Lecturer: Yujiro Handa	Knowing what messages are to be communicated by using what kind of materials in order to nurture leadership by gaining the understanding of the leaders at the policy level or at the hospital manager level for the approach	The lecturer would show the PowerPoint documents used at the sites in Africa to enable the course participants to see what kind of messages have been communicated with what kind of consideration to the government officers, hospital managers, and intermediate managers at the sites

Name of the Lecture and Lecturer	Purpose of the lecture	Lecture description
5S-KAIZEN-TQM and JICA Cooperation in Industry Lecturer: Takafumi Ueda	Knowing the original point of 5S-KAIZEN-TQM, and understanding in what way such original point had been taken into development aids	Actual examples of 5S-KAIZEN-TQM in manufacturers Actual examples of 5S-KAIZEN-TQM in development aids Points to note
Implementation structure for 5S-KAIZEN-TQM Lecturer: Shuichi Suzuki	Sharing of information regarding what would be possible in the future based on the experiences of the participants and what has been learned through the lectures up until this point	Example themes - Do you have any experience in having implemented 5S? - Your impression towards 5S-KAIZEN - Questions regarding the approach - What is the core aspect of this approach?
TQM Activities in Iizuka Hospital Lecturer: Hiromi Ando	Understanding the activity for establishing teams and the TQM activities based on the example at Iizuka Hospital	TQM activity in Iizuka Hospital Employees education for implementing TQM activity The procedure for establishing the TQM circles Providing support for the circles
Practice 1 ： 5S (Sort: S1, Set: S2, Shine: S3) Lecturer: Mr. Suzuki	Understanding the contents, procedures, and points to note for S1, S2, and S3	Based on actual cases (with pictures), provide a 3S implementation plan, and specific tools and methods for implementing S1, S2, and S3.
Practice 2 ： 5S (Standardize: S4 and Sustain: S5) Lecturer: Mr. Suzuki	Understanding the contents, procedures, and points to note for S4 and S5	Based on the case shown above, create a hospital internal supervisory trip plan (including the trip route, purposes, members, timing, and frequency) and a check list for the supervisory trip
Practice2 ： 5S (Standardize: S4 and Sustain: S5) Continued Lecturer: Mr. Suzuki	Understanding the contents, procedures, and points to note through working upon problem analysis exercises	Analyze the problems that exist among an example case for where the patients are forming a long queue in front of the operating room (problem tree chart or fishbone diagram)
Practice3 ： KAIZEN (Problem Analysis) Lecturer: Mr. Suzuki	Understanding the contents, procedures, and points to note through working upon the exercises of establishing countermeasures	Analyze and assess the case shown above using a system diagram.
Practice4 ： KAIZEN (Planning of Countermeasure) Lecturer: Mr. Suzuki	Understanding what kind of structure needs to be established in order to implement and provide guidance for 5S-KAIZEN	What is WIT? What are the roles expected for the leaders and the members? What is QIT? When proceeding from 5S onto KAIZEN, in what way are the team roles to be enforced? In what way is support to be provided for

Name of the Lecture and Lecturer	Purpose of the lecture	Lecture description
		establishing the structure?
Presentation of the results Lecturer: Mr. Suzuki	Making presentations for exercise 2	Group presentations to be made by assuming of making presentations at the sites
Discussion: 5S-KAIZEN-TQM in JICA Cooperation Lecturer: Mr. Ishii, Mr. Suzuki	Discuss in what way 5S-KAIZEN is to be implemented into JICA business once again to share information for the purpose of being able to utilize the approach in a more practical way	Example themes - What have you learned through this training course? What impressions have you gained? - The bottlenecks for JICA's cooperation - Method for implementing 5S into the existing schemes - Establishing a favorable relationship with the government of the target country

The purposes of the training course are as listed below;

- Learn the international, regional, and national trend in the overall health area and understand the current status of supports provided in the health sector in Japan to consider the future directions
- Nurture the experts for technical cooperation who aim for the improvement of healthcare management and services, and human resources who have the immediately adaptable abilities such as planners or researchers required for forming business cases by implementing 5S-KAIZEN-TQM
- Learn the practical methods for implementing 5S-KAIZEN-TQM in healthcare cooperation business

(2) Preparation of the textbooks

The approach has been proven to be effective at the last seminar for Group 1 in 2008, and it had been discussed that in order to make this approach familiar and widely known, it is necessary to prepare a standard textbook which describes the characteristics of the approach, definition of the terms, implementation processes, and examples of successful cases. Based on this discussion, the textbook editing committee was organized with the main members consisted of the resource persons, which started preparing the textbook from Feb. 2009. This cooperation preparatory survey has been providing support for proofreading, translating, printing, and distributing the textbook.

(3) Group 1 region focused training course

In 2010, the region focused training course for Group 1 "Quality Improvement of Health Services by

5S-KAIZEN-TQM" was held for the second time (to be held for 3 times in total, once a year). The course was held during Jun. 22 – 30 (10 days) in Japan, and then during Jul. 1 – 7 (7 days) in Sri Lanka, where 2 persons – the person responsible in the MOH or persons relevant with the pilot hospital – participated from each of the 8 countries in Group 1, totaling the participants to 16 persons. The local staff members of JICA Malawi participated as the observers, too.

(4) Group 2 Wrap-up Seminar

AAKCP "TQM for Better Hospital Services" is a program which holds 3 seminars and which implements the pilot business utilizing the 5S-KAIZEN-TQM method for the period of approx. one and a half year. The implementation seminar for the 7 Francophone African countries was held in March 2009, and a field workshop was held in Sri Lanka in August of the same year as an intermediate seminar. After that, each country started its own pilot activity for 5S-KAIZEN-TQM, and the technical support committee implemented supervisory trip during Jan. – Mar. 2010. The wrap-up seminar, which is in the last stage of the program, was held at Institut National d'Administration Sanitaire in Rabat, the capital city of Morocco for 5 days during Oct. 25 – 29, 2010. The purpose of the seminar was to share the achievements gained through the activities implemented in the pilot hospitals, and to provide an opportunity for holding a discussion for proceeding onto KAIZEN and for deploying the 5S activities to a nation-wide level. The participants were; 2 persons from each of the 7 countries in Group 2 (3 persons from Morocco), 4 Japanese resource persons, and 1 person from Madagascar. The purpose of this seminar was to confirm the following matters as a wrap-up of the program.

- Confirm up to what level 5S is implemented in the pilot hospitals in each country through the project.
- Acknowledge the current status of the activities implemented by the MOH in each country for making 5S familiar.
- Clearly identify the challenges for realizing Standardize (S4) and Sustain (S5) in each country while also eyeing the plan for implementing KAIZEN in the following year, and reconfirm the correct understanding towards black belt 5S (Super 5S).

In order to achieve the purposes listed above, the seminar was held in the following structure;

Preliminary activity: Implement a self-assessment using the check sheet, confirm the progress status of the activities, and the implementation status for the proposals made during the supervisory trip

During seminar;

1) Review the purposes and overview of AAKCP "TQM for Better Hospital Services": lecture
2) Presentations of the achievements in each country: presentation to be made for the matters described during the preliminary activity
3) Considerations to be made when proceeding from 5S onto KAIZEN: lecture and discussion

4) Sharing quality improvement programs implemented in each country (open seminar)

5) Sharing the future prospects: discussion

(5) Holding a Joint Workshop

JICA participated in the 2nd Global Forum on Human Resources for Health held during Jan. 25 – 29, 2011 in Bangkok, Thailand as one of the host organizations. JICA also invited the relevant persons at the chief level in the MOH and the managers of the national or state hospitals from the 13 countries out of 15 African countries which are implementing the 5S-KAIZEN-TQM approach under the framework of the Program – Kenya and Eritrea were not able to participate due to some reason within their MOH. This was the first time where the 5 English speaking countries and the 9 French speaking countries that are subject for the approach would all gather since the cooperation project started in 2007, and therefore JICA seized this opportunity for having participated in GHWA to hold this workshop on Jan. 26, 2011 in order to help information sharing and the establishment of the human network.

2-4-4 Support for establishing Region-wide Programs

The survey results are compiled on the Final Report of the Survey and presented future directions for the Program.

Chapter 3　Result of the Survey

Chapter 3 Survey Results

3-1 Outline of the Survey Results for Each Country

3-1-1 Group1

(1) Eritrea

1) Orotta Hospital

a. Current status in the pilot hospital

Orotta Hospital is located in Asmara, the capital city of Eritrea, and is a tertiary hospital with 189 beds, but it does not have obstetrics, gynecology and pediatrics. The annual number of outpatients is approximately 34,000, the number of emergency patients is 12,000, the number of hospitalized patients is approx. 3,000, and the more than 570 patients are visiting the hospital as referrals. The average length of hospital stay is 12.3 days for internal medicine, and 12.5 days for surgery, and these numbers are decreasing year by year. Bed occupancy rate is 80.2% for internal medicine, and 73.8% for surgery, and these percentages are also declining. (Data as of 2009)

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-1 Results of the Time Study for Waiting Time (Orotta Hospital)

Executing Time	March, 2010		January, 2011	
Measurement Indicators	Average Waiting Time	Sample Number	Average Waiting Time	Sample Number
Waiting time from the reception to consultation	2hr 30min	28	2hr 31min	28
Waiting time for payment	—	—	2min 38 sec	30
The time required for picking up a patient's record	6min	28	1min 50 sec	28
The time required from when an test is requested until the test result is obtained	1hr 9min	28	3hr 54min	30
The time required from the reception at the pharmacy to receiving drugs.	—	—	1min 34 sec	27
The time required for sterilization of the surgery equipment.	—	—	9min 51 sec	20

- The transition of the number of staff members in the hospital: No change between year 2006 and 2007
- Death cases in the hospital: 482 cases (2009), which tends to increase.
- Incident cases in the hospital: 5 cases (2009)

b. Progress status of the 5S-KAIZEN activities

QIT was organized with 10 members in 2007, and has been expanded to a team with 19 members in 2008. The team is implementing monthly monitoring activities and has held more than 10 seminars for

the hospital staff members. WITs are established in all 12 units where daily meetings are held in each unit and monthly general meetings are being held for all of the members.

c. Monitoring Results of the check sheet

The evaluation results for the 5S activities and leadership using the check sheet are as listed in Table 3-1-2.

Table 3-1-2 Monitoring results of the check sheet (Achievement Rate %, Orotta Hospital)

	Leadership	Sort	Set	Shine	Standardize	Sustain
March, 2010	70	80	80	50	60	80
January, 2011	18	28	44	20	27	28

Sources: Monitoring results

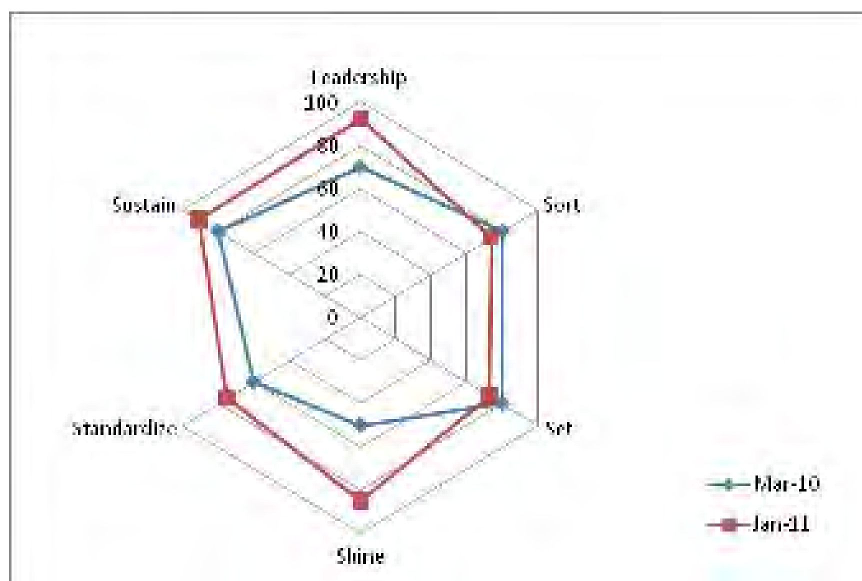

Figure 3-1-1 Monitoring Result by checksheet (Orotta, Eritrea)

Table 3-1-3 Key Points for Evaluation Indicators (Orotta Hospital, Eritrea)

	1st Survey (March, 2010)	2nd Survey (January, 2011)
Leadership	The secretariat is continuously taking the leadership	As the case is in the previous survey, the secretarial is continuously taking the leadership
Sort (S1)	Although warehouses for unwanted items are being installed and it has been recommended to use them, the existence of the warehouses or the idea of using them are not fully familiarized within the	The unnecessary items management system is not functioning well, and there are some cases where unnecessary goods are left in the work place or in the corridor

	1st Survey (March, 2010)	2nd Survey (January, 2011)
	hospital	
Set (S2)	Surgical instruments and consumable supplies are being sorted in an appropriate manner	All the medicines and the shelves in the entire hospital are being labeled. There were some cases where the label name and the contents were not matching with each other
Shine (S3)	Although the hospital is sufficiently cleaned, those shadowy places are not clean enough	The hospital is kept clean. Some creative method is required for managing the cleaning tools.
Standardize (S4)	Although the hospital has started utilizing the color coding method, the method is not standardized across the hospital yet	Although the activities such as labeling, etc. are implemented throughout the hospital, the methods are not being standardized. Methods such as color coding, etc. are not being implemented well.
Sustain (S5)	Although an implementation seminar had been held for the employees, regular follow-up seminars have not been held yet	Only On the Job Training (OJT) has been implemented since the last seminar, and no additional seminar has been held.

d. Challenges for 5S-KAIZEN activities

These are the challenges pointed out by the supervisory team at the Supervisory Trip in March 2010.

- Although WITs are established in 12 units within the hospital, the WIT activities are implemented only by some of the members
- Although the secretariat is highly motivated, that has not led to motivating the other employees in the hospital, and only some of the WITs and leaders are actively promoting the activities
- Although the 5S activities have been implemented at a hospital-wide level, they are not fully established as constant activities, which can be observed from the fact that unwanted items are not collected on a constant basis, and that the posters for the 5S activities have not been updated, etc.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-4 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Jan. 2011.

Table 3-1-4 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Timing of Implementation	Responses
1	Although setting is implemented by following the rules, it is done merely	September, 2010	− All departments are holding regular meetings regarding the 5S activities for 5 minutes

	Recommendations	Timing of Implementation	Responses
	in a formal manner; since the original purpose of setting is to improve work environment and to streamline business operations, it is necessary to shift the setting to be functional where the effect from that setting activities can be confirmed and fully familiarized such method across the hospital		every day. − WIT is making regular follow-ups for the 5S activities.
2	Although the entire hospital is being sufficiently cleaned, the hospital staff members will need to make an even greater effort to clean the non-medical areas such as the rest rooms.	October 14th and 15th in 2010	Health campaign was held where all staff members participated in.
3	Drug control methods are varying depending on the departments; they need to be consolidated and standardized	Continuously implementing	Based on the policy of the MOH, a satellite pharmacy and a collective management system for not only the medicines within the Orotta Medical and Surgical Hospital but also those in the Orotta Pediatric Hospital and Orotta Maternal and Child Hospital are currently under way of being implemented.

The following recommendations have been offered in order to aim for further promotion of the activities;

- Review current 5S activities to sophisticated stage, since Sort (S1) to Shine (S3) have already been settled in the hospital
- Discuss about and establish concrete waste management system with relevant actors
- Strengthen supports for the departments less implemented 5S
- Review management of the unwanted items (Equipment, furniture and others)
- Initiate KAIZEN activities
- Continuously supervise KAIZEN activities in WIT
- Share good practices periodically, apply better practice and standardize to other departments
- Need positive support from the MOH for renovation and enhancement of the infrastructure of pilot hospitals

2) Halibet Hospital

a. Current Status of the Pilot Hospital

Halibet Hospital is a secondary hospital located in the capital city Asmara with 250 beds, and its major diagnosis and treatment departments are; internal medicine, surgery, dentistry, dermatology, and otorhinolaryngology, etc. The annual number of outpatients is approx. 76,000, the number of emergency patients is 12,000, and the number of inpatients is approx. 5,000, and as an overall trend, the number of patients is gradually decreasing when compared with the data for 2007 and 2008. The average number of hospital days is 17 days for internal medicine where the number of days seems to be increasing, whereas the number for surgery is 9 days, which is relatively shorter when compared with internal medicine. The bed occupancy ratio is 75.5% for internal medicine and 77.4% for surgery, where both ratio values are reduced when compared with those for 2008. (Data for 2009)

The information gathered as the baseline for the 5S-KAIZEN activities during this survey is as described in Table 3-1-5.

Table 3-1-5 Results of the Time Study: Waiting Time (Halibet Hospital)

Timing of the Time Study	Mar. 2010		Feb. 2011	
Indicators	Average	Sample size	Average	Sample size
From reception to consultation	1 hr 21 min	90	1 hr 58 min	62
From payment reception to payment	14 min	80	16 min	28
Time to obtain a patient record	1 hr 6 min	26	8 min	24
Time required from request to obtaining results of lab exam	1 hr 21min	10	43 min	14
Time required to receive drugs at the pharmacy	2 min	90	1 min	52
Time for sterilizing operational tools	23 min	7	1 hr 30min	4

- Change in the number of hospital staff members: The number of staff members has increased from 480 persons in 2006 to 543 persons in 2009. Among the increased staff members, the additional medical staff members are 3 doctors and 3 nurses, and the rest are clerical staff members.
- In-hospital death cases: 113 cases (for 2009), and the number has decreased when compared with the numbers for the past years. The number of death cases due to HIV/AIDS has decreased significantly in particular.

b. Progresses of 5S-KAIZEN Activities

QIT was organized with 20 members in October 2009, and is holding monthly meetings. It has held 4 seminars for the hospital staff members where approx. 300 members have participated in total. WITs were

established in 2 units at the point of activity launch, and are established in 7 units as of Jan. 2011, where they are holding meetings on an irregular basis.

c. Monitoring Results by the Check sheet

The evaluation results for 5S and leadership using the check sheet implemented in Jan. 2011 are as described in Table 3-1-6. Although no evaluation was made using the check sheet during the 1st supervisory trip implemented in March 2010, the implementation statuses for the 5S activities were confirmed; the results gained during both surveys are as shown in Table 3-1-7.

Table 3-1-6 Monitoring results of the check sheet (Achievement Rate %, Halibet Hospital)

	Total	Leadership	Sort	Set	Shine	Standardize	Sustain
Jan. 2011	80	96	89	76	88	78	91

Sources: Monitoring results

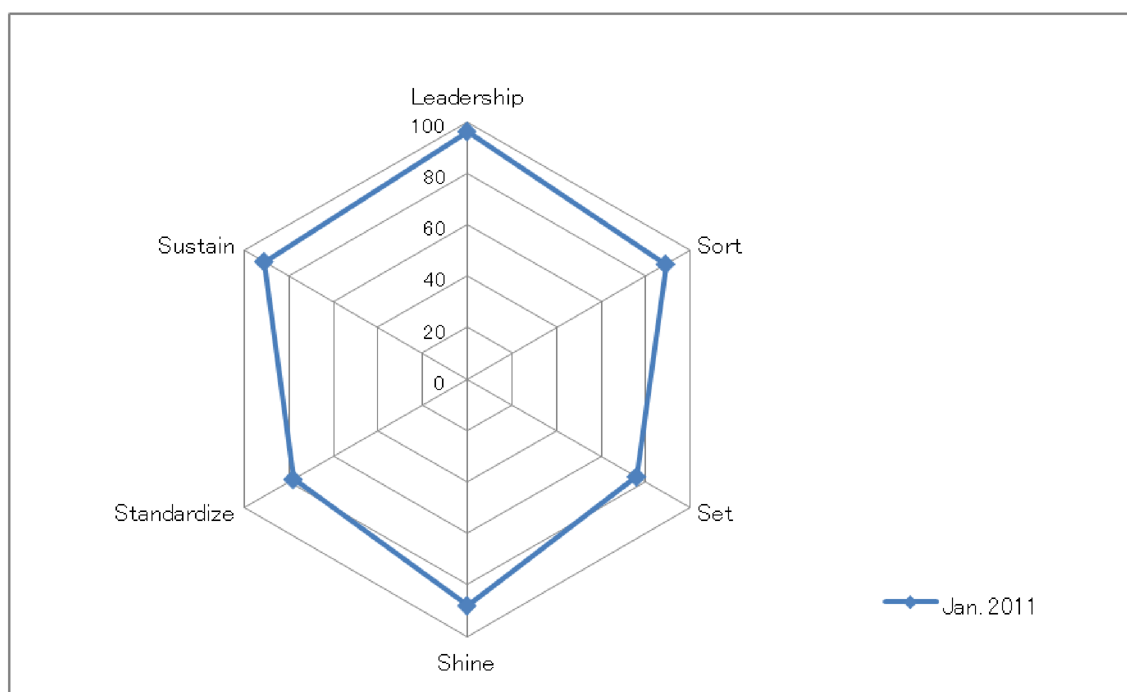

Figure 3-1-2 Monitoring Result by check sheet (Halibet, Eritrea)

Table 3-1-7 Key Points for Evaluation Indicators (Halibet Hospital, Eritrea)

	1st Survey (March, 2010)	2nd Survey (January, 2011)
Leadership	Leadership is exercised effectively where orders made by the top level are accurately implemented by the general workers.	Monthly meetings are held where records are made for these meetings and submitted to the hospital director.

	1st Survey (March, 2010)	2nd Survey (January, 2011)
	KAIZEN is also included among the incomplete 5S processes.	
Sort (S1)	An existing warehouse was utilized as a warehouse for unnecessary items, but the content was not sufficiently sorted out. However, not the entire flow line was occupied with unnecessary items.	Although inside the hospital is neat and clean, trashes were observed out of the hospital. Although there is still some room for improvement for patient records, the management status for these patient records has improved dramatically. After holding negotiations with the MOH, it has been determined to remove the unnecessary medical equipment in the near future.
Set (S2)	Patient IDs are incorporated to sort the patient records, and efforts are being made sequentially in each department to abolish the departmental record numbering system.	The labeling system and inventory system were already implemented. Implementation of the color coding system will be considered in the near future.
Shine (S3)	The waste collection point which used to be unclean and scattered with various different wastes has had its state improved dramatically.	All members are working upon self cleaning activities, and a cleaning map has been prepared, but some tables and desks were still not sufficiently cleaned up.
Standardize (S4)	The operating rooms had their medicines and equipment adequately managed which proved that standardization would directly lead to safety. However, color coding was not sufficiently ensured.	Labeling is standardized throughout the hospital. Attaching labels and visualizing guidance displays in order to control the safety were not being promoted yet.
Sustain (S5)	Some staff members had given up making improvements due to being highly inconvenient.	Training seminars were held for all staff members and records have been kept for those seminars. The challenge for the hospital would be to make the efforts for asking the visitors to understand the concept of and the activities made for 5S-KAIZEN.

d. Challenges for 5S-KAIZEN activities

As for the challenges identified during the first supervisory trip in March 2010, the survey team provided recommendations for further improvement. The Recommendations are listed in Table 3-1-8.

Table 3-1-8 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Responses
1	Though most patients were waiting outsides, a construction plan to establish patient waiting rooms, which the director explained, should be urgently realized.	Patients' waiting room was created inside the hospital, and chairs were placed within the waiting room by utilizing the JICA aid money.
2	The disposal management system should be established to accelerate disposal processes although the hospital cannot make any decision to dispose all medical equipment and devices, which belong to the Ministry of Health.	Negotiation had been made with the MOH for having a warehouse for the unnecessary items and for disposing those to be removed, which enabled the hospital to get rid of various types of unnecessary medical equipment.
3	Based on the safety reasons and prevention of infectious diseases, sagging parts on the floor in the surgery department should be repaired as soon as possible.	Although correspondence is being considered, the essential issue lies within the basic structure of the hospital which requires repairing.
4	*The hand-wash station for operational staff should not be utilized for washing instruments and other items. *The hand-wash station for operational staff should be established separately	A hand washing space dedicated for the surgeons was established independently from places for other purposes.
5	The hospital did not apply international color code for oxygen and nitrous oxide gas on the anesthetic machines. It should be introduced the international standard if possible.	Currently under consideration together with the manufacturer, and will be changed in 2011.

The following recommendations have been offered in order to aim for further promotion of the activities;

- Share good practices periodically, apply better practices and standardize them in the entire hospital
- Adjust Standardize (S4) and Sustain (S5) activities with condition of the hospital and activate their efforts
- Work more for cleaning backyard such as toilet for patients
- Educate patients and their families how to stay at the hospital since there are many visitors staying

(2) Kenya

Although Mazali Hospital was originally selected as the pilot hospital, it had been offered that they

would like to change the pilot hospital to Coast Province General Hospital in 2009 and 5S 5S activities have been implemented in both hospitals. Therefore, the Team made surveys for both hospitals.

1)Mazali National Hospital

a. Current status in the pilot hospital

Mazali Hospital is located in Nairobi, the capital of Kenya, and is a Level 6[6] psychopathic hospital which also acts as an educational hospital, and has 750 beds, where 200 beds among them are allocated for the institutionalizing the patients in the Maximum Security Unit[7]. The hospital has psychopathic and the general outpatient section. The annual number of outpatients is approx. 25,000, the number of hospitalized patients is approx. 4,000, the average length of stay is 49 days, and the bed occupancy rate is 68%. (All data as of 2009)

The information collected as the baseline for the 5S-KAIZEN activities at the supervisory trips in January 2010 and January 2011 is as listed below.

Table 3-1-9 Time Study Results (Mazali Hospital)

Service Units	1st Supervisory Trip January, 2010	2nd Supervisory Trip January, 2011
The time required from being accepted at the reception until the consultation (Outpatients)	1hr 51 min (n=28)	2.2 hr (n=21)
The time required from being accepted at the reception until the consultation (Dentistry)	-	11.3 min (n=41)
The time required from the reception at laboratory to receiving results	47 min (n=6)	-
The waiting time for payment	13.5 min (n=25)	5.5 min (n=25)
The time required for picking up a patient's record	5.1 min (n=19)	32 sec (n=22)
The time required for providing medicines to patients at the pharmacy	1.4 min (n=20)	-

Source: Measurement results at the supervisory trips

Other baseline information (2010)

- The transition of the number of staff members in the hospital: 9 staff members increased from 427 staff members in 2006 to 436 staff members in 2009, and doctors have increased and nurses have decreased.

6 In Kenya, healthcare facilities are categorized into levels 1-6, starting from the lowest community level, and hospitals providing comprehensive treatments will be categorized into level 4 or into the higher categories. Level 4 is assigned to district hospitals, level 5 is assigned to provisional hospitals, and level 6 is assigned to top referral hospitals.

7 A hospital ward where patients who have committed serious crimes and have been diagnosed as being mentally disordered are institutionalized.

b. Progress status of the 5S-KAIZEN activities

QIT was organized with 8 members in 2007, and is currently undergoing the approval process (as of 2010). It holds monthly meetings, and implements monitoring activities and seminars as necessary. WITs are established in the pilot departments (Male Ward 8 (W8), Medical Recording Office, and Pharmacy), and monthly meetings are being held.

At the point of the supervisory trip in Jan. 2011, QIT was approved by the hospital, and was implementing the activities with 9 members – 1 member added – in total. Additionally to the 3 departments described above, the dentistry department, the public health office, and other departments have started to implement the activities.

According to the interview results, the monthly meeting is held for confirming issues and for discussing their countermeasures, etc. It seems that in some cases, it is possible to identify issues by making a differential analysis between the service charter specified by the Ministry of Medical Services and the current status within the hospital. The hospital has been implementing monitoring / assessment activities once in a quarter, and has installed a proposal box for the purpose of gathering information that would be helpful when holding discussions and making considerations.

Mazali Hospital has been encouraging the staff members to gain knowledge about 5S-KAIZEN and has been promoting the 5S-KAIZEN activities by actively providing opportunities for participating in seminars. KAIZEN Office has been established which has promoted the organization and systematization of the activities. They say that as a result, the implementation status for the 5S activities including Standardize (S4) and Sustain (S5) has been improved.

c. Monitoring Results of the Check Sheet

The assessment results regarding 5S and leadership are as listed in Table 3-1-10.

The assessment results gained by using the checklist shows that the 5S statuses have improved in general. It has been identified through interviews made with the QIT members and through the supervisory trip that such improvement has presumably been realized by having the activities promoted mainly by the power of teamwork in QIT. However, as shown in the key points for each assessment item listed in Table 3-1-11, the gap widening between departments is a matter of concern.

Table 3-1-10 Monitoring results of the check sheet (Kenya Mazali Hospital)

		Leadership	Sort	Set	Shine	Standardize	Sustain
January, 2010	Achievement Rate	56	53	49	61	31	31
	Acquired Points	14	19	27	24	14	11
January, 2011	Achievement Rate	72	66	62	75	63	74
	Acquired Points	18	23	34	30	25	26

Sources: Monitoring Results

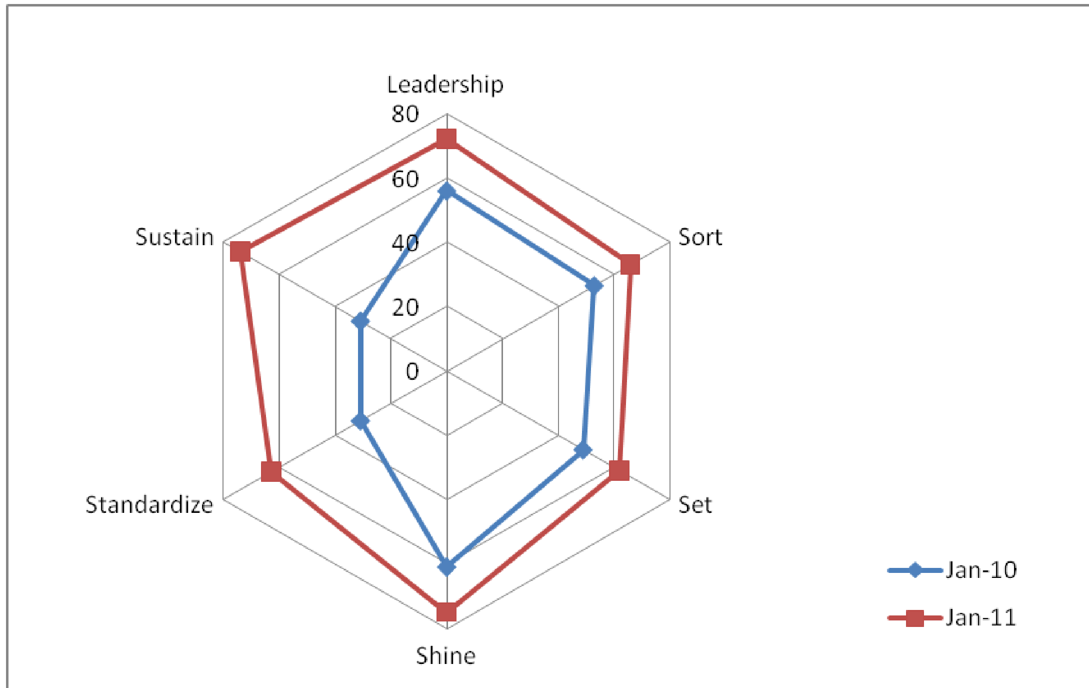

Figure 3-1-3 Evaluation Results by Monitoring Checksheet (Kenya: Mazali Hospital)

Table 3-1-11 Key Points for Evaluation Indicators

	Evaluation Indicators	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
1	Leadership	QIT and WITs within the pilot areas are active to implement 5S under strong commitment of the leaders.	Although the top managements of the hospital were not necessarily highly committed, QIT exercised superior leadership, and the top managements have improved their acknowledgement through the extensive activities within the hospital mainly implemented by QIT.
2	Sort (S1)	There is much room for improvement such as tiling the wasted spaces within the storage shelves in a much more effective manner and sorting the unnecessary items stored in the top shelf, etc.	Significant gaps have been confirmed between departments regarding the Sorting of the unnecessary items and displays from the work sites, offices, shelves, desks, and walls.
3	Set (S2)	Although labels and tags are being implemented, they can be used in a much more effective manner such as attaching the shelf number labels onto the storage in the direction where they can be easily seen from the entrance, etc.	Visual control, clearly displaying guidance for the hospital facility, and sorting the displays were not ensured or implemented appropriately in most part.

	Evaluation Indicators	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
4	Shine (S3)	The departments are thoroughly cleaned up, and the department members are working on the cleaning task in an effective manner.	Although the cleaning activities have been extensively implemented, posting of cleaning maps or cleaning schedules had not been ensured yet.
5	Standardize (4)	The 3 steps of S1, S2, and S3 are firmly set as a part of the daily works within the pilot area – especially within W8.	Although it had been confirmed that tools for the 5S activities such as checklists or labels had been confirmed, standardization of the management method for documents, furniture, or equipment, etc. had not been ensured yet.
6	Sustain (S5)	Although seminars are being continuously held for the purpose of raising awareness of the hospital staff members, some are still showing reluctance or are having wrong ideas against the 5S activities.	It was confirmed that seminars are being held for many staff members, and that relevant activities are being implemented. On the other hand, there were some who say that there had been some impact from the renewal of the HR management within the ministry implemented in Nov. 2010, or those who complained how difficult it is to convince those who are reluctant in implementing 5S activities.

Source: Monitoring results at the Supervisory trips in January 2010 and 2011.

d. Challenges for the 5S-KAIZEN activities

These are the challenges found at the supervisory trip in March 2010.

- Expanding the 5S target departments and how to promote the activities for Standardize (S4) and Sustain (S5).
- Guidance required for WITs regarding how to implement and familiarize the ideas for Standardize (S4) and Sustain (S5).
- Necessary to improve the sense of ownership for the WITs by enabling continuous and systematic learning and by exchanging information.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-12 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Jan. 2011.

Table 3-1-12 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendation	Implementation Timing	Responses
1	Improve the 5S-KAIZEN-TQM seminar structure within the	March, May, September, and so on in 2010	Extensive seminars have been held by effectively utilizing the materials used in other domestic / international seminars. This has led to enable more

	Recommendation	Implementation Timing	Responses
	hospital in order to continuously hold seminars within the units where 5S is being implemented.		than 90% of the staff members to participate in the implementation seminar; however, approx. half of them have been transferred due to the renewal of the HR management method within the minister implemented in Oct. 2010.
2	Improve the sense of ownership by implementing self assessments for the WITs.	October, 2010	Implemented in some of the departments such as Record Department, etc. This has led to the improvement of the service quality, identification of the weak points, and discovery of the points in need to hold further seminars.
3	Reinforce the reporting system to the Ministry of Medical Services.	Not yet practiced	Neither the hospital nor the Ministry of Medical Services had acknowledged that there is a significant problem in the reporting system between them, and therefore no specific effort was being made. Monthly report are submitted to the person responsible for the 5S activities in the hospital, and quarterly reports / progress status reports are submitted to the Ministry of Medical Services on a regular basis, and no significant change has been made for the reporting system.

Source: Monitoring results at the supervisory trip in March 2010 and January 2011.

QIT members have recognized some challenges such as large-scale personnel transfers, dilapidated buildings, complicated procurement procedures and resistance against 5S-KAIZEN activities among part of hospital staff members. Also, it was founded that gaps of activities and improvement of the conditions have been widened among the units.

Based on the results of the supervisory trip, the team made three recommendations to expect the hospital to disseminate and enhance 5S activities in the hospital.

- Mazari hospital should visualize and share more of their best practices and lessons learned in order to promote 5S/KAIZEN activities.
- The hospital should standardize the practice of treatment and care for patients in order to provide the services equally and to reduce the gap of quality of services among different departments.
- Hospital should reduce the gap of 5S activities among departments because it also can deteriorate of equality of the treatment and care.

2) Coast Province General Hospital(CPGH)

a. Current status in the pilot hospital

Coast Province General Hospital is a general hospital which functions as an educational hospital and as a referral hospital with 700 beds, more than 30 diagnosis and treatment departments, and 800 staff members. The annual number of outpatients is approx. 140,000 (2008), the number of emergency patients is 62,000 (2008), the number of hospitalized patients is approx. 37,000 (2008), the number of normal deliveries is approx. 6,000 cases (2009), and the number of Caesarean sections is approx. 2,000 cases (2009). The average hospital days is 6.0 days (2009), and the bed occupancy rate is 69.4% (2009).

The hospital has been ranked as rank 1 for 2 consecutive years of FY2008/09 and FY2009/10 among the hospitals of level 5 for the hospital reformation assessment monitoring survey implemented every year by the Ministry of Medical Services.

The service provisioning times at Coast Province General Hospital are as listed in Table 3-1-13. The figures have been measured during the supervisory monitoring which was held for the purpose of hospital reformation in Kenya.

Table 3-1-13 Time Study Results: Waiting time for patients (CPGH)

Service Unit (Target)	2008/09	2009/10
Reception (Within 5 min)	Within 5 min	Within 5 min-
Clinical Examination (within 30min-)	Within 30 min	Within 30 min
Preparation for drug prescriptions (20 min)	Within 20 min	Within 20 min
Maternity (within 15 min)	Within 15 min	Within 15 min
X-Ray (within 20 min)	Within 20 min	Within 20 min
Guidance for patients (within 5 min)	Within 5 min	Within 5 min
Emergency reception (within 10 min)	Within 10 min	Within 10 min
General reception (within 60 min)	Within 60 min	Within 60 min
Payment (within 30 min)	Within 30 min	Within 30 min

Source: Internal documents CPGH

b. Progress status of the 5S-KAIZEN activities

The hospital had participated in the Program starting from the thematic training seminar held in Sep. 2009 (domestic seminar); however, the staff members had an opportunity to participate in a seminar regarding 5S-KAIZEN which had been held by GTZ before that, which had enabled the hospital to actively promote the 5S activities on its own by following the firmly committed hospital managers. 5S has been implemented into the hospital from 2005 after being approved by the hospital managers'

conference. KAIZEN team is established within the hospital's Quality Assurance Steering Committee, which acts at the same level with QIT. WITs were scheduled to be established by Mar. 2010. Now, there are 10 WITs already established at 10 units and total 120 members in January 2011.

Coast Province General Hospital had been promoting the implementation of ISO9001 from before, and also has been actively deploying monitoring activities due to being necessary of implementing quality control for conforming to the hospital approval system specified by National Hospital Insurance Fund. For example, it has been implementing patients satisfaction survey (every half year), waiting time survey (every half year), in-hospital patients exit poll (every month), information collection by utilizing proposal box, etc., and analysis of customers acknowledgement, etc. The information gathered through these surveys, etc. is assembled into a report documents, and has been used mainly by QIT for identifying and analyzing the issues and causes, for providing feedback to the responsible departments, and for promoting implementation of the efforts to be made for realizing improvements.

Based on such experience, Coast Province General Hospital has taken on the role of enabling other hospitals to gain the knowledge and experience for the 5S-KAIZEN activities as of January 2011. It is cooperating in the 5S-KAIZEN activities implemented in the 3 hospitals in Coast Province, and 2 other hospitals are planned to be added to these hospitals in July 2011. The QIT leader was acknowledging this 5S-KAIZEN deployment activity as a solution for spreading the patients that have concentrated to Coast Province General Hospital due to the improvement of the quality of the service provided to other regional hospitals.

c. Monitoring Results of the Check Sheet

The evaluation results for the 5S activities and leadership using the check sheet are as listed in Table 3-1-14.

All evaluation indicators are showing improvement, where it was identified through the interviews and observations that the activities had been promoted with the driving force of strong leadership. However, as shown in the key points for each evaluation indicator shown in Table 3-1-15, it is considered that there are various other points that can still be improved by ensuring the activities to a higher level.

Table3-1-14 Monitoring results of the check sheet (Kenya: CPGH)

		Leadership	Sort	Set	Shine	Standardize	Sustain
January 2010	Achievement Rate	60	59	55	58	46	37
	Acquired points	15	21	30	23	21	13
January 2011	Achievement Rate	84	69	62	75	55	63
	Acquired points	21	24	34	30	22	22

Source: Monitoring results at the Supervisory Trips

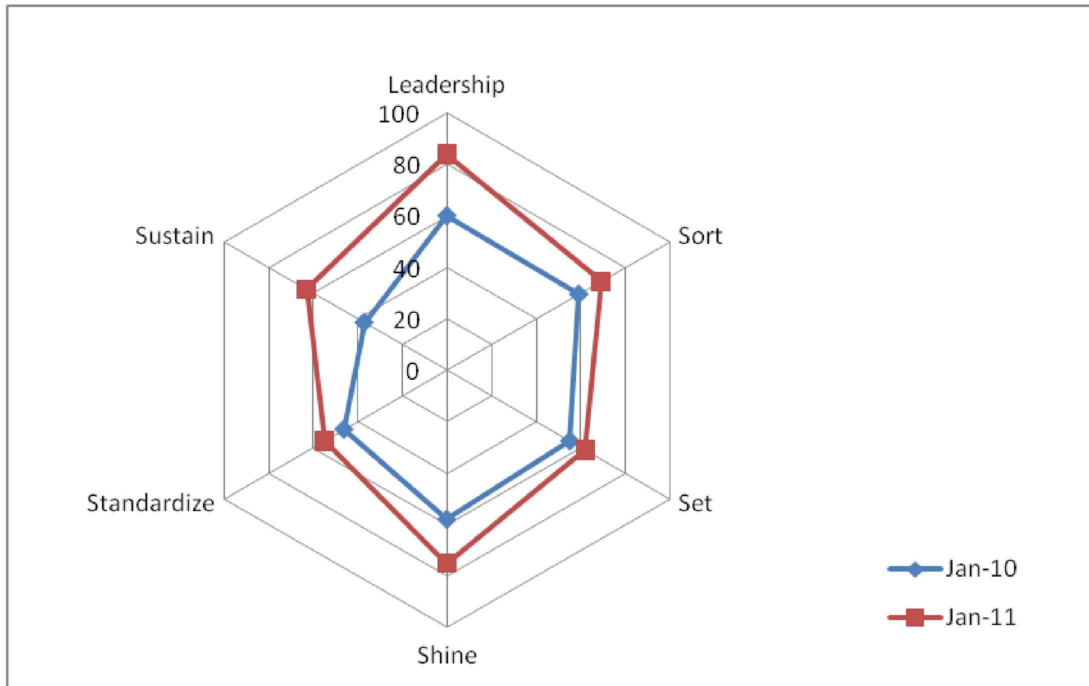

Figure 3-1-4 Evaluation Results by Monitoring Check sheet (Kenya: CPGH)

Table3-1-15 Key Points for Evaluation Indicators

	Evaluation Indicators	January, 2010	January, 2011
1	Leadership	5S activities are being promoted by following the firmly committed administrative section in the hospital.	The QIT leader, who is also the Deputy Director of the hospital, and other hospital management members are highly knowledgeable of, and understand 5S-KAIZEN well, showing strong commitment by providing active instructions for various activities. However, the appropriateness of the manuals and seminar details may require some reconsideration.
2	Sort (S1)	There is some room for improvement such as utilizing the spaces in a much more effective manner since an warehouse for unnecessary items are not established yet.	Although Sorting was implemented well, unnecessary items removal was not ensured in some part within the hospital and out of the hospital.
3	Set (S2)	It is time for some of the departments which have reached a certain level to consider some creative ideas to improve the work environment such as by improving	Although it was confirmed that some efforts were being made, the Set activity was not ensured throughout the hospital since there weren’t enough guidance sign boards, and no labels were attached for the room names, equipment, doors,

	Evaluation Indicators	January, 2010	January, 2011
		the work flow line.	and switches, etc.
4	Shine (S3)	Regular cleaning activities are being implemented, and wastes are categorized by using different colors as specified in the guideline.	The S3 status is maintained at a good level since the hospital has hired cleaning staff members; the next challenge would posting schedule charts for the cleaning of the outside of the hospital and for the equipment maintenance.
5	Standardize (S4)	The 3 steps of S1, S2, and S3 are firmly set as a part of the daily works with the necessary rules specified, but they are not being standardized yet.	Standardization was not ensured sufficiently since instruction labels were not attached onto the valves, doors, or fire extinguishers, etc.
6	Sustain (S5)	Although the staff members in some of the pilot areas are highly knowledgeable regarding the 5S activities, other hospital staff members are showing reluctance towards the 5S activities.	The WITs have not implemented 5S activities in an autonomous manner on the whole. The staff members may be too dependent onto the QIT leader who is exercising strong leadership, but there is still much potential for the situation to be improved due to the QIT leader's high motivation.

Source: Monitoring results at the Supervisory Trips

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed out at the supervisory trip in March, 2010.

- The bulletin boards and safety warning signs are being installed without considering their purposes and therefore are not in line with the concept for the 5S activities.
- As in the case described above, no placement standard is specified by considering business effectiveness or safety for when piling up some items due to not having enough space.
- Systematic education or information exchange regarding the 5S activities is being implemented irregularly within the pilot area.
- Report results of the 5S activities to the Ministry of Medical Services and request its support.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-16 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Jan. 2011.

Table3-1-16 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Timing of Implementation	Responses
1	Prepare documents specifying	Continuously implementing	The KAIZEN subcommittee draft which had been presented at the previous supervisory trip /

	Recommendations	Timing of Implementation	Responses
	the business scope, roles, responsibilities, and the organizational chart of the QIT/5S committee, and reinforce the enlightenment / seminar activities in order to enable all hospital staff members to get familiarized with them.		monitoring occasion has been approved, and KAIZEN (continuous quality improvement) Subcommittee has been established in QASC. It is acknowledged that the understanding towards 5S / KAIZEN is being improved throughout the hospital due to the activities implemented by this subcommittee.
2	Improve the already standardized color-coded dust bin strategy to an even more advanced level, and improve the sense of ownership by implementing self assessments.	Continuously implementing	According to the interview survey, color coding had proven enhancement in ownership and streamlining in the businesses. However, this is limited to the pilot area only, and is not implemented or proven in the entire hospital.
3	Improve the communication status with the Ministry of Medical Services.	Not yet practiced	No issue was acknowledged on the hospital side regarding the communication between the Ministry of Medical Services and the hospital. Currently, reports are being made on a regular basis via the Coast Provincial Medical Office by following the formal protocol.

Although the role of the Provincial Medical Office should be important for the communication between the hospital and the Ministry, being the intermediate body in between the two, no clear evidence showed any participation of the Provincial authority within the pilot activity.

However, since Coast Province General Hospital is highly motivated and therefore taking on an important role in expanding the activities to other hospitals described above (please refer to the progress status of 5S-KAIZEN in (2) above), it is concerned that the hospital would be lacking the necessary interest for its own hospital management business, and would have its personnel and resources scattered and in shortage.

In consideration of such situation, the following 5 recommendations have been made for the hospital in order to ensure familiarization and fictionalization of the activities within Coast Province General Hospital

- Coast PGH should formalize designation of WITs with terms of reference from the 120 staff already trained in 5S/KAIZEN.

- The hospital should enhance development and display for use Standard Operating Procedures.
- The WITs should enhance visual control in 5S implementation at the various areas of work.
- As a leading and teaching facility, CPGH should enhance documentation of 5S activities, lessons learned and best practices and then prepare to share these with others internally and outside.
- CPGH should set up a KAIZEN office with staffing to enhance coordination of 5S/KAIZEN implementation.

3) Comparison between Mazali Hospital and Coast Province General Hospital

Described in Fig. 3-1-5 and Fig. 3-1-6 are the evaluation results using the monitoring sheet for Mazali Hospital and Coast Province General Hospital in 2010 and 2011.

As of Jan. 2010, Mazali Hospital, which had started the activities from 2007, had been evaluated lower than Coast Province General Hospital, which had started the activities from 2009, for the 5 items apart from Shine (S3). The reasons are assumed that the Deputy Director of the Coast Province General Hospital is exercising superior leadership, and that documentation had been already highly promoted in the hospital for the purpose of applying for ISO-9001.

In January 2011, the statuses of Sort (S1), Set (S2), and Shine (S3) in Mazali Hospital had been at the same level with those for Coast Province General Hospital. Additionally, the evaluation results for Standardize (S4) and Sustain (S5) in Mazali Hospital had been largely improved when compared with the previous evaluation results, and were also showing higher achievement levels than Coast Province General Hospital. This seems to be due to the fact that Mazali Hospital was stimulated by the supervisory trip made in 2010 and had held more internal seminars, and promoted organization and systematization of QIT. On the other hand, Coast Province General Hospital had the achievement statuses for 5S and leadership improved, where the improvement for leadership had been significant. Coast Province General Hospital seems to be efficiently guided by the Deputy Director's strong leadership as it had been the case in the previous occasion.

Although it is necessary to make some consideration for the fact that the evaluation method has been reviewed for the 2nd Supervisory trip in 2011 and that the evaluators are different between the two occasion, it can be assumed that the 5S activities can be promoted by the strong leadership of the leaders, but when it comes to the stage of Standardize (S4) and Sustain (S5), where the activities need to be expanded to a hospital-wide level, what is important is that QIT is actively implementing its activities. Specifically, the key point is to nurture QIT so that it is capable of providing education and guidance, and of making evaluations for 5S and KAIZEN by cooperating with those in the actual work sites.

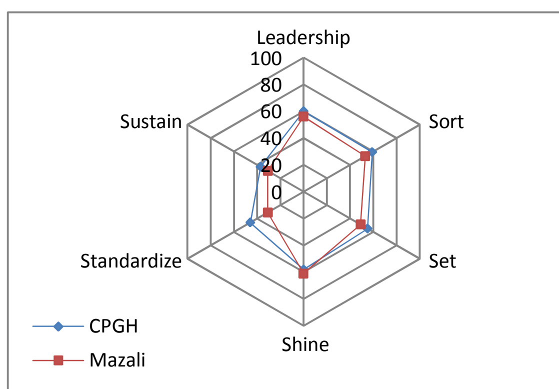

Figure 3-1-5 Comparison between the pilot hospital at the 1st supervisory trip (Kenya, January 2010)

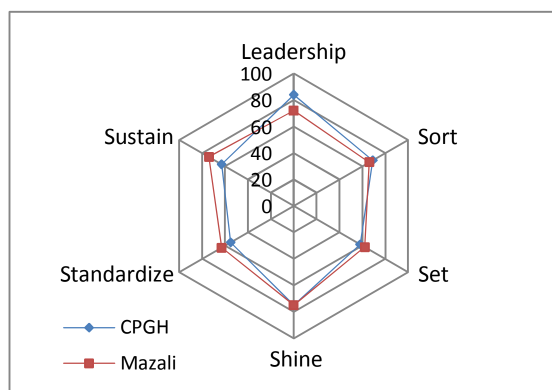

Figure 3-1-6 Comparison between the pilot hospital at the 1st supervisory trip (Kenya, January 2011)

(3) Madagascar

a. Current status in the pilot hospital

Mahajanga University Hospital Center (Centre Hospitalier Universitaires: CHU Mahajanga) is one of the only 2 university hospitals in Madagascar, and is a highly specialized medical facility with approx. 380 staff members and 392 beds. Since there is no other public hospital in the provincial capital of Mahajanga, the hospital also takes on the role as the districts' referral hospital. The annual number of outpatients is approx. 10,000, the number of emergency patients is 2,500, the number of hospitalized patients is approx. 7,000, and the number of Caesarean sections is approx. 400 cases. (Data of 2009)

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-17 Results of the Time Study: Waiting Time

Examination timing	March, 2010		November, 2010	
Examination Indicators	Average	Sample	Average	Sample
From the reception to consultation (Psychiatrics)	1 hr 21 min	6	18 min	6
From the reception to consultation (Pediatrics)	46 min	10	48 min	10
From the reception to consultation (Dermatology)	—	—	27 min	5
From the reception to consultation (Respiratory)	—	—	28 min	8
Payment	16 min	10	10 min	28
From requesting laboratory examination to obtaining results	60 min	4	—	—
Pharmacy	18 min	9	12 min	50

Other baseline information (2010)

- The transition of the number of staff members in the hospital: 136 staff members increased from 242 staff members in 2006 to378 staff members in 2009, and 18 members of doctors, 64 members of

nurses, and 22 members of midwives have increased.

b. Progress status of the 5S-KAIZEN activities

QIT was organized in 2007 with 14 members, and has been holding biannual meetings. There are 37 WIT teams which cover all 47 sections (some of the WITs cover several sections), and each WIT is holding meetings every other month.

Later, in the survey made in November 2010, the hospital organization and the QIT organization have been reviewed in May 2010 under the control of the new Director, where the Director assumed the role of the QIT leader, the number of QIT members increased to 20 persons, and monthly meetings are being held since then. There are 38 WIT teams which cover all 47 sections (some of the WITs cover several sections), and whereas each WIT used to hold bimonthly meetings, it is now holding monthly meetings.

c. Monitoring Results of the 5S progresses by Monitoring Check Sheet

QIT was organized in 2007 with 14 members, and has been holding biannual meetings. There are 37 WIT teams which cover all 47 sections (some of the WITs cover several sections), and each WIT is holding meetings every other month. Surveyors scored each department, and the scores for all departments were averaged to gain the overall evaluation result. In the survey implemented in November 2010, the QIT members made a trip to all departments / offices as the main surveyors, and then gained the evaluation result for the overall hospital. Monitoring results of the hospital by monitoring check sheet are indicated on the Table 3-1-18 and summary of the results for each evaluation indicator is shown on Table 3-1-19.

Table3-1-18 Monitoring results of the check sheet (Achievement Rate: %)

	Total	Leadership	Sort	Set	Shine	Standardize	Sustain
March 2010	56	-	74	52	55	52	55
November 2010	67	80	63	65	65	58	77
2008 (For Reference)	73	68	73	77	84	67	65

Note: The evaluation in 2008 had been implemented in a different method from that of the survey in 2010, and therefore the values for the survey in 2008 are reference values.

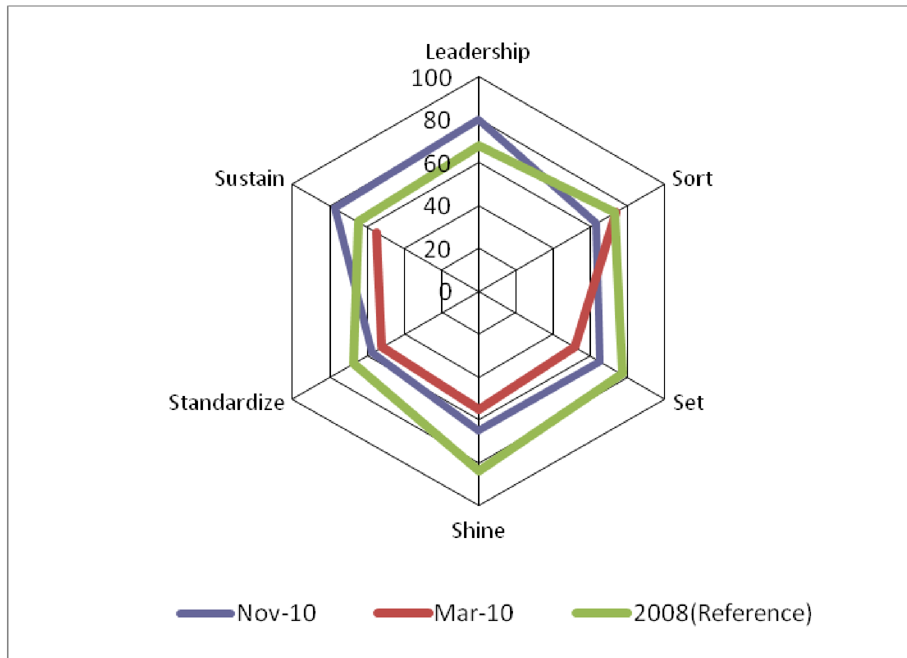

Figure 3-1-7 Evaluation Results by Monitoring Checksheet (Madagascar)

Table3-1-19 Key Points for Evaluation Indicators

		1st Supervisory Trip (March 2010)	2nd Supervisory Trip (November 2010)
1	Leadership	Although the new director of the hospital understands 5S very well, the QIT is not fully functioning, and therefore insufficient technical advices or follow-ups are being provided to each section.	Although some of the management members lack understanding towards the activities, the hospital director and the QIT are exercising excellent leadership, and are implementing regular activities.
2	Sort (S1)	Although there is much room for improvement since there are some personal belongings stored in the shelves, unnecessary items not being discarded, or old posters still posted on bulletin boards, etc., there are many sorting activities on-going.	Most of the unnecessary items are being tidied up by each department, which shows that the system for Sorting has been firmly established; but still, such system is not being fully ensured.
3	Set (S2)	The labeling method has not been fully familiarized, and some stockout had been confirmed as well.	The photographs of before implementing 5S and after having implemented 5S have been taken by QIT and the data of such photographs are maintained by QIT as well; however, those photographs are not being posted. Although the displays within the hospital are standardized, implementation of visual control,

		1st Supervisory Trip (March 2010)	2nd Supervisory Trip (November 2010)
			etc. is still limited.
4	Shine (S3)	Regular cleaning is being implemented, maintaining the hospital clean; however, no cleaning is being implemented in each department, and the idea of cleaning up your own surrounding has not been fully familiarized between the staff members.	Each person is implementing his/her own cleaning activity, and has a cleaning schedule prepared. However, no system is ensured to control the entire hospital according to a predefined set of rules.
5	Standardize (4)	The 3 steps of S1, S2, and S3 are firmly set as a part of the daily works in Newborn department, Emergency room, pediatrics department, Test Room, and obstetrics department. However, the activities implemented in each department are not being standardized.	Checklists are prepared for each work, file storage methods are specified, and warnings are made for dangerous objects in each department, such efforts are not being standardized yet. Labeling and notice boards are standardized in the hospital.
6	Sustain (S5)	Seminars for introducing and familiarizing 5S-KAIZEN-TQM are being held continuously, and the knowledge regarding 5S is being shared between the staff members. However, still some of the staff members are showing reluctance towards the 5S activities or are misunderstanding the activities.	Although seminars are held twice a year, and internal audits are implemented on a regular basis, some of the staff members are still showing reluctance. The structure has been reviewed in order to diffuse the QIT responsibilities and therefore have everyone participate in the activities. Encouragement of self-discipline to staff and visitors is already standardized.

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed out at the supervisory trip in March, 2010.

- When 5S activities had been introduced to all departments in the hospital in the 2nd year of their efforts, the main focus had been set onto the incentive where the departments will be entitled with increased budget and therefore being able to purchase more goods by participating in the 5S activities, the staff members are not fully understanding the basic principle for the concept which is to improve the work environment or the staff members' awareness, and this has resulted in having large discrepancies in the progress status or commitment towards the 5S activities between the departments.
- Since too many departments have introduced the 5S activities, QIT is not being able to address all issues.

- Capacity of QIT is relatively insufficient compared with the areas implementing 5S activities in the hospital so that adequate guidance is not provided to all the departments.
- It is difficult to obtain support from the MOH since quality control of the health services is less prioritized on the National Health Policy.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-20 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Nov. 2010.

Table 3-1-20 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Implementation Timing	Detailed Responses for Recommendations
1	Enforce functions of QIT and implement monitoring activities and supervisory trips so that the self evaluation system within the hospital and within each department will be ensured.	The organizational chart and the structure for the entire hospital and 5S-KAIZEN-TQM have been reviewed by May.	− The hospital organization was reviewed in order to be able to enforce the management structure. − The QIT organization was also reviewed, and the section managers of Statistics Section, Training Section, and the HR Section were added to QIT members. − TOR was created for the hospital director, intermediate managers, QIT, and WIT. − QIT meetings used to be held once in 3 months; now they are held on a monthly basis, together with additional meetings whenever necessary. − Currently QIT is consisted of 20 members including the hospital director, and the director is taking on the role as the QIT leader.
2	Make an effort to improve the structure and capabilities for introducing and executing S4 and S5 at the hospital-wide level, while going over the concept of the 5S activities	After the previous Supervisory Trip	Implemented monitoring activity, identified the issues, reviewed the inappropriate protocol details, and improved the seminars.

	Recommendations	Implementation Timing	Detailed Responses for Recommendations
	once again at the departmental level.		
3	Analyze the results gained through the 5S activities within the hospital and share the efforts and outcomes between the units, and then share the information between other universities such as CHU Fianarantsoa and promote cooperation with the hospital.	QIT and WIT meetings are continuously held on a regular basis since the last supervisory trip.	− QIT meetings and meetings of the WIT level are held on a regular basis to solve technical and organizational issues and have the information regarding them shared. − Information has been shared with Finanarantsoua University Hospital as a part of the KAIZEN seminar, where the seminar curriculum was jointly established. − Exchange of information such as documents, good practices, etc. is being coordinated by the MOH.
4	In order to achieve the goals described above, consider having experts sent from Japan or Sri Lanka for a short period, increasing budget for seminars from among the local support budget, and using the seminar text books used for Group 2.	Not yet implemented	According to the activity plan established by the hospital, when any expert or consultant is required, such human resource can either be considered to be acquired within Madagascar, or if a Japanese expert is required, the subject hospital can consult JICA Madagascar office for such request.

These are the recommendations provided by the team for further progresses of the 5S-KAIZEN activities.

A) Recommendations for CHU Mahajanga

- Reconfirm the implementation statuses of Sort (S1) and Set (S2) throughout the hospital. It is desirable that 1) confirming usage status of the equipment (furniture, medical equipment, other fixtures) , 2) removing unwanted items and repairing broken ones, 3) appropriate relocation and standardization of the management and utilization rules for them in each department.
- It is recommended that the users of the medical equipment would make sure to thoroughly clean up the equipment as part of Shine (S3) activity (as a preventive equipment maintenance management

activity).

- From among the good practices that had been identified through this supervisory trip or the QIT activities, consider which ones are effective, and standardize them to the entire hospital. When doing so, first start from implementing them in some of the units on a trial basis to confirm the efficiency and the effectiveness, change them into methods that can be easily utilized in all departments, and then standardize them throughout entire hospital. This procedure of identifying the good practices and standardizing them should be implemented by QIT on a regular basis.
- This supervisory trip is making proposals for the possible improvements as the Next Step additionally to the good practices; QIT should discuss the contents and implement the necessary countermeasures.
- As for Standardize (S4) and Sustain (S5) which are already being implemented with firm commitment, they should be improved even more, and it should be ensured that the entire hospital would be fully familiarized with 5S and have the activities firmly settled by having all departments participate in the activities.
- QIT should implement monitoring activities (making supervisory trips and providing guidance, making evaluations using check sheets, and implementing time study, etc.) on a regular basis to confirm the progress status of the 5S activities in the entire hospital.
- QIT should correctly understand the KAIZEN concept, processes, and analysis tools, and provide technical support and implement monitoring activities according to the KAIZEN processes to the WITs which are considering of implementing KAIZEN.
- It is recommended that QIT holds a discussion regarding whether to include the improvement of the moral for providing the medical services essential for the tertiary hospital in Mahajanga Province even when the hospital operation is in an unstable status where strikes are launched very often and where management class relocations are appointed with not much prior notice into one of the purposes of 5S-KAIZEN-TQM activities.

B) Recommendations for the MOH

- The roles expected for the MOH are; (1) provide political and technical support to the pilot hospital (incorporating 5S-KAIZEN-TQM approach into the national health plan and the national quality improvement program), and (2) establish and implement the plan for enabling the nations to become familiarized with the 5S-KAIZEN-TQM approach by implementing political measure described in (1). When establishing the plan, it is desirable to refer to the draft activity plan established within the seminar held in Japan for this program. As for providing technical support, it is recommended that a group of advisors be formed which is mainly consisted of resource persons who have already participated in the seminars in Japan as it has been the case in the past, too.

- Ensure alignment between the departments within the MOH which are relevant with this area to coordinate and enforce the implementation structure described above.
- As for the hospitals which already have 5S-KAIZEN-TQM implemented, it would be desirable to provide technical support to enable them to implement the monitoring activities which we have implemented for this survey such as self evaluation and time study. This should enable the MOH to implement its monitoring activity in an efficient manner.
- Since the leadership of the hospital director is crucial for implementing 5S-KAIZEN-TQM, it is also recommended to set another hospital whose director is exercising superior leadership as a new model hospital, too.
- It is recommended to create opportunities for sharing good practices between the pilot hospitals on a regular basis, and therefore work upon urging each hospital to make good progress on its own efforts.

(4) Malawi

The MOH in Malawi had originally selected Dowa District Hospital as the pilot hospital for this program. However, it had been offered that they would like to change the pilot hospital to Mzimba District Hospital in 2009, and therefore currently both hospitals are implementing the 5S-KAIZEN-TQM activities. We have made surveys for both hospitals in this survey.

1)Dowa District Hospital

a. Current status in the pilot hospital

Dowa District Hospital is a regional general hospital which offers outpatient section, surgery, internal medicine, obstetrics, pediatrics, and medical care for HIV carriers, with 255 staff members and 144 beds. The annual number of outpatients is approx. 192,000 (2009), the number of emergency patients is 334 (2009), the number of normal deliveries is approx. 1,900 cases (2009), and the number of Cesarean sections is approx. 340 cases (2009).

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-21 Results of the time study: Waiting time of patients (Malawi: Dowa Hospital)

Services	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
From Reception to Consultation (Outpatient)	87 min(n=24)	89min(n=27)
From requesting to obtaining laboratory results	75min(n=29)	34min(n=27)

Services	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
Obtaining drugs at pharmacy	16 min(n=32)	11min(n=30)
Time to find patient record	58 sec(n=24)	65 sec(n=30)

(Resource: Information gathered at the Supervisory Trips in 2010 and 2011)

Other baseline information (2010)

- Transition of the number of staff members in the hospital: 94 staff members increased from 63 staff members in 2006 to 157 staff members in 2009 (Due to 81 administration staff members have been hired in 2008)
- Frequencies of stockout cases in the pharmacy: Less than 10 times a year.
- Death cases in the hospital: It has increased from 137 cases in 2006 to 172 cases in 2009.

b. Progress status of the 5S-KAIZEN activities

QIT was organized with 13 members in 2007, and is holding monthly meetings. The WIT is consisted of 19 members, and is implementing the 5S activities in the pilot areas (Laboratory, Warehouse, Laundry, Obstetrics ward, Pharmacy, and Administration Department). It holds seminars for newcomers once in 2-3 months, and 5S progress review meetings are held once in 3 months.

As of 2011, QIT is organized with 13 members as Quality Improvement Support Team (QIST). The team is holding monthly meetings. WITs are established in all 13 departments in the hospital, and have launched the 5S activities. Seminars are held for new employees once in 2-3 months, and reviews are made for the progress status of the 5S activities once in 3 months.

The hospital has been implementing various activities regardless of its physical restrictions such as the aging of its facilities and the buildings with frequent renovations, and has once been commended for the services it had provided. As for the 5S-KAIZEN activities, the regular monitoring system is not fully organized yet, and the QIST members understand that they have not been able to solve the issues that exist for ensuring Standardize (S4) and Sustain (S5). However, the hospital is showing its highly motivated attitude by establishing a plan for proceeding onto KAIZEN activity in or beyond April 2011.

c. Monitoring Results of the Check Sheet

Evaluation results for the 5S activities and leadership using the check sheet are as listed in Table 3-1-22.

The evaluation results gained in January 2011 do not show sufficient improvement from those gained in January 2010, which prove that after the activity frameworks had been organized such as by having the QIST formed, specific implementation or familiarization of the efforts have not been ensured sufficiently. Additionally, as shown in Table 3-1-23, results for some of the departments are showing deterioration,

where the scores for leadership were suffering from serious deterioration.

Table 3-1-22 Monitoring results of the check sheet (Malawi: Dowa Hospital)

		Leadership	Sort	Set	Shine	Standardize	Sustain
January 2010	Achievement Rate (%)+	64	58	54	68	44	37
	Acquired Points +	16.0	20.2	29.3	27	19.8	13
January 2011	Achievement Rate*	62	63	56	69	47	41
	Acquired Points*	15.4	22.1	30.9	27.6	18.8	14.3

Resource：Monitoring results at January 2010 and 2011.

+Average of laboratory, warehouse, washing room, maternity wards, pharmacy Administration office

*Average of Laboratory, warehouse, washing room, Maternity Ward, Pharmacy, Administration Office, Outpatient and Pediatrics.

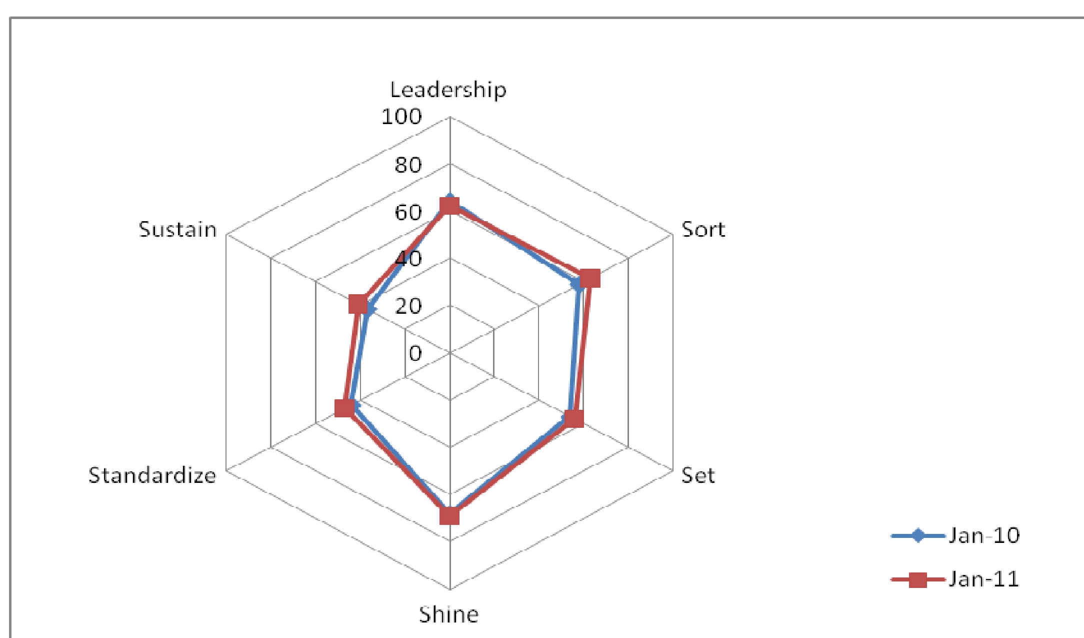

Figure 3-1-8 Evaluation Results by Monitoring Check sheet (Malawi: Dowa Hospital)

Table 3-1-23 Situation of the progresses of 5S activities in the units visited at the Supervisory Trips

Units	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
Laboratory	The staff members are firmly committed, and are implementing S1, S2, and S3. The mechanism of cascaded trainings within the department is not sufficient	The statuses are better than those of the other departments on the whole, and standardization was in good progress. However, Setting by visual control remains a

Units	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
		future challenge.
Warehouse	The work site is well organized, and the shelves are arranged in good order. The labeling method is not consolidated. The business operation flow line is not fully considered	Cleaning is thoroughly ensured, and the site is relatively organized, but the activities seem to be stagnant when compared with last year's statuses. In particular, the efforts for standardizing the works and for promoting self discipline were not in good progress.
Laundry	The room is very clean, and the system of receiving and delivering the laundries is firmly established. S2 and labeling are not implemented in an appropriate manner	The activities are delayed on the whole when compared with other departments. Many parts had been deteriorated (leadership, S3, S4, and S5) when compared with last year's status including the motivation held for gaining knowledge of and implementing the 5S activities.
Obstetric ward	5S activities are implemented sufficiently under the guidance of the firmly committed staff members, and the ward is sorted in an appropriate manner Some of the staff members are showing reluctance against the idea Some parts are not having S2 sufficiently implemented (the medicine cabinet and the drawers)	The activities are delayed on the whole, and the leadership elements are significantly deteriorated when compared with last year such as not having enough training for the persons responsible in each department or not holding enough meetings within the departments (achievement ratio reduced from 80% to 48%).
Pharmacy	The shelves in the warehouse are labeled in an appropriate manner, and most medicines are being set in an appropriate manner as well Some of the staff members are showing reluctance against the idea The drug prescription area is cluttered and is not being sorted well	Although the members are knowledgeable of and do understand the activities, and that efforts were being made in an active manner, group activities within the departments and S4 and S5 were not fully ensured yet.
Administration Department	The filing system is firmly established and all files are arranged in an appropriate manner. Some of the departments have too many posters and instructions posted onto the wall, showing that S1 and S2 are not implemented sufficiently	Set is implemented well when compared with other departments, and has been maintaining its improvement trend from last year.
		Activities are delayed on the whole when compare with other departments where its

Units	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
		leadership or status of cleaning including the knowledge of or understanding for 5S are not in a desirable statuses.
		The acknowledgement for and the leadership regarding 5S activities are superior, and is maintaining good progress for the activities when compared with other departments.

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed out at the supervisory trip in January 2010.

- Although Sort (S1), Set (S2), and Shine (S3) activities are continuously implemented in the pilot departments, the procedures are not standardized and are therefore not expanded onto other departments.
- It is necessary to maintain the motivations for the staff members in order to promote the Standardize (S4) and Sustain (S5) activities.
- Set (S2) is not fully ensured.

Based on the challenges raised at the 1st supervisory trip, the team made recommendations for the pilot hospital shown on Table 3-1-24. The team confirmed responses for these recommendations at the 2nd supervisory trip in January 2011.

Table 3-1-24 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Implementation Timing	Responses for the Recommendations
1	MOH and other hospitals shall visit the hospital, and staff members of the hospital shall become the instructors for training seminars to expand other hospitals and keep workers' motivation in the pilot hospital.	Not yet implemented	The MOH or any medical institution other than the pilot hospitals has visited Dowa District Hospital.
2	Reinforce the on-the-job trainings for S2, improve the usage of the bulletin boards (including installation of a 5S section) and the labeling method, and standardize the color coding method for the trash bins and the waste disposal center.	December, 2010	On the Job Training for 5S is provided in a manner by pointing out any concern every time it is noticed, and is not provided in a systematic manner or on a regular basis.

	Recommendations	Implementation Timing	Responses for the Recommendations
3	Increase the frequency of the supervisory tours and monitoring occasions implemented by QIT in order to enforce the technical support provided for each department, and review the activities' plan for the S4 and S5 activities so that they will be improved, too.	Continuously implemented	Technical support has been provided through supervisory trips and monitoring activities, by addressing issues on a voluntary basis as they occur of when QIT, etc. notices them. Not structure is established for providing these technical supports on a regular basis or in a systematic manner.

The activities at Dowa District Hospital are being stagnant on the whole. The QIST members who are taking on the central role in implementing the 5S-KAIZEN activities were also aware of such situation where they were executing the Standardize (S4) and Sustain (S5) activities in a trial and error method. Although they are highly motivated in proceeding from the 5S activities onto the KAIZEN activities, since the hospital has not dispatched any staff member to JICA seminars for the past 2 years, the members do not have any specific idea how to implement those activities. Additionally, no visit has been made by the MOH, and therefore no sufficient feedback has been provided for their activities.

In consideration of such situation, the following 6 matters have been recommended in order to have Standardize (S4) and Sustain (S5) fully ensured and to launch the KAIZEN activity;

- In order to improve the hospital staff members' acknowledgement regarding the 5S-KAIZEN activities, refine and clearly describe the roles and post of, and the Terms of Reference (TOR), etc. for QIT and WIT in documents.
- For the purpose of systematically promoting the 5S activities, prepare a standard work procedure document for the 5S activities such as labeling and color coding.
- Nurture promoters of the KAIZEN activity among the hospital staff members.
- Develop the internal orientation or training packages (guideline, tools, etc.) for the 5S activities.
- Enforce execution of regular supervisions and monitoring activities.
- QIT meetings need to promote the motivation of the staff members so that they would volunteer in participating in and therefore make the 5S activities more active. (This would be necessary for proceeding from 5S activities onto KAIZEN activity.)

2)Mzimba District Hospital

a. Current status in the pilot hospital

Mzimba District Hospital is located 310 km off north from the capital city, and is a regional general

hospital with 239 staff members and 290 beds. The annual number of outpatients is approx. 115,000, the number of normal deliveries is approx. 2,000 cases, and the number of Cesarean sections is approx. 700. The average length of stay is 6.75 days, and the bed occupancy rate is 103%. (Data in 2009)

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-25 shows the baseline information gathered as 5S-KAIZEN progress indicators at the Supervisory Trips in January 2010 and 2011.

Table 3-1-25 Results of the Time study for patients' waiting time (Malawi: Mzimba Hospital)

Measurement Indicators	1st Supervisory Trip in 2010	1st Supervisory Trip in 2011
From Reception to Consultation	29min(n=20)	25min(n=15)
From requesting lab examination to receiving results	55min(n=20)	44 min(n=8)
From submitting prescription to receiving drugs at the pharmacy	3 min(n=20)	-
From reception to consultation at surgery department	-	38 min(n=5)
From reception to consultation at dental department	-	1hr 58 min(n=4)
Total time for all processes	1hr 3 min(n=20)	55 min(n=15)

(Resource: Results of the time study conducted at the supervisory trips in 2010 and 2011)

Other baseline information (2010)

- The transition of the number of staff members in the hospital: 48 staff members increased from 149 staff members in 2006 to 197 staff members in 2009, and nurses have increased by 43 members, and medical assistants have increased by 9 members.
- The frequencies of stockout cases in the pharmacy: Less than 10 times a year. Penicillin had been stockout for as long as 2 months (2009).
- Death cases in the hospital: 146 cases (2009)

b. Progress status of the 5S-KAIZEN activities

QIT was organized with 9 members in 2009, and is holding monthly meetings. The 5S activities are implemented in the pilot areas (outpatient section, surgery ward, obstetrics ward 1 & 2, pharmacy, Test Room, and General Affairs Department). Monthly support/supervision is implemented for the WITs.

Mzimba District Hospital has been participating in this program since the thematic training seminar held in September 2009. After the seminar, the hospital worked on sorting and repairing the wards which had been used as warehouses in the obstetrics ward and the surgery ward for 4 months to improve the

cluttered status in the obstetrics ward.

After the visit to Mbeya Referral Hospital in Tanzania in October 2010, members of QIT were newly reselected, and as of January 2011, the team is consisted of10 members with the hospital director as the leader. 5S activities are implemented mainly by the QIT coordinators, who establish the activity plans and reconfirm the target departments (outpatients, surgery ward, obstetrics, pharmacy, examination office, and operational department). The personnel who are taking the central role in hospital operation such as the hospital director and chief nurses are also participating in QIT. Orientation, etc. are implemented for the present and new staff members, and efforts are being made for the purpose of enabling the staff members to acknowledge the 5S activities.

c. Monitoring Results of the Check Sheet

Evaluation results for the 5S activities and leadership using the check sheet are as listed in Table 3-1-26

The results are showing improvement on the whole, and pediatrics, where a QIT coordinator belongs to, is showing particular progress when compared with other departments; however, the scores themselves are not very high, and show that the hospital is in a trial and error situation for the stage prior to implementing Standardization (S4) and Sustain (S5).

Table 3-1-26 Monitoring results of the check sheet (Malawi: Mzimba Hospital)

		Leadership	Sort	Set	Shine	Standardize	Sustain
January, 2010	Achievement Rate*	29	35	37	47	20	20
	Acquired Point *	6.5	11.5	20.2	18.8	9.0	7.0
January, 2011	Achievement Rate	50	51	48	58	32	23
	Acquired Point	12.5	17.8	26.5	23	12.8	8.2

Resource：Monitoring results in January 2010 and 2011.

*Average of Laboratory, Maternity, washing room for outpatients, Maternity ward, pharmacy, administration office, outpatient and pediatrics

+ Average of Laboratory, Warehouse, Washing room, Maternity Ward, Pharmacy, Administration Office, Outpatient and Pediatrics (round off the closest whole number)

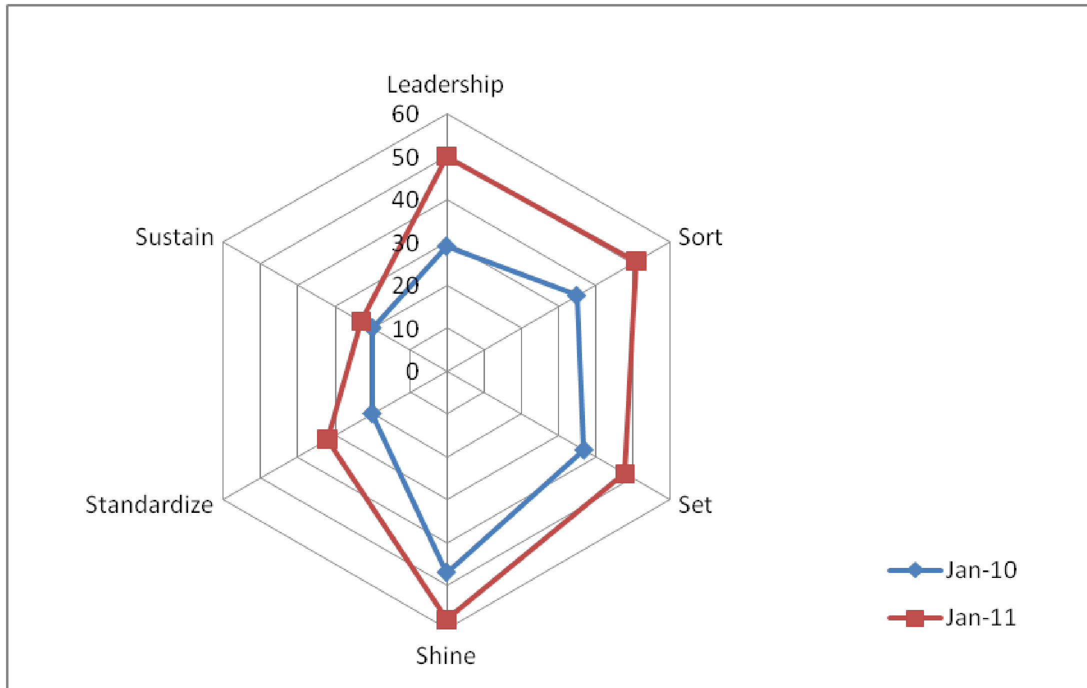

Figure 3-1-9 Evaluation Results by Monitoring Check sheet (Malawi: Mzimba Hospital)

Table 3-1-27 Progresses of the 5S-KAIZEN activities in the units visited by the previous supervisory trips

Units	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
Outpatients	The entire section is maintained clean. The patients' flow is well considered. Old posters and old information are being posted upon the walls, and what are being posted upon the bulletin boards are not categorized in an appropriate manner. The nurse station is insufficiently sorted.	Stagnant on the whole when compared with other departments. Waste disposal is not worked upon or posted objects are not being sorted out when compared with the situation in the year before, and the overall status was stagnant apart from the element of leadership.
Surgery Ward	The medicine cabinets and the warehouse are well sorted. The staff members' knowledge regarding the 5S activities and their techniques for S2 is insufficient.	Improved on the whole when compared with the situation last year, and there has been significant change in the amount of knowledge and the acknowledgement the staff members have towards 5S. However, visual control was not sufficiently implemented yet.
Maternity Ward	All staff members are participating in the 5S activities. Lots of information, posters, and instructions are posted onto the wall without being sufficiently categorized. Labeling method is not consolidated.	Leadership has been improved when compared with last year, and Sorting has become better. On the other hand, implementation of visual control, labeling, and activities beyond S4 had not been much promoted yet.
Pharmacy	The pharmacy is making an effort to shorten	Medicines, etc. are being classified by having

Units	1st Supervisory Trip (January, 2010)	2nd Supervisory Trip (January, 2011)
	the prescription time by introducing the labeling method and by categorizing the medicines. The staff members have insufficient knowledge and techniques regarding 5S activities The prescription area is not sufficiently sorted	continued the labeling activity from last year, and therefore the statuses for Sort and S2 have been maintained. However, leadership has been improved such as by having the staff members' acknowledgement and knowledge for 5S improved, and by becoming even more committed towards the activities when compared with other departments.
Laboratory	Labeling is being implemented. The staff members are not firmly committed and inexperienced regarding their techniques for S1 and S2	The status of being less committed, which had been pointed out last year, is currently being improved step by step, and some positive changes have been made for S1, S2, and S3. Labeling has still not been fully ensured.
Pediatrics	No visit	Highly motivated for 5S, and leadership and commitment for the activities were confirmed within the person responsible in the department. The situation is better when compared with other departments, and they have also been making an effort for implementing S4 and S5.
Administration	A filing system has been established. The staff members are showing reluctance against the idea. The staff members are not sufficiently knowledgeable or do not have sufficient techniques for the 5S activities	No survey made (the survey was made on a holiday, and the Administration Dept. was not open)

Resource: Monitoring results at the supervisory trips in January 2010 and 2011

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed out at the supervisory trip in January 2010.

- Although it has been 4 months since the 5S activities were launched, their implementation structure is not sufficiently organized.
- The activities for Set (S2), Standardize (S4), and Sustain (S5) are not sufficient in particular.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-28 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in January. 2011.

Table 3-1-28 Recommendations for the hospital at the 1st Supervisory trip and responses for them (Malawi: Mzimba Hospital)

	Recommendations	Implementing timing	Responses
1	Prepare documents describing the business operations, roles, and responsibilities for QIT, and organize the structure for familiarizing the 5S activities within the hospital.	Not yet implemented	Although the central members of QIT clearly acknowledge the businesses, roles, and responsibilities of QIT, they were not clearly described in documents by the hospital organization.
2	Hold practicing seminars for the mid-level managers within each ward.	Feb. 2010	Although briefing sessions are made for the persons responsible in each hospital department, no systematic execution seminar is held.
3	Improve the staff members' awareness towards the 5S activities by installing sections for 5S-KAIZEN-TQM activities and 5S activities with the pilot units within the hospital as the showcases.	Continuously implemented	Efforts have been made to hold orientations for the new staff members/intermediate management (in Feb., Mar. and Jul.) in order to improve their acknowledgement and to share knowledge. They said that by having the issues regarding 5S in the work site acknowledged, requests for counseling regarding the activities and requests to have the issues solved have increased.
4	Standardize the waste disposal system and improve the color coding system for the linen cans.	March, 2010	Color-painted linen bins have been implemented in some parts in the hospital. However, since no systematic waste disposal system is implemented to the entire hospital, the coding rules are not consolidated yet.

In Mzimba District Hospital, activities are implemented by 1 coordinator in effect based on the policy specified by the hospital director. Therefore, in some of the matters, the 5S-KAIZEN activities, and the organization and systematization of the seminars for such activities are not being fully promoted, resulting in delay for the standardization works. No visit has been made or no feedback has been provided by the person responsible in the MOH. The coordinator has not percolated in the KAIZEN seminar, and no knowledge or information regarding KAIZEN has been provided for the hospital staff members.

In consideration of this situation, the following 6 recommendations have been made in order to standardize, organize, and systematize the efforts.

- Color coding and labeling methods are to be consolidated and standardized throughout the hospital and all departments.

- All QIT members should review the QIT organizational structure and function for the purpose of expanding the 5S-KAIZEN activities.
- QIT efforts require strong support and cooperation from the personnel of the hospital management level.
- Utilize all opportunities available at maximum where the hospital staff members would gather, such as the morning meetings, orientations, and operational meetings, etc. in order to improve the hospital staffs' acknowledgement towards 5S-KAIZEN.
- All QIT members should work upon resolving the confusion between 5S and KAIZEN, and resolving the misunderstandings towards them.
- Establish a continuous seminar system for 5S-KAIZEN.

(5) Nigeria

a. Current status in the pilot hospital

Lagos Island Maternity Hospital is a secondary level professional medical organization with 184 beds under the jurisdiction of Lagos State. It has the functions of obstetrics and gynecology, new born section, and an emergency section for pregnant and parturient women. The annual number of outpatients is approx. 98,000, the number of emergency patients is 10,000, and the number of hospitalized patients is approx. 4,100 (2009). The average length of stay is 7 days in both obstetrics and gynecology departments, and the bed occupancy rate is 34.9% in both departments as well. After the supervisory trip implemented in April 2010, the doctors in public hospitals held strikes so often claiming for better treatment, and therefore the number of patients have been reduced dramatically.

The information gathered as the baseline for the 5S-KAIZEN activities during the supervisory trip in April 2010 is as described below. At the survey made in November 2010, the number of patients had decreased dramatically due to the doctors' strikes, and therefore no time study was implemented.

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

- The time required from being accepted at the reception until the consultation (number of sample cases): 2 hours and 55 minutes on average (67 sample cases)
- The time required for picking up a patient's record (number of sample cases): 10.5 minutes on average (73 sample cases)
- Death cases in the hospital: 317 cases in 2009, increasing tendency,

b. Progress status of the 5S-KAIZEN activities

The hospital has launched the 5S activities in 2007, and had the Hospital Management Committee formed in order to implement the 5S-KAIZEN-TQM activities. Activities were implemented in a proactive manner such having 5S Day, etc.; however, after having participated in the thematic training

seminar in 2009, the activities load has concentrated to a specific doctor who belongs to the Committee, and since that particular doctor had lost his/her motivation towards the 5S activities, the activities in the hospital had become stagnant. Since the General Manager of the Social Welfare Department in the hospital had participated in the regional seminar in 2010, the Committee's activities became active, and WITs were formed in all departments.

As for the KAIZEN activity, KAIZEN seminar was held in March 2010, and the activity is currently implemented by each WIT. The good practices confirmed for the KAIZEN activity during the supervisory trip in November 2010 are as listed below;

- The patient record office has newly purchased a patient records' shelf which imitates the method implemented by Castle Street Hospital for Women in Sri Lanka. We have requested the hospital to keep a record as for how the patient records' delivery and receipt have changed after the new shelf is installed.
- The pharmacy is considering of pre-packaging of the medicines required for operations and in emergency cases.
- The clerical departments are considering of creating a list of costs so that they can make prompt inquiries regarding the unclaimed payments and provide prompt answers for the inquiries made by the patients or the patients' families.
- The perinatal period ward is considering of the methods for managing and restricting visitors to the ward.
- QIT is considering of establishing a system for controlling the hospital visitors as a project for the entire hospital such as by registering the visitors or installing a security post.

These activities are still in the stage of consideration; they will be examined by QIT, decided by the hospital management, and then be executed.

c. Monitoring Results of the Check Sheet

A) 5S and Leadership

Table 3-1-29 is the monitoring results of the check sheet for 5S and leadership in the pilot hospital.

Table 3-1-29 Monitoring results of the check sheet

		Leadership	Sort	Set	Shine	Standardize	Sustain
April 2010	Achievement rate	84	60	58	65	48	51
	Acquired point	21	21	32	26	19	18
November 2010	Achievement rate	84	69	75	70	70	71
	Acquired point	21	24	41	28	28	25

Resource：Monitoring results

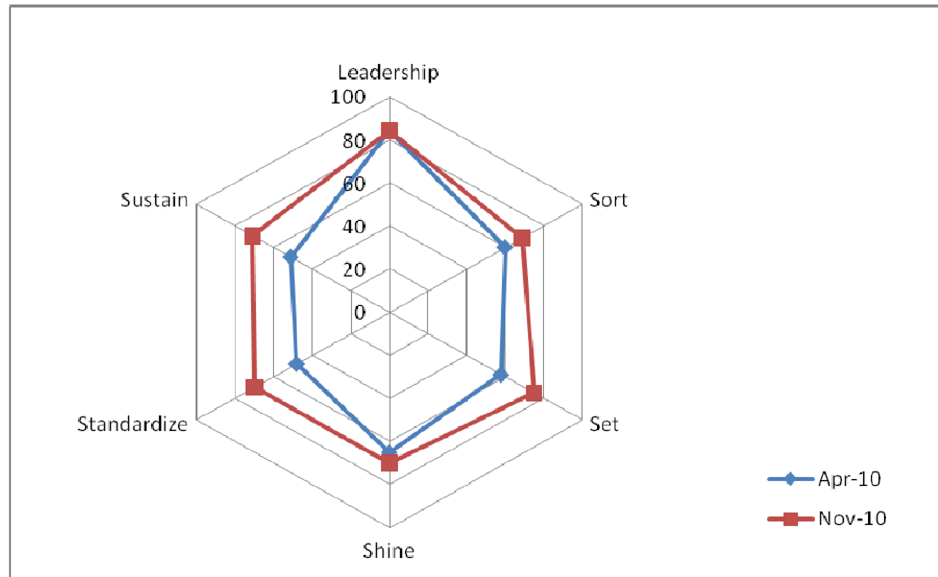

Figure3-1-10 Evaluation Results by Monitoring Check sheet (Nigeria)

Table 3-1-30 Key Points for Evaluation Indicators

	Evaluation Indicators	April, 2010	November, 2010
1	Leadership	The members in the 5S committee were firmly committed, and had possessed sufficient knowledge and interest towards the 5S activities.	The person responsible for QIT and the WIT leaders are highly motivated for 5S, and are working upon making 5S familiar by holding meetings and seminars.
2	Sort (S1)	Some equipment that seemed unnecessary was left in the elevator halls.	Although no unwanted items warehouse has been ensured, the unnecessary items upon the shelves and the unnecessary posters posted on the walls, etc. are removed as necessary.
3	Set (S2)	The documents stored in the cabinets were messier than before.	Patient records office is tidied up, labels are attached for each department, and guidance signs are organized.
4	Shine (S3)	There is no bad smell in wards, operational rooms and toilet and the hospital seemed clean.	Although the cleaning groups or schedules are not displayed, trash bins are installed and cleanings are implemented on a regular basis.
5	Standardize (4)	WIT activities are not being implemented on a continuous basis.	They are preparing for creating the instruction document and standard procedure document for each department.
6	Sustain (S5)	Although 5S enlightenment activities are being implemented as necessary	Enlightenment is continuously implemented

	Evaluation Indicators	April, 2010	November, 2010
		by holding seminars and posting posters, etc., the activities are not fully familiarized among the staff members.	by posting posters, and by holding regular meetings and seminars.

B) PQMSCD (Productivity, Quality, Safety, Morale, Cost, Delivery)

Table 3-1-31 is the monitoring results of PQMSCD (Productivity, Quality, Safety, Morale, Cost, Delivery).

Table 3-1-31 Monitoring results of the check sheet for KAIZEN

		Productivity	**Quality**	**Cost**	**Safety**	**Delivery**	**Morale**	**WIT**	**Empowerment of Staff**
Apr. 2010	Achievement Rates	36	20	28	28	20	20	32	53
	Acquired Points	9	5	7	7	5	5	8	8
Nov. 2010	Achievement Rates	68	72	60	60	68	72	68	93
	Acquired Points	17	18	15	15	17	18	17	14

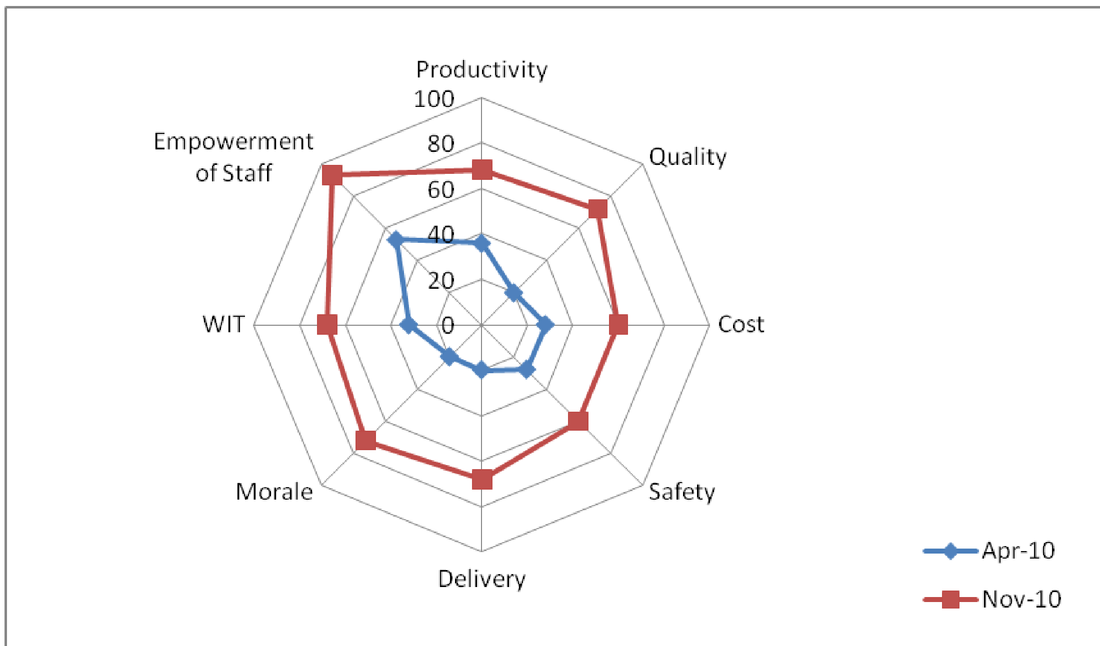

Figure 3-1-11 Monitoring Results of PQMSCD (Nigeria)

Table 3-1-32 Key Points for Evaluation Indicators

	Indicator	November, 2010
7	Productivity	Activity for shortening the waiting time is considered to be implemented by the patient record office and the examination office.

	Indicator	November, 2010
8	Quality	Work standardization is implemented by using standard procedure document and flow charts.
9	Cost	Cost reduction is being promoted due to ensuring “correct operations” and the KAIZEN effects in the maintenance departments.
10	Safety	Although the acknowledgement towards safety is being improved, specific achievements are yet to be made.
11	Delivery	Categorization of the emergency patients (triage), implementation of the blood pressure measurement at the waiting room for gynecology outpatients department, the examination office categorized by the specimen, and Just In Time system on trial at the operational room.
12	Morale	Signs are posted warning patients of the prohibition of drinking and eating within the patients’ room.
13	Organization	The WIT activities are becoming more and more active.
14	Empowerment	WITs are being enforced through the monthly meetings and seminars.

* Since the scores gained at the survey made in April 2010, no summary was provided for the evaluation results.

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed out at the previous supervisory trip in April, 2010.

- The number of patients seems to have increased since our last visit in Jan. 2007, as if the hospital is handling more patients it they can possibly handle. Therefore, one would have the impression that the entire hospital is being worn out.
- Since the 5S Committee is organized mainly by doctors, there is an advantage that actions can be made via a top-down hierarchy, but there also is a disadvantage that the doctors would not be participating in the activities for the Committee very much due to being too busy.
- Although records are taken at pharmacies and Test Rooms as for matters such as their reception time, test details, and inventory, etc., those records are not being utilized in management or business improvement.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-33 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Nov. 2010.

Table 3-1-33 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Implementation timing	Progresses of the Responses for the recommendations
1	Since the staff members are being worn out, the hospital shall make a fresh restart with a positive mindset, and utilize the existing resources in an effective manner so that the current good points would be improved to an even better status.	June, 2010	KAIZEN seminar was held for the staff members, which resulted in making the WIT members active and improving the productivity, too.
2	Consider changing the layout within the hospital, and reviewing the protocols and the work procedures based on the concept of "being staff- and patient-friendly".	September, 2010	Flow charts and guidance signs are posted in each department, which made it easier for the staff members and patients to move around within the hospital.
3	Collect data with the mindset of understanding the current status.	June, 2010	Questionnaire form was distributed to the staff members. Photographs and information regarding the status before KAIZEN implementation were collected.

At the supervisory trip implemented in November 2010, 5S-KAIZEN activities were activated, and evaluation results gained by using monitoring check sheets proved to be improved. The possible reasons are; 1) the fact that the number of patients reduced dramatically due to the impact implied from the strikes implemented since August 2010 had become the momentum for reconsidering the 5S activities, 2) the staff members who had newly participated in regional seminars re-activated the activities implemented by 5S-KAIZEN-TQM Committee, and 3) support contacts have increased due to the alignment with JICA's Maternal and Child Health project.

These are the recommendations for the hospital to progress the activities.

- Make the staff members even more motivated, and ensure the atmosphere of "Do it myself" among the staff members.
  - Introduce the activities relevant with "Do it myself" which is implemented in Sri Lanka, and explain the hospital staff members that there are certain matters that can be achieved by themselves.
  - Provide guidance to review the current mechanisms and procedures in order to consider and impalement the improvements by themselves first before considering of implementing any new equipment, etc., and then to make requests for purchasing the truly necessary equipment /

machineries to the management.

- Collect baseline data before officially implementing the KAIZEN activity.
  - − Time study: Waiting time for the patients record, doctor's consultation, and examinations
  - − Counts: Number of patients waiting in the waiting room, and the number of items stored in the warehouse, kitchen, and pharmacy
- Install a "warehouse for unnecessary items" within the hospital.

(6) Senegal

a. Current status in the pilot hospital

Tambacounda State Hospital is located in the inland of the east of Senegal, in a poor state which occupies a third of the country, and is a general hospital with 180 staff members and 135 beds. The annual number of outpatients is approx. 287,000 (2007), the number of hospitalized patients is approx. 17,000 (2009), the number of deliveries is approx. 850 cases (2008), and the number of Cesarean sections is approx. 423 cases (2007). The average length of stay is 4.7 days (2008), and the bed occupancy rate is 33% (2008).

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-34 Results of the time study for patients' waiting time

	February, 2010		Nov. 2010～Jan. 2011	
	Average waiting time	Sample size	Average waiting time	Sample size
From reception to consultation	18.7 min	17	1 hr 24 min	28
Payment	38 min	19	24 min	16
From requesting exams to obtaining results	3 hr 2 min	10	32 hr 52 min	19
Obtaining drugs at the pharmacy	11 min	20	4 min	18
Finding patients' records	16 min	7	-	-
Outpatients	-	-	2 hr 44 min	34

Other Information

- Nosocomial Infection Rate (2007): 17.6% in internal medicines, 13.8% in surgery, 14.3% in obstetrics, and 10% in pediatrics.

b. Progress status of the 5S-KAIZEN activities

In Tambacounda State Hospital, the Quality Management Team (QMT) was organized in 2007, and the 5S activities are being firmly launched. In normal cases, a WIT would be established in each department under the direction of QMT; it has been confirmed that at least 2 departments of the

ophthalmology and the clinical laboratory were selected as the pilot areas in this hospital. 15 QMT staff members are selected from each department belonging to QMT. Those staff members who do not belong to QMT are not participating in the 5S activities.

No progress has been made for the activities after that since the hospital was closed during Jul. – Sep. 2010 due to the employees strike, and the 5S activities remained contained within the pilot units. In October 2010, discussion was held regarding the 5S activities implementation structure, and it was determined that a structure where a subcommittee established for each building would be better apt for implementing the activities in the hospital rather than having the WIT established within each department implement the activities, and therefore the structure was reviewed according to that decision. Currently, 4 subcommittees are established (in ophthalmology/clinical examination, pediatrics, pharmacy/management division, and echo/X-ray department), and 6 more subcommittees for the remaining buildings are to be established in the near future.

QIT is currently consisted of 11 members, and the personnel in the Maintenance Section is taking on the role of the team leader. QIT meetings have been held twice before the supervisory trip. Although the meetings were not made regular since the activities had only started at the time when the supervisory trip was made, they were expecting to hold QIT meetings once in 2 months and WIT meetings once a month.

c. Monitoring Results of the Check Sheet

Evaluation results of the 5S activities and leadership using the check sheet are as listed in Table 3-1-35.

Table 3-1-35 Monitoring results of the check sheet

		Total	Leadership	Sort	Set	Shine	Standardize	Sustain
Feb 2010	Achievement Rate (%)	36	70	50	40	30	20	20
	Acquired point	83	18	18	22	12	7	7
Nov 2010	Achievement Rate (%)	54	72	57	56	53	33	49
	Acquired point	122	18	20	31	21	15	17

Resource: Monitoring Results

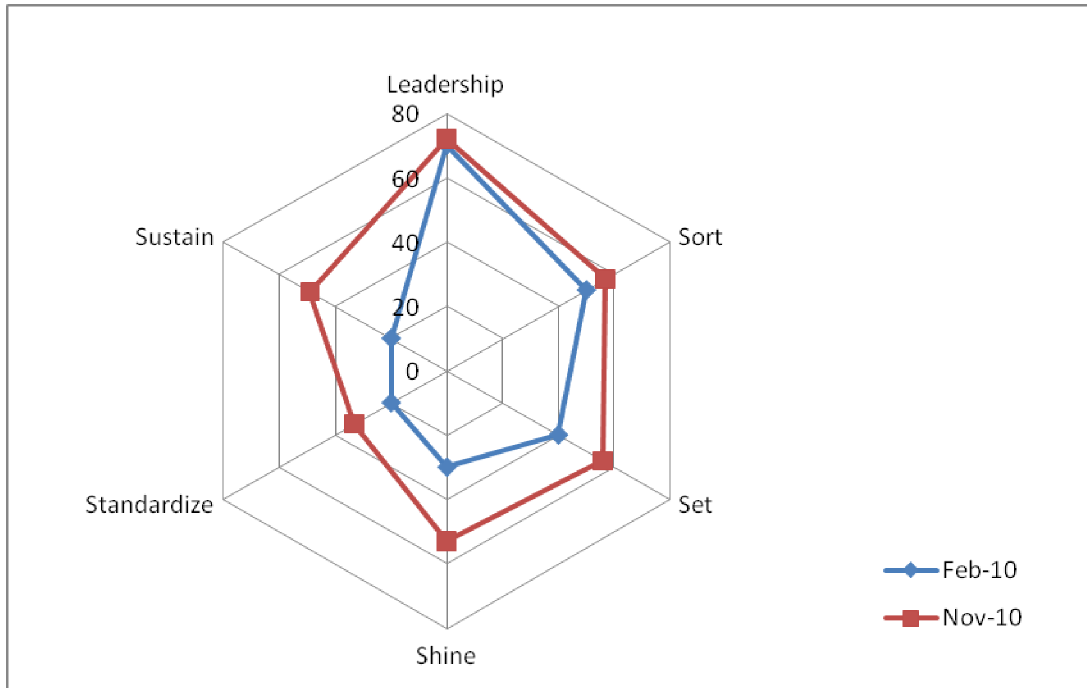

Figure 3-1-12 Evaluation Results by Monitoring Checksheet (Senegal)

Table 3-1-36 Key Points for Evaluation Indicators

	Indicator	February, 2010	November, 2010
1	Leadership	Although the hospital director is highly motivated for the 5S activities, he is not promoting the mid-level managers to actively participating in the activities.	Although the hospital leaders are highly motivated, the impact implied from the strikes is still looming and no regular QIT activities or seminars are being held yet.
2	Sort (S1)	There is no warehouse installed for storing unnecessary items.	Although rules have been established for disposing unnecessary items, since there is no system for carrying out large or heavy items, unnecessary items are left in various places within the hospital.
3	Set (S2)	Although labels and tags have been introduced, they are used only in limited areas.	Labels, inventory, and visual control system is implemented only in a limited part of the hospital.
4	Shine (S3)	Although this activity is implemented on a regular basis, not all staff members are participating in it.	Cleaning was implemented with all hospital staff members including the hospital director before the supervisory trip. Waste segregation, management of cleaning tools, and posting the cleaning schedule are not ensured yet.
5	Standardize (4)	The 3 steps of S1, S2, and S3 are not firmly set as part of the daily works.	Although they do understand the necessity of the activities required towards ensuring

	Indicator	February, 2010	November, 2010
			standardization, no specific action is made yet.
6	Sustain (S5)	Although the Director's staff members and the QMT know of effects of the education and trainings for raising the awareness of the staff members', no specific guidance is being provided for the WIT.	Although the poster provided by the Overseas Cooperation Volunteers is posted on the wall, no effort is made for ensuring S5 has been implemented by the hospital yet.

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed at the supervisory trip in Feb. 2010.

- Since the director has changed since 2007, the activities are not being continued from the past.
- The impact of the doctors who are responsible for improving the quality of the services is very limited.
- The managers (doctors) in the pilot areas (clinical test section, ophthalmology, and the operation department) are not actively participating in the 5S activities.
- Although the 5S activities such as improving the physical environment or effectively utilizing existing facilities in the hospital are being implemented in some parts of the hospital.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-37 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Nov. 2010.

Table 3-1-37 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Implementation Timing	Responses
1	Gain the staff members' understanding and consensus for the fact that improving the business environment is mandatory for improving the services provided by the hospital.	Aug. 2010	− Questionnaire survey was made to identify the level of understanding. − 5S training session is planned to be held for new staff members. Seminar implementation is incorporated into the action plan.
2	Enforce direct intervention for the managers in the pilot areas to enable S1, S2, and S3 to be fully familiarized within the organizations at the work sites.	Started in June, 2010 and gradually expanded	− Subcommittee is established for each building, and secretariat is established to clarify the responsibilities. − The subcommittees would make visits and acknowledge the current status, and then prepare the activity plan and implement the activities.
3	Provide an opportunity where the hospital top executives and the	Started after the 1st supervisory	The hospital director has positively participated in the

	Recommendations	Implementation Timing	Responses
	staff members working at the actual work sites can exchange their opinions regarding improving the business environment on a regular basis.	trip in Feb 2010	5S Committee as participating in monitoring tour at this supervisory trip. Management levels of the hospital and from other hospitals also participated in the mission meetings held at the previous supervisory trip, too.

Due to the strike held during Jul. to Sep. 2010, overall medical activities had been suspended including the 5S activities. The activities restarted from October 2010, and experimental initiatives such as re-organizing the existing 5S framework to one adapted more appropriately to the facilities were implemented. On the other hand, it has been determined that the hospital director would be replaced, which therefore requires the 5S-KAIZEN activities to be promoted under the instruction of the new director.

These are the recommendations provided by the team for further progresses of the 5S-KAIZEN activities.

A) Recommendations for the Pilot Hospital

- Adapt the monitoring check list, manual, and guideline to be appropriate for the hospital, and utilize them.
- Ensure to continuously gain technical support form JICA office.
- Cooperate with the coordinator for the national quality program, and ensure to gain support for the activities.
- Execute the activity plan in a firm and steady manner.
- Hold 5S-KAIZEN seminars for the staff members on a continuous basis.
- Enforce communication within the hospital and between those out of the hospital to ensure that all staff members participate in the activities.
- Continuously report the progress status to the State Health Office and MOH, etc. to gain technical support, etc.

B) Recommendations for the MOH

- Ensure that the coordinator for the national quality program understands 5S correctly and would support implementation of the activities.
- Hold discussions with JICA office as necessary to promote the activity plan established during the seminar of the Program held in 2010 (in Sri Lanka).
- 5S activities are included into the national quality program; clarify the national policies and plans

within the program, and provide support to the pilot hospitals.

- Fully utilize the textbooks created in the past, Tanzania's national guideline, and the manuals, etc. prepared by the short-term experts in the past to prepare the guideline and manual, etc. specific for Senegal.

(7) Tanzania

a. Current status in the pilot hospital

Mbeya Referral Hospital is located at a 12-hour distance by car from the capital city, in Mbeya Region which is adjacent to Zambia, and is one the 8 referral / specialized hospitals in Tanzania, with 326 staff members and 477 beds, and is responsible for tertiary medical care as the top referral hospital within the southern highland area (region hospitals and district hospitals are positioned below the referral hospitals). The annual number of outpatients is approx. 191,000 (2008), the number of emergency patients is approx. 20,000 (2008), the number of hospitalized patients is approx. 29,000 (2009), the number of normal deliveries is approx. 6,100 cases (2008), the number of Cesarean sections is approx. 1,300 (2008), and the number of accepted referrals is approx. 2,900 cases (2009). The average length of stay is 8.0 days (2008), and the bed occupancy rate is 82.0% (2008).

The information collected individually by the hospital's QIT as the baseline for the 5S-KAIZEN activities during the survey made in Feb. and May 2010 is are listed in Table 3-1-38. The hospital has separately implemented patient satisfaction survey and staff satisfaction survey.

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-38 Results of the time study for patients' waiting time

	Feb-2010		May-2010	
Indicators	Average waiting time	Sample number	Average waiting time	Sample number
From reception to consultation	68 min	9	36 min	100
Payment counter	12 min	10	26 min	100
From requesting exams to receiving results	108 min	8	124 min	100
Pharmacy	-		11 min	100
Dentistry	-		113 min	100
Surgery outpatient	-		164 min	34

- The transition of the number of staff members in the hospital: 63 staff members increased from 263 staff members in 2006 to 326 staff members in 2009, and 10 doctors, 21 nurses, and 11 midwives have increased.

b. Progress status of the 5S-KAIZEN activities

QIT was organized with 11 members in 2008 with the hospital director as the leader, and it is holding monthly meetings. WITs are established in 12 pilot areas (WITs originally covered 6 sections in 2007, and expanded to cover 12 areas in 2009), and each of them are holding monthly meetings.

After that, during the 2nd supervisory trip held in Jan. 2011, a pharmacist joined QIT in 2010, and QIT is now consisted of 12 members. QIT is highly active in its activities, where it holds meetings twice a month, and implements supervisory activities for the WITs and internal monitoring activities on a regular basis. WITs were originally established in 12 pilot areas (the project started with 6 pilot areas in 2007, and increased to 12 areas in 2009), but has expanded to 22 teams since the 5S activities were implemented into all departments within the hospital, and each WIT was holding monthly meetings in general.

Due to the hospital director's strong leadership and the activities implemented in a proactive manner by the QIT, all of the hospital staff members in the entire hospital were fully knowledgeable of the 5S concept. It was confirmed via the KAP survey implemented for general hospital staff members who are not WIT members that they have extensive knowledge regarding 5S, and that it was understood that the activities need to be implemented by all staff members on a constant basis.

The hospital started the KAIZEN activity from approx. a year ago, and had gradually increased number of departments which implement the activity since then, whose number of departments currently implementing the activity totals to 6 departments.

The KAIZEN pilot units are promoting the activity according to the KAIZEN method by utilizing the tools (such as Pareto charts) up to the stage of selecting the themes, setting targets, and analyzing the current status and issues; however, only 1 section (management ward) was able to achieve the level of setting the solutions and implementing the improvement plans. Efforts were made for KAIZEN mainly by the departments where QIT members or KAIZEN seminar participants belong to. It should be noted that few departments had taken records of the baseline data, and therefore in most cases, it was not able to confirm whether any practical improvement was achieved or not. The opinions raised by the members of the work sites regarding KAIZEN were; it is difficult to identify issues, but difficult to determine solutions; we want to participate in seminars; coaching is required, etc. These opinions show that it is still not easy to utilize the analysis method.

c. Monitoring Results of the Check Sheet

A) Monitoring results of 5S and leadership

The evaluation results for the 5S activities and leadership using the check sheet are as listed in Table 3-1-39. During this survey, we implemented monitoring activities and evaluations in the 6 departments which have been implementing 5S from phase 1, which has started from August 2007 (Medical Professions Division, central warehouse, administration ward, outpatients section, female's surgery ward,

and pediatric infectious diseases ward), and the 6 departments which have implemented 5S from phase 2, which has started in 2009 and beyond (dental clinic, male's internal medicine ward, pediatrics surgery ward, newborn unit, general obstetrics and gynecology ward, and obstetrics and gynecology outpatients section), for 12 departments in total.

The expert, Mr. Ishijima made an evaluation based on the check sheet in half year's time from the 1st supervisory trip, in September 2010; a comparison is made with the evaluation results gained at that point in Table 3-1-39.

Many departments have shown improvement when compared with the survey results gained in the 1st survey (February 2010). This is due to the strategic personnel positioning where the leaders of the department that had been successful for implementing 5S would be reassigned to other departments and therefore enable one department after another to be familiarized with 5S, additionally to the strong leadership of the hospital director and the QIT members, and regular implementation of internal monitoring activities.

Table 3-1-39 Monitoring results of the check sheet (2010)

	Unit	Investigation period	Leadership	Sort	Set	Shine	Standardize	Sustain
Phase 1	Administration	February	100	91	84	95	78	77
		September	100	100	89	93	84	77
	Outpatient	February	88	77	75	78	62	69
		September	88	74	78	80	73	63
	Central Store	February	64	66	67	65	58	57
		September	68	66	67	70	53	48
	Medical Record	February	64	74	65	80	62	46
		September	72	69	67	80	64	46
	Female Surgical Ward	February	72	74	73	80	71	60
		September	88	83	78	80	76	66
	Pediatric Infectious Ward	February	68	80	78	83	69	63
		September	100	97	80	83	73	71
	Phase 1 Average	February	76	77	74	80	67	62
		September	86	82	77	81	71	62
Phase 2	Infant Surgical Ward	February	52	49	53	58	38	23
		September	72	74	73	75	76	74
	Male Internal Medicine Ward	February	56	63	67	65	42	29
		September	52	51	44	73	56	23
	Dental Clinic	February	44	51	56	65	33	20
		September	76	77	75	73	49	29

	Unit	Investigation period	Leadership	Sort	Set	Shine	Standardize	Sustain
	Obstetrics and Gynecology Ward	February	68	71	60	68	51	46
		September	72	71	65	73	60	54
	Newborn Unit	February	68	77	60	70	56	54
		September	76	83	76	83	80	74
	Obstetrics and Gynecology Outpatient	February	60	66	53	63	42	43
		September	72	74	69	75	67	69
	Phase 2 Average	February	58	63	58	65	44	36
		September	70	72	67	75	65	54

Resource: Monitoring results

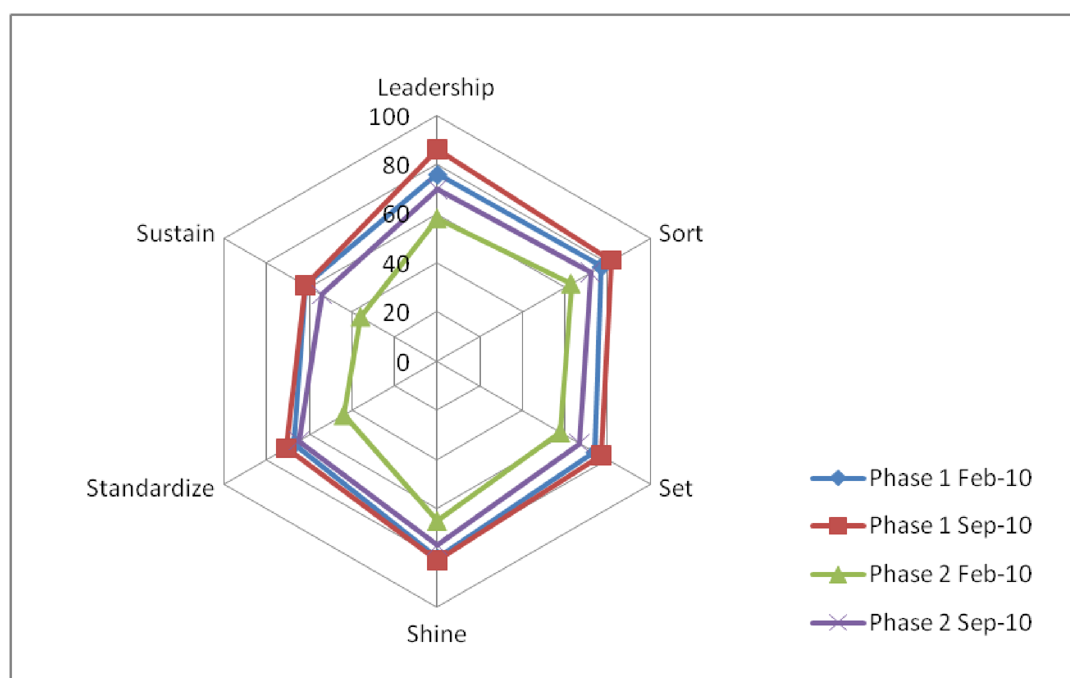

Figure 3-1-13 Evaluation Results by Monitoring Check sheet (Tanzania)

These are the key points for the evaluation results in February, 2010.

- Leadership: The hospital director is firmly committed to the 5S activities, and the QIT is actively working on the activities, and it can be expected to have the activities continued and improved by having technical advices and supports for follow-ups provided, and by making daily tours.
- Sort: Although personal belongings had been stored in some of the shelves, unnecessary items had been discarded on the whole and no old posters were posted on bulletin boards, showing that the spaces are being utilized in an effective manner.
- Set: Although the labeling system is fully familiarized in the phase 1 departments, they still need to improve their inventory control system. The phase 2 departments are not fully familiarized with the labeling system, and they also need to be more effective in utilizing the space.

- Shine: Cleaning is implemented in each department on a regular basis, and therefore both outside and inside the hospital is maintained clean. The staff members are also highly aware of the necessity of cleaning up the hospital. Most of the cleaning tools are stored in an appropriate manner. The staff members are making an effort on streamlining the works.
- Standardize: The 3 steps of Sort (S1), Set (S2), and Shine (S3) are firmly set as a part of the daily works.
- Sustain: Seminars are being held continuously in order to raise the awareness of the hospital staff members, and the knowledge regarding the 5S activities are being shared among the staff members in general.

The advantages and challenges for the 5S activities as of September 2010 are as listed below;

<Advantages>

- Since 5S were implemented into all departments within the hospital, the staff members understood the spirit of 5S very well, and enable the activities to be firmly established
- In most departments, the staff members are actively implementing the 5S activities
- Not only the hospital director and QIT, but the leaders in each department are exercising strong leadership
- 5S activities are firmly established as a part of the daily works, and the hospital is maintained very clean

<Challenges>

- Some of the departments which had implemented 5S activities at a later timing (phase 2 and 3) do not understand 5S very well
- The visual cleanness is prioritized to streamlining the provisioning of the services
- Creative ideas are not fully considered for the flow line of work and of the patients
- Utilization of visual control is not implemented in a sufficient manner

B) Evaluation results for PQMSCD (Productivity, Quality, Safety, Morale, Cost and Delivery)

Among the 12 departments which implemented the 5S activities, the 6 departments which had launched them in 2007 are already working upon KAIZEN. The PQMSCD monitoring results gained by using the check sheet are as listed in Table 3-1-40 below;

Table 3-1-40 Monitoring results of the check sheet for KAIZEN at the six units (2010)

Unit	Monitoring timing	Productivity	Quality	Cost	Safety	Delivery	Morale	WIT	Empowerment of Staff
Administration	February	56	60	48	60	64	72	80	67
	September	76	72	60	60	76	68	76	67
Outpatient	February	52	64	NA	44	56	52	80	60

Unit	Monitoring timing	Productivity	Quality	Cost	Safety	Delivery	Morale	WIT	Empowerment of Staff
	September	64	64	NA	60	64	68	64	60
Central Store	February	32	60	NA	NA	52	56	72	47
	September	56	60	40	48	56	60	60	40
Medical Record	February	24	40	NA	NA	60	40	52	40
	September	40	44	NA	44	52	32	52	47
Female Surgical Ward	February	44	56	NA	48	56	64	72	60
	September	56	56	NA	60	64	60	60	60
Pediatric Infectious Ward	February	40	60	NA	44	60	72	72	67
	September	64	64	NA	60	64	76	80	67
Average	February	41	57	48	49	58	59	71	57
	September	59	60	50	55	63	61	65	57

Resource: Monitoring check sheet

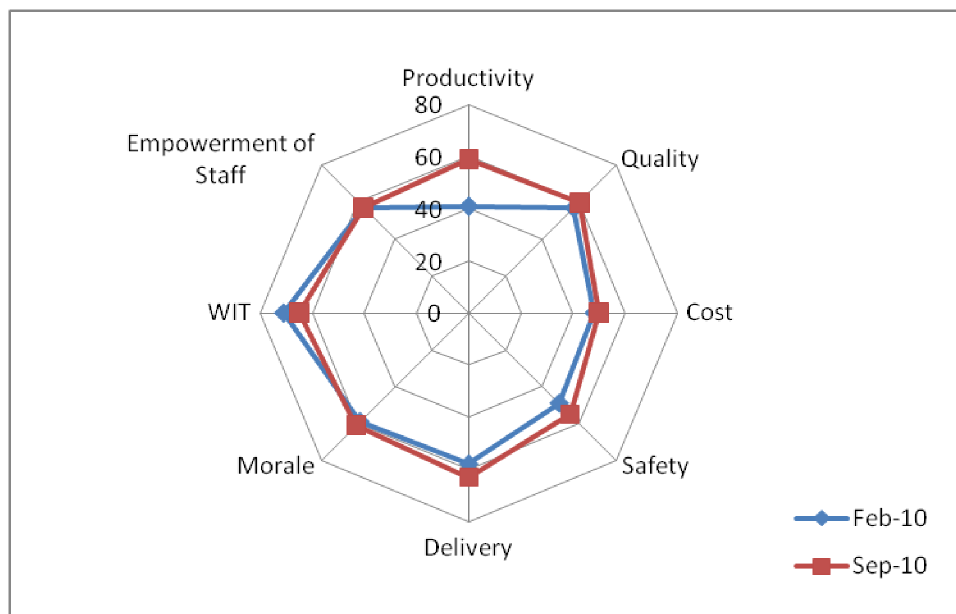

Figure 3-1-14 Monitoring results of PQMSCD by Monitoring check sheet (Tanzania)

d. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed out at the supervisory trip in February, 2010.

- The Standardize (S4) and Sustain (S5) activities in some of the phase 1 pilot areas are insufficient
- The phase 2 pilot areas need to reinforce the activities for Sort (S1), Set (S2), and Shine (S 3)

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-41 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Jan. 2011.

Table 3-1-41 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Implementation timing	Responses for the recommendations
1	Increase internal seminar occasions in order to expand 5S-KAIZEN to a higher level	March, 2010	A seminar was held for 5S in general (where 40 persons participated) and one for KAIZEN (where 46 persons participated)
2	The departments which had implemented 5S first (in phase 1) should deepen S4 and S5, and launch KAIZEN	April, 2010	A discussion was held regarding the method for implementing S4 and S5 in the seminar that was held, and KAIZEN activity has been launched, too
3	The departments which have just launched 5S (from phase 2) should enforce the S1-S3 activities	March, 2010	An additional seminar was held for the departments which had launched 5S from phase 2
4	Establish the internal standard for the hospital	August, 2010	Standardization for labeling has been considered and implemented
5	Promote internal monitoring / evaluation results analysis and information sharing	March, 2010	Information sharing is being promoted in various different meetings, and internal monitoring / evaluation have been implemented for the entire hospital
5	Allocate budget for the 5S-KAIZEN activities	July, 2010	Budget has been requested to the MOH for the 5S activities
6	Consider implementing evaluation for the productivity and cost from among the evaluations expected for KAIZEN	Not yet implemented	Since the understanding for KAIZEN is not sufficient and the methods are not fully utilized, the recommended evaluations have not been implemented yet

These are the recommendation for further progresses of the 5S activities at the supervisory trip by the resource person in September 2010.

- In order to measure the progress status of the KAIZEN activity, enforce measurement of and recording or the baseline data such as the waiting time and number of stockout dates
- Improve the inventory control system and accurately record the items
- Review the KAIZEN seminar to be one much more easier for the staff members to understand, and hold a refreshing seminar, too
- Standardize the labels and promote utilization of visual control

(8) Uganda

a. Current status in the pilot hospital

Tororo General Hospital is located in the Eastern Region of Uganda, and is operated by the Tororo District, with 160 staff members and 214 beds. The annual number of outpatients is approx. 35,000, the

number of hospitalized patients is approx. 14,000, the number of normal deliveries is approx. 2,600 cases, and the number of Cesarean sections is approx. 200 cases. The number of average hospital days is 5.3 days, and the bed occupancy rate is 90.0%. (All data as of 2009)

The information collected in this survey as the baseline for the 5S-KAIZEN activities is as listed below.

Table 3-1-42 Results of the time study for patients' waiting time

Indicators	Feb-2010	*1) Jan-2011
From reception to consultation	Average 39 min (n=10)	Average 1 hr 2 min (n=26)
From requesting exams to receiving lab results	Average 35 min (n=10)	*2) Average 3 hr 32 min (n=5)
Time to provide drugs	Average 10 min (n=10)	Average 43 min (n=23)

1) The hospital conducted by itself. However, there were not enough staff members due to the funeral ceremony held at the same day of the survey.

2) The duration on the process from consultation to the second consultation through receiving lab results.

Other indicators

- Nosocomial Infection cases: 373 cases in 2006, 336 cases in 2007, 374 cases in 2008 and 362 cases in2009.

b. Progress status of the 5S-KAIZEN activities

A) Monitoring Results for 5S and Leadership

The 5S Committee was organized at the end of 2008, and has started its activities from FY2009. QIT is consisted of the team leaders of the WITs which are established in the 11 units. The activities implemented by each WIT are reported at the monthly QIT meetings, and QIT or the Hospital Operational Committee would directly visit or provide guidance for the department where any issue has been reported.

The data on the table 3-1-43 are the monitoring results for 5S and leadership based on the checksheet.

Table 3-1-43 Monitoring results of the check sheet

	Leadership	Sort	Set	Shine	Standardize	Sustain
February 2010	63	54	53	62	44	42
January 2011	63	64	61	69	50	42

Resource：Monitoring results

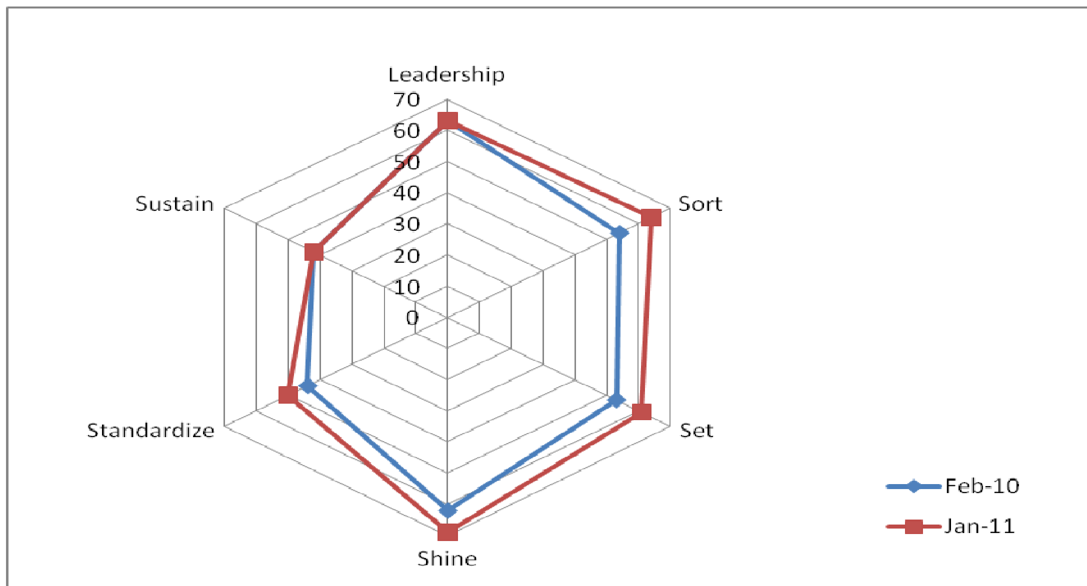

Figure 3-1-15 Evaluation Results by Monitoring Check sheet (Uganda)

Table 3-1-44 Key Points for Evaluation Indicators

	Evaluation Indicators	1st Supervisory Trip February, 2010	2nd Supervisory Trip January, 2011
1	Leadership	The hospital managers have good understanding towards the 5S activities, and the support structure is firmly in place such as having QIT and WIT established, but the detailed part for the activities are not well supported	The hospital director and the 5S manager is highly committed for 5S, and are working upon making 5S familiar through meetings and seminars.
2	Sort (S1)	Although unnecessary items are sufficiently discarded in both the Medical Records and the Female wards, the waste disposal labels are not consolidated within the sections.	Although no warehouse is ensured for storing unnecessary items, utilization of red tags was confirmed. Although some departments seemed not to have removed unnecessary items from the shelf or the unnecessary posters from the wall, in most departments, the unnecessary items / posters were appropriately removed.
3	Set (S2)	Although labels and tags are introduced, the staff members need to consider not only to clean up the place but also how to set the work place in order to carry out the business in a more efficient manner	Labeling for the medicine shelves and color coding for waste disposal processes were implemented in general.
4	Shine (S3)	The cleaning task is implemented by a private company, and the hospital has described the staff members regarding the necessity of cooperating with the staff members in the cleaning company and the responsibilities of the hospital staff members in order to improve the	Although much more creativity is required for the position of the waste bins and the storage of the cleaning tools, the hospital was generally clean and felt comfortable.

	Evaluation Indicators	1st Supervisory Trip February, 2010	2nd Supervisory Trip January, 2011
		cleaning activities	
5	Standardize (4)	Although S1, S2, and S3 are beginning to be firmly set as a part of the daily works within the Medical Records, not many activities are implemented in other departments to ensure these steps to be continuously executed.	Although the works were being standardized in general, documentation was implemented in only a limited part of the hospital.
6	Sustain (S5)	The hospital is implementing activities for raising the staff members' awareness for 5S-KAIZEN by holding seminars regarding the 5S activities for the staff members, etc.	The acknowledgements of all hospital staff members are becoming much higher every day due to the daily supervisory trips.

B) Monitoring for PQMSCD (Productivity, Quality, Safety, Morale, Cost, Delivery)

The monitoring has been conducted for KAIZEN indicators such as PQMSCD (Productivity, Quality, Safety, Morale, Cost, Delivery) since the hospital has started to work for KAIZEN in 2011, although KAIZEN had not started at the 1st supervisory trip in Feb. 2010. The results are shown on the Table 3-1-45.

Table 3-1-45 Monitoring results of the check sheet for KAIZEN(Achievement rate: %)

January 2011	**Productivity**	**Quality**	**Cost**	**Safety**	**Delivery**	**Morale**	**WIT**	**Empowerment of Staff**
Female ward 1	44	56	44	60	60	76	72	67
Female ward 2	52	56	60	68	60	64	80	60
Male ward	40	52	40	60	52	60	60	60
Outpatient	60	64	60	76	60	64	60	60

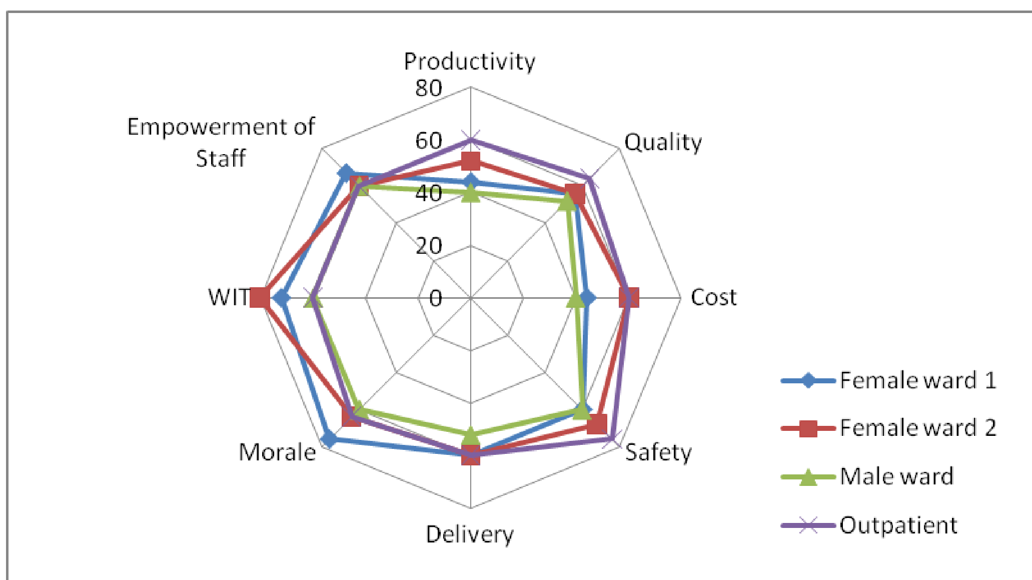

Figure 3-1-16 Monitoring results for PQMSCD (Uganda)

Table 3-1-46 Key Points of Evaluation Indicators

	Indicators	January, 2011
7	Productivity	As a part of the activity for shortening the waiting time at the pharmacy, implemented pre-packaging of the medicines.
8	Quality	Awareness is enhanced for improving service quality, and the reputations of the patients are being improved, too.
9	Cost	Labels are attached to call for turning off the light during the daytime in order to improve the cost awareness, but tap water leakage was observed in some places.
10	Safety	Safety boxes for preventing accidental injection are utilized.
11	Delivery	The waiting space which used to be shared between the outpatients reception and the pharmacy reception has been clearly divided and creative methods such as displaying an arrow onto the chairs to let the patients sit in their arrival order.
12	Morale	Some staff members seemed to aware of the responsibility for his/her own job.
13	WIT	WIT has been established in all departments, and 4 departments have launched the KAIZEN activity.
14	Empowerment of Staff	Some of the staff members have become more confident for their businesses and have gained more reliance fro his/her family via the 5S activities.

c. Challenges for 5S-KAIZEN Activities and Responses

These are the challenges pointed at the supervisory trip in February 2010.

- Although the concept and the importance of the 5S-KAIZEN activities are well understood among the mangers and the staff members, they lack 5S skills, and therefore are not being able to derive sufficient outcomes.
- Although it has been 2 years since the 5S activities have been introduced, the hospital is making an effort around the activities for Sort (S1), Set (S2), and Shine (S3), and many of the departments among the pilot units are still not making sufficient outcomes from the Standardize (S4) and Sustain (S5) activities.
- Some of the staff members still consider 5S-KAIZEN activities as reasons for increasing their work amount.

As for the challenges identified during the first supervisory trip, the matters listed in Table 3-1-47 had been recommended by the survey team. The follow-up statuses for addressing those recommendations have been confirmed during the supervisory trip implemented in Jan. 2011.

Table 3-1-47 Recommendations for the hospital at the 1st Supervisory trip and responses for them

	Recommendations	Implementation timing	Progresses of the Responses for the recommendations
1	Although it has been 2 years since the program was launched in 2007, the hospital is still making an effort around the activities for S1, S2, and S3; reinforce the activities for S4 and S5.	September, 2010	S4 and S5 enforcement seminar was held. After the seminar, the participants prepared daily check sheets which are checked by WIT.
2	Consider changing the hospital internal layout, and reviewing the protocol and work procedures based on the concept of being "staff- and patient-friendly". It would be necessary to provide support for learning the 5S methods by holding refreshing seminars, etc.	March, 2010 June, 2010 October, 2010	KAIZEN Day implemented Internal seminar held Supervisory trip implemented by the hospital director and 5S manager (for the 4 departments where WITs are established)

Significant progress was confirmed at the point of the 2nd supervisory trip made in January 2011when compared with the status during the 1st supervisory trip made in February 2010, such as; the level of participation of the MOH being highly improved, the 5S-KAIZEN activities making significant progress in the pilot hospital, the 5S-KAIZEN-TQM activities are starting to become familiarized in the medical facilities in Tororo District – mainly starting from the pilot hospital, and the alignment with the business implemented by the Overseas Cooperation Volunteers being enforced.

The future challenge would be how to maintain the 5S activities which have already been steadily deployed and established within the hospital. It is important for the departments which have been implementing the activities from the earlier stage to promote and continue their activities for Standardize (S4) and Sustain (S5), and firmly get the KAIZEN activity – which has already been confirmed to be launched – off the ground.

We have made the following recommendations regarding the challenge shown above;

- Further promote the 5S activities (examples are as shown below;)
  - Consider creative methods for storing the cleaning tools
  - Consider the method for keeping the white coats.
  - Specify the locations for keeping the stretchers and wheel chairs, and post a display for notifying them.
  - Implement color coding in managing the patients records.
- The purpose of 5S is the improvement of the work places; reconfirm that each S is the measure for doing so, and ensure that the staff members clearly acknowledge this idea.
- Supervisory trips and monitoring activities should be implemented for the purpose of encouraging the staff members and not for criticizing them.
- When selecting the theme for KAIZEN, make sure to select the one that can be worked upon the WIT individually, and to utilize the analysis method and method for solving issues that match with the theme.

3-1-2 Group 2

(1) Benin

a. Current status in the pilot hospital

Lagune Maternal and child Hospital (Hopital de la Mere et l'Enfant Lagune: HOMEL) was established in 1958 under the name of Lagune Maternity Hospital, and has become the top referral hospital since 2005 together with Cotonou National University Hospital, and is also functioning as an educational hospital. The hospital has 220 beds and 430 staff members, and is a specialist hospital for obstetrics and gynecology, new born babies, and pediatrics, and it also accepts for emergency cases when requested The number of annual outpatients is approx. 20,000, the number of emergency patients is 12,000, the number of hospitalized patients is approx. 7,000, and number of accepted referral cases is approx. 2,500 cases. The average hospital days is 4 days for the obstetrics and gynecology, pediatrics, and new born babies, 3 days for Intensive Care Unit (ICU), and 10 days for cases including surgeries. Bed occupancy ratio is low on average – 50% for obstetrics, 42% for pediatrics, 62% for new born babies, 40% for ICU, and 35% for operation cases (surgeries). This is considered to be due to the strikes held frequently in 2009.

(Sources: Hospital information in 2009)

b. Progresses of 5S activities

QIT for HOMEL was formed in 2008, and the secretariat is established in the Quality Control Office. Currently QIT is consisted of 15 members (Quality Control Manager, Quality Control Sub-Manager, and Quality Control Officers), which are gathered from various job types and hold monthly meetings.

Table 3-1-48 QIT Members in HOMEL

Doctors	Nurses	Laboratory Technicians	Pharmacists	Radiologists	Administrative Staff	Midwives
3	3	1	1	1	2	4

Resources: Answers of Questionnaire

HOMEL has started preparing to be certified for ISO 9001 / 2000 from 2002, has launched the "Quality-related Activities Implementation Project" from April 2004, and has successfully been certified for ISO 9001 / 2000 in September 2005. The major activities for QIT are; holding monthly WIT meetings, organizing WITs based on the plan, implementing internal audits, and preparing for external audits (such as the one implemented by ISO, etc.).

There are 34 Work Improvement Teams (WITs) organized as of February 2010, and they implement 5S activities under the supervision of the hospital doctors. WIT meetings are held once a month, and the progress status for the 5S activities is reported to the hospital once a month, too.

Seminars related to the Program and 5S were already implemented for 20 managers, 174 technical staff members (health Professional), and 49 clerical staff members. These seminars included those

regarding the Grant Aid software component and the follow-up works for such software.

Evaluation results of the 5S activities and leadership using the check sheet are as listed in Table 3-1-49.

Table 3-1-49 Monitoring results of the check sheet (Achievement Rate)

Indicators	Total	Leadership	Sort	Set	Shine	Standardize	Sustain
Feb-2010	56%	72%	49%	56%	58%	50%	54%
Oct-2010	26%	0	54%	36%	53%	0	0

* Monitoring has been conducted only for Sort, Set and Shine in October 2010 due to the decision by the hospital.

Resource：Monitoring Results

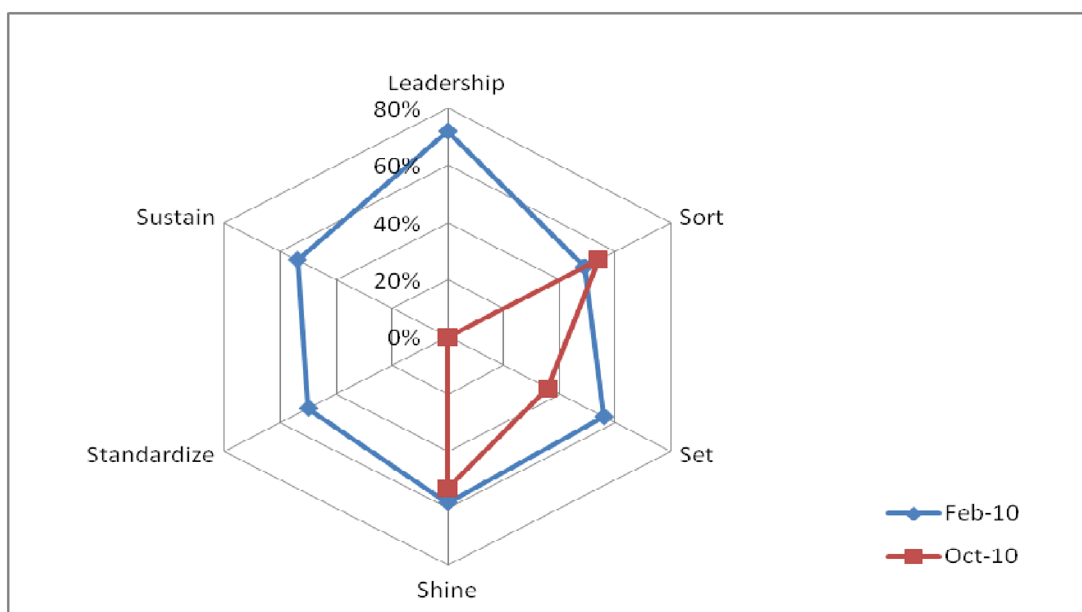

Figure 3-1-17 Evaluation Results by Monitoring Checksheet (Benin)

Below shows the summary points of the 5S indicators at the supervisory trips in 2010.

- Leadership: Although the hospital director and QIT leaders had good understanding and superior leadership, the QIT was not making sufficient supervisory trips for providing guidance.
- SEIRI (Sort): Although the posted materials were relatively organized, unnecessary items were not being discarded or moved sufficiently.
- SEITON (Set): Although the rules for managing and setting the old photographs were being relatively organized, the direction map was not covering all of the complex structure of the hospital, and it was making it difficult for the patients to find the laboratory or the pharmacy.
- SEISOU (Shine): Although the cleaning categories were unclear and there were no storage lockers or the like for the cleaning tools, the hospital is clean enough, and color-coded dust bins were used.

- SEIKETSU (Standardize): By having been certified for ISO 9001, document management was being implemented in a sufficient manner. However, standardization for individual cases needs to be implemented as the future task.
- SHITSUKE (Sustain): Although both enlightenment using 5S posters is implemented and report documents for the result of the seminars are being prepared in sufficient manners, these efforts are still not widely familiarized among the staff members or the visitors, and making such efforts familiarized among all staff members and the visitors should be set as the future task.

c. Other observations

HOMEL has gathered information of infant mortality, number of hemorrhage at a delivery, waiting time for diagnosis, but it could not be confirmed how these kinds of data have been utilized.

d. Recommendations for 5S activities at the Supervisory trips and responses for them

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

Table 3-1-50 Recommendations for the hospital at the 1st Supervisory trip and responses for them

Recommendations	Responses (In October, 2010)
Sort unnecessary items by using red tags and prepare a warehouse to be used for storing them	The warehouse location has been secured and the warehouse is currently under construction. The equipment is currently being stored in another place.
Set up guidance maps and sign boards that can be easily understood by the patients	Sign boards have already been ordered, and currently temporary paper signs are being posted.
Quality control office to make regular supervisory trips	Currently being implemented
Make a review based on the checklist (3 months later)	Currently being implemented

e. Report of outcomes at the wrap-up seminar

As the achievements for the pilot activities, the following points were introduced; 1) all staff members familiarized with 5S, 2) innovative sanitary measures implemented (such as implementing footwear to be worn only within the hospital or protection equipment for when breastfeeding the babies, etc.), and 3) ISO9001 obtained.

A participant asked a question regarding the method for making the staff members familiarized with 5S, and the following creative methods were introduced as the answer for that question; 1) educate the staff members in a sustainable manner by continuously holding seminars for the staff members, and 2) ensure sharing of information by allocating 5S committees in all departments.

In the seminar wrap-up session, the following good practices were identified;

- Establishing and implementing the plan for maintaining the clean status within the hospital
- A Quality Circle consisted of the 5S committees and WITs is holding monthly meetings (S4)
- Checklist prepared for the purpose of ensuring standardization (S4)
- Internal training implemented for executing 5S (S4)

(2) Burkina Faso

a. Current status in the pilot hospital

Banfora Regional Hospital Center is a regional hospital with 104 beds, and its medical district covers the 3 districts of Banfora, Mangodara, and Sindou for the total population of approx. 600,000 people. The hospital has emergency, pediatrics, general internal medicine, obstetrics, and surgery departments. Since the hospital is a referral hospital, it does not have any independent outpatient department, and has the doctor's examination room established within the in-patients ward for all departments other than the emergency department. The director of the hospital is not a doctor but is a professional hospital management officer.

The annual number of outpatients is approx. 9,000, the number of hospitalized patients is approx. 7,000, and the number of deliveries is approx. 2,000. The average number of annual outpatients is 8,974, and 4,390 among them, which accounts for 48.9% of the total annual outpatients are examined by the specialist physicians. The referral acceptance ratio is 3.9%, and the ratio of repeated examination is 43.7%, which shows that it accepts the patients at the level equivalent with a primary medical facility rather than at the level of a secondary referral facility. (2009)

The information collected in this survey as the baseline for the 5S activities is as listed below.

- The time required from being accepted at the reception to the consultation 1) Pediatrics (number of samples): 55 minutes 57 seconds on average (43 sample cases)
- The time required from being accepted at the reception to the consultation 2) Obstetrics (number of samples): 24 minutes 42 seconds on average (13 sample cases)
- The time required from being accepted at the reception to the consultation 3) General Internal Medicine (number of samples): 3 hours 47 minutes on average (29 sample cases)

b. Progresses of 5S activities

The 5S Committee was established in October 2009, and is consisted of 1 doctor, 3 nurses, 1 laboratory technician, 1 radiation technician, and 1 clerical staff member – 6 members in total. The committee is holding meetings once a month and the 5S activities for the month is summarized in a report document and submitted to the management.

WIT is organized within the 5S pilot area (post-surgical ward, and internal medicine, obstetrics, pediatrics, and emergency departments), and is responsible for establishing the plan for the 5S activities, monitoring, and evaluation, and is holding meetings once in 2 weeks. The major activities are as listed in Table 3-1-51.

Table3-1-51　Main activities practiced by WIT

Activities	Frequency	Main actors	Report
Creating action plans	Annually	Director, Manager, Chief	Report of the action plan meeting
Training of the staff members	Arbitrarily	-	-
Supervision and QIT meeting	Monthly	Member of 5S committee and other staff members	Activity report

Source: Answers of Questionnaire

Table 3-4-52 shows breakdown of the participants in the staff seminars.

Table 3-4-52 Number of participants in the staff seminars

Manager	35 persons
Technical Staff	135 persons
Support Staff	17 persons

Sources: Answers of the questionnaire

Monitoring results of the 5S activities and leadership using the check sheet are as listed in Table 3-1-53.

Table3-1-53　Monitoring results of the check sheet　(Burkina Faso, Banfora Regional Hospital Center)

(Achievement rates)

Indicators	Total	Leadership	Sort	Set	Shine	Standardize	Sustain
March, 2010	54%	80%	63%	55%	50%	38%	49%
October, 2010	84%	93%	89%	81%	87%	77%	82%

Source: Monitoring Results

* Only pilot units were monitored.

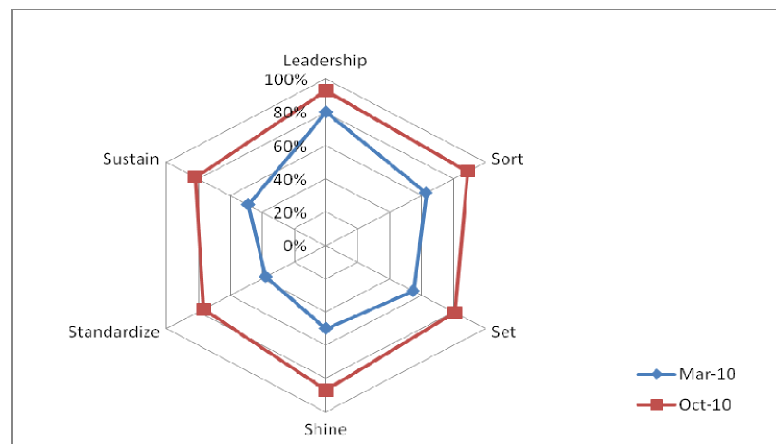

Figure 3-1-18　Evaluation Results by Monitoring Checksheet (Burkina Faso)

Below shows the summary points of the 5S indicators at the supervisory trip in 2010.

- Leadership: The hospital director understands the significance of this program very well, and is describing the idea adequately to the hospital staff members and those relevant within the MOH. He is also actively providing guidance to the 5S Committee, and is exercising superior leadership.
- SEIRI (Sort): Although unnecessary items were being discarded or moved quite sufficiently within the pilot area, the signboards were not being sorted well.
- SEITON (Set): Patient records and the cabinets in the examination rooms are being well Set. The hospital was also providing baskets to the patients so that the patients can store their personal belongings which were very efficient. However, the status of S2 for the switches and the area below the patients' beds need to be improved.
- SEISOU (Shine): Cleaning is implemented by external subcontractors, and is implemented as necessary. However, there is no storage for the cleaning tools, whereas the tools are left on the corner of the rooms or corridors, and this point requires further improvement.
- SEIKETSU (Standardize): Since it is determined that the hospital will be renovated to a new hospital, no guidance map or direction sign was organized.
- SHITSUKE (Sustain): Although enlightenment is made by posting posters for the 5S activities, the acknowledgement towards these activities vary between the hospital staff members according to their work site, and therefore further enlightenment is required.

c. Other observations

- The hospital had implemented "patient satisfaction survey" in December 2009, and the results were presented to the survey team, the MOH, and those implementing the 5S activities in the hospital on March 2, 2010. The result implied that the patients had low satisfaction level regarding the correspondence made by the hospital staff members, and regarding the rest rooms. Although the survey required some improvement such as the number of samples and the attribution analysis for the survey, etc., such effort itself is epoch-making and it is required that the hospital continues to make such efforts in the future, too.
- After that, in September 2010, the hospital implemented staff satisfaction survey. The results implied that the staff members in the departments already implementing 5S activities were achieving higher satisfaction level when compared with those in the departments where 5S activities were not implemented yet. The survey results require further analysis in much more details.

d. Recommendations for 5S activities at the Supervisory Trips and responses for them

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

- Expansion from pilot units to the entire hospital

- Further strengthening supervisory trips by 5S committee members.
- Involvement of external resources such as kitchen and cleaning staff
- Unification and standardization of the rules (Strengthening Standardization)
- Confirming the effects of the seminars
- Making efforts to avoid 5S activities becoming burden of the staff members.

e. Report of the achievements at wrap-up seminar

As the achievements for having implemented the 5S activities, the following points were introduced; work environment in the nursing department, etc. improved, waste management improved, the 5S implementation guide prepared, TOT for 5S, and patient satisfaction level improved.

A participant pointed out that it is necessary to specifically list up what is required for the MOH in order to smoothly implement the 5S-KAIZEN-TQM activities, and we provided an example where seminars using manuals are held in a continuous manner.

In the seminar wrap-up session, the following good practices were identified;

- Staff and patient satisfaction survey implemented (KAIZEN)
- Preparation implemented for creating the national 5S strategy implementation guidance (S4)
- Creating a chart diagram of and implementation of the cascaded trainings (S4)
- Preparation of the organizational chart when seen from the aspect of implementing the 5S activities (5S-KAIZEN)

(3) Burundi

a. Current status in the pilot hospital

The pilot hospital for this program in Burundi, Prince Regent Charles Hospital, is positioned at the secondary level in the referral system for the people in the Bujumbura metropolitan area, and is positioned as the third level specialist hospital at the nationwide level. The hospital has 495 hospital staff members and 511 beds, covering the total population of 530,000 people living in the surrounding area. The annual number of outpatients is approx. 13,000, number of emergency patients is 2,500, number of hospitalized patients is approx. 3,300, and number of delivery cases is approx. 5,400. (Data in 2009)

The information collected in this survey as the baseline for the 5S activities is as listed below.

- The time required from being accepted at the reception to the consultation: Internal outpatients 1 (number of samples): 3 hours 44 minutes on average (30 samples)
- The time required from being accepted at the reception to the consultation: Internal outpatients 2 (number of samples): 2 hours 26 minutes on average (20 samples)
- The time required from requesting to obtaining the results of the laboratory test (number of samples): 2 hours 16 minutes on average (12 samples)
- The time to wait for payment (number of samples): 5 minutes on average (28 samples)
- The time required for providing medicines to each department (number of samples): 25 minutes

on average (43 samples)

- The transition of the number of staff members in the hospital: 90 staff members increased from 405 in 2006 to 495 in 2009. Nurses (including nurse aids), administration staff and workers are mainly increased among staff members.

b. Progresses of 5S activities

QIT has been formed with the 6 members of the director, the deputy director, and those who had participated in the seminar held in September 2009, and has held 2 meetings on an irregular basis. There are 3 WITs set up in the pilot area, and are also holding meetings on an irregular basis.

Although 5S activities are implemented in all 47 departments, we have been able to visit only the 8 departments described below due to the time limit. Monitoring results of the 5S activities and leadership using the check sheet are as listed in Table 3-1-54.

Table 3-1-54 Monitoring results of the check sheet

	Item	Total	Leadership	Sort	Set	Shine	Standardize	Sustain
Feb-2010	Acquired Point	103	23	13	14	17	15	21
	Achievement Rate	45%	92%	37%	25%	43%	33%	60%
Oct-2010	Acquired Point	157	25	29	33	28	17	25
	Achievement Rate	68%	100%	83%	60%	70%	43%	71%

Resource: Monitoring Results

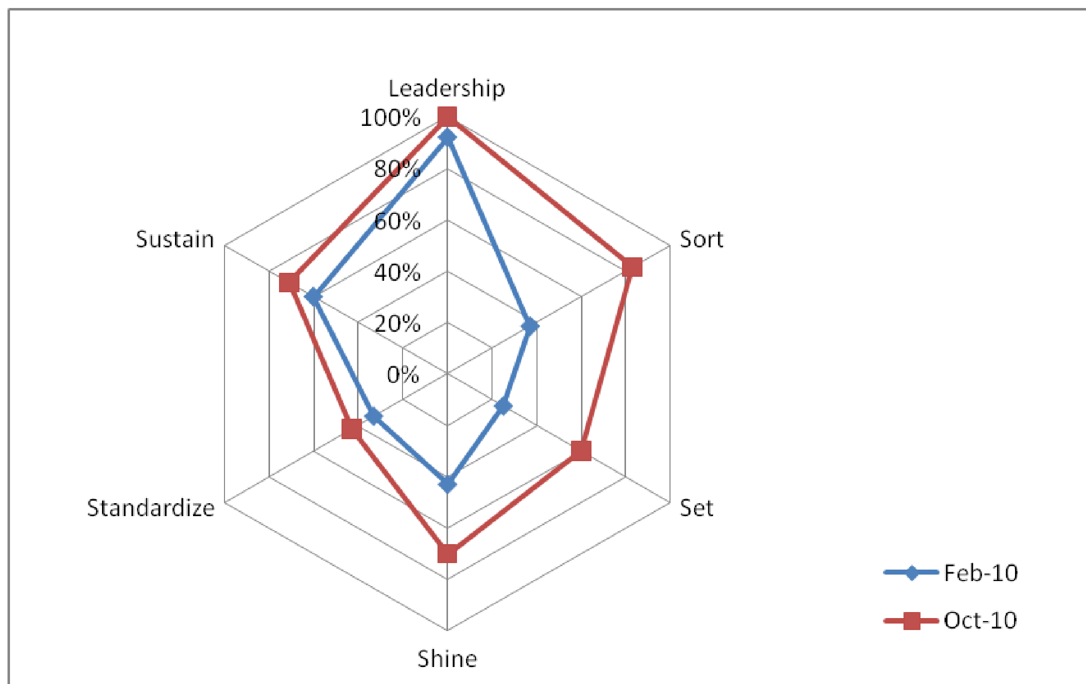

Figure 3-1-19 Evaluation Results by Monitoring Check sheet (Burundi)

Table 3-1-55 shows the summary points of the 5S indicators at the supervisory trip in 2010.

Table 3-1-55 Key Points for Evaluation Indicators

	Indicator	February 2010
1	Leadership	The activities are being implemented mainly in the pilot units with the members who had participated in the seminar for the Program taking on the major roles. The director is too busy and is not being able to participate in the activities very much, and there is no responsible person appointed as the person responsible for the MOH, either.
2	Sort (S1)	Although unnecessary items and garbage were removed in the pilot units, storage location for the unnecessary items, their categorization system, rules, and mechanism are required to be corresponded as their future tasks.
3	Set (S2)	Photographs have been taken and inventory management labels are being introduced due to the technology cooperation project implemented in the hospital. However, not guidance map or label was posted, and no color coding system or the like was implemented yet.
4	Shine (S3)	The hospital was clean on the whole. However, improvement was still required for posting the cleaning schedule, considering the daily cleaning activities for each staff member, implementing the waste disposal system, sorting out the cleaning tool storage status, and cleaning up and maintaining / managing the equipment.
5	Standardize (4)	Although the 3 steps from S1 to S3 are being firmly established as included in the daily routine for the staff members in the pilot unit, the activities in each department are not being standardized.
6	Sustain (S5)	The posters created by the technology cooperation project were posted in various different places in the hospital, contributing for making the project familiarized. However, no other activity or seminar for all hospital staff members or whatsoever was being implemented yet.

c. Challenges for 5S-KAIZEN Activities and Responses

Based on the results obtained at the supervisory trip, the team provided recommendations shown below to the MOH.

- Develop monitoring and evaluation system of the 5S activities under the responsibility of a focal point.
- Engage effective commitment of national steering committee and all organizations for management of the 5S project.
- Designate a focal point to follow progresses of the 5S action plan created at the Seminar in Colombo

on March 2009.

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

As for the challenge shown above, the survey team provided the following recommendations shown on Table 3-1-56. At the wrap-up seminar held in October 2010, the pilot hospital said that it is appropriately addressing these recommendations.

Table 3-1-56 Recommendations at the supervisory trip and responses for these suggestions

	Recommendations	Responses
Overall	• Organize regular 5S Committee meetings and encourage staff members changing attitude to keep records to improve traceability. • Develop a monitoring and evaluation system of 5S activities • Concentrate on 3S (S1, S2 and S3) and expand the 5S activities in a whole hospital within 1 year	− The leader's commitment and the traceability have been enforced. − The 5S activities have been expanded to all departments, which equivalent with the 7 services provided within the hospital
Sort (S1)	• Introduce red tag system to identify unneeded items • Establish rules for posting / removal briefings	Bulletin board management committee has been established.
Set (S2)	• Identify equipment and tools with labels and keep their contents in the inventory record. • Have a room to keep broken or nonfunctional items. • Mark parking places for vehicles such as wheelchairs and carts on floors.	No mentioning
Shine (S3)	• Establish a plan for cleaning / consolidation to avoid disorder. • To popularize use of garbage strategy. • Improve frequencies and methods of disposal for both medical and domestic wastes.	Waste disposal point which covers the pilot units has been established.
Standardize (4)	• Secure places to keep hospital equipment and devices with standardized manner	Standards have been established for improving the environment and for caring for the quality.
Sustain (S5)	• Develop ongoing training program for existing teams • Encourage more KAIZEN activities • Set Suggestion boxes and keep records of public comments. • Create and introduce slogans and posters to expand 5S concepts/activities. • Conduct awareness programs, contests and prizes on 5S activities. • Conduct employee satisfaction survey.	No mentioning

d. Report of the achievements at the wrap-up seminar

Achievements and challenges of the pilot activities were introduced shown below.

<Achievements>

- The following points were introduced; 1) Making 5S familiar in the local language (referred to as 5K in the local language), 2) seminar held based on the matters pointed out during the supervisory trip, 3) meetings promoted, and 4) implementation of 3S (Sort: S1, Set: S2, and Shine: S3) enforced.
- The participants appreciated in having the 5S introduced in the local language, and it was pointed out that activities required for the MOH for having 5S expanded, such as implementing monitoring activities in the hospital or providing appropriate supports, etc., need to be considered.

<Challenges>

- Expanding the 5S activities to all departments
- Deploying Standardize (S4) and Sustain (S5) in the pilot unit
- Operation of the quality improvement contest within the hospital
- Increase in the requests made by the users who are being provided with services of higher quality

These good practices were extracted at the summary session of the seminar.

- 5S activities are incorporated into the hospital's action plan
- By having implemented the 5S activities, the hospital will be able to participate in Performance Based Finance (PBF) (S4)

(4) Democratic Republic of Congo (DRC)

a. Current status in the pilot hospital

The pilot hospital for the project in Democratic Republic of Congo (DRC), Clinic Ngaliema, is a secondary level medical institution located in the capital city Kinshasa. It has physical therapy department and the seminar and education department additionally to the general 7 departments. The hospital accepts emergency cases additionally to implementing normal examinations, accepting patients for almost 24 hours a day excluding an hour during the lunch time.

The information collected in this survey as the baseline for the 5S activities is as listed below.

- The time required from being accepted at the reception to the consultation (number of samples): 1 hour 24 minutes on average (91 sample cases)
- Waiting time for payment (number of samples): 2 minutes 26 seconds on average (136 samples)
- The time required from requesting to obtaining the results of the laboratory test (number of samples): 27 minutes on average (78 samples)
- The time required to pick up patient records (number of samples): 9 minutes on average (67 samples)
- The transition of the number of staff members in the hospital: 90 staff members increased from 405 in 2006 to 495 in 2009. Nurses (including assistant nurses), administration staff and workers are mainly increased among staff members.

b. Progresses of 5S activities

The pilot hospital has the 5S Committee established which is equivalent with QIT and is operated by 21 members including the hospital director. The hospital director is the chairperson of the 5S Committee, and holding meetings once in 2 weeks to promote the 5S activities.

The hospital is promoting the activities by categorizing them into the following 2 phases of phase 1 and phase 2 according to the activities strategy prepared by the hospital. The survey was made at the point when implementation of phase 1 had just completed.

- Phase 1: The pilot units would appoint the responsible person for each S from among the 5S Committee, and efforts for the activities would be implemented by the responsible persons taking on leadership for tasks set for the period of every 2 weeks.
- Phase 2: Familiarize 5S to the entire hospital, make 5S firmly established and prepare for implementing KAIZEN in the pilot units.

Monitoring results of the 5S activities and leadership using the check sheet are as listed in Table 3-1-57.

Table 3-1-57 Monitoring results of the check sheet (Achievement Rate %)

	Indicators	Overall	Leadership	Sort	Set	Shine	Standardize	Sustain
Feb-2010	Acquired Point	129	23	21	30	30	11	14
	Achievement Rate	56%	92%	60%	55%	75%	24%	40%
Sep-2010	Acquired Point	139	18	25	36	24	19	17
	Achievement Rate	60%	72%	71%	65%	60%	48%	49%

Resource: Monitoring results

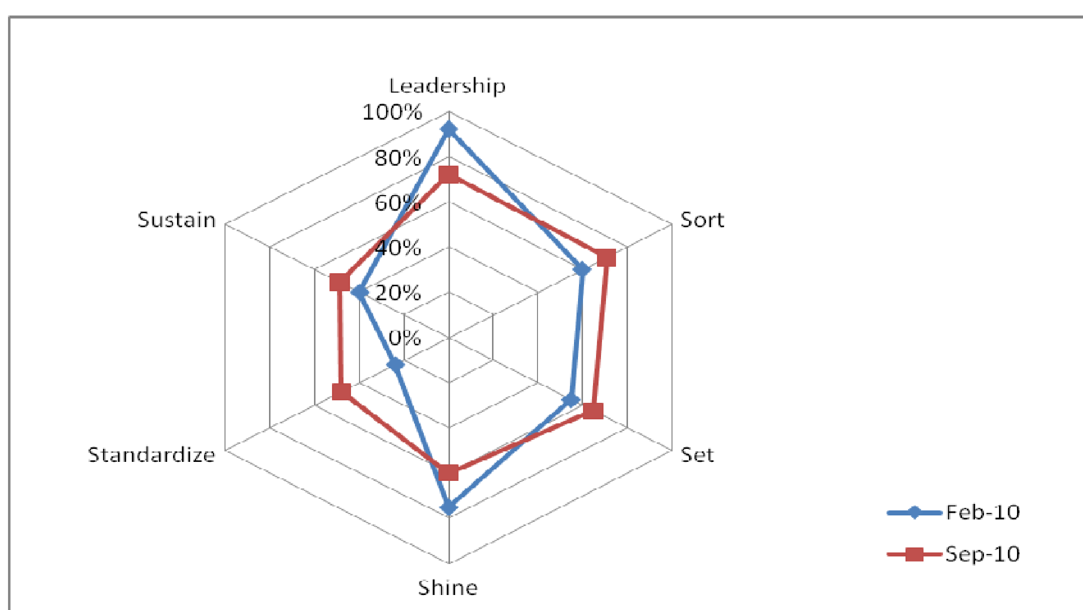

Figure 3-1-20 Evaluation Results by Monitoring Check sheet (DRC)

Table 3-1-58 shows the summary points of the 5S indicators at the supervisory trip in 2010.

Table 3-1-58 Key Points for Evaluation Indicators

	Indicators	Feb-2010
1	Leadership	Although no one is assigned for the project in the MOH, it was confirmed that the hospital director has strong leadership, knowledge of 5S concept and strong enthusiasms. The members of the 5S Committee are also highly committed and knowledgeable, and have high interest in the 5S activities, and were discussing to establish specific action plans.
2	Sort (S1)	Although unnecessary items were removed from the pilot units, the activity needs to be implemented in other areas so that a system or mechanism would be established to enable Sorting in those other areas.
3	Set (S2)	Many large and clear guidance indicators were posted all over the hospital, showing that they were trying to make arrangements for the visitors. Color-coding and labeling were the future tasks.
4	Shine (S3)	The hospital was clean on the whole and efforts were being made for segregating the wastes and clearly describing the location of the dust bins. However, improvement was still required for posting the cleaning schedule, considering the daily cleaning activities for each staff member, implementing the waste disposal system, sorting out the cleaning tool storage status, and cleaning up and maintaining / managing the equipment.
5	Standardize (S4)	The hospital was clean on the whole. Attempts for Standardization have not been implemented yet.
6	Sustain (S5)	Activities for establishing, implementing and firmly familiarizing the rules and the system for making the 5S activities familiar and firmly established among the entire hospital including the visitors would be required to be implemented.

c. Recommendations at the supervisory trip and responses

Based on the results of the supervisory trip, the team made recommendations for Kinshasa State Health Office and the MOH.

A) Recommendations for Kinshasa State Health Office

- Oversee 5S activities in Ngaliema Clinic
- Disseminate 5S activities in all health facilities in Kinshasa
- Accelerate the process of evacuation of material, equipment, medical equipment and vehicles which were already downgraded

B) Recommendations for the MOH

- Develop monitoring and evaluation system of 5S activities under responsibility of a focal point.
- Engage effective commitment of the national steering committee and all organizations for management of 5S project.
- Designate a focal point to follow progresses of the 5S action plan created at the Seminar in Colombo in March 2009.

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

Table 3-1-59 Recommendations at the supervisory trip and responses

Indicators	Recommendations	Responses
Overall	Develop a monitoring and evaluation system of 5S activities using checklists	Made the checklist available
	Develop 5S manuals with many relevant details	Made leaflet
	Expand 5S activities throughout the Clinic and form WIT teams in other services to expand the activities	Already implemented
Sort (S1)	Establish a red tag system to identify unwanted items	Developed a system to separate broken/unnecessary items
	Establish rules for posting / removal briefs	Not yet implemented
	Remove barbed wire	Not yet implemented
Set (S2)	All equipment and tools should be recorded on identification labels and inventory records.	Not yet implemented
	Assuring storage places for broken and /or unwanted items.	Not yet implemented
	Clearly marking places to store whiles, while-chairs, and carts.	Not yet implemented
	Set and indicate electronic codes and switches safely and conveniently Arrange the power lines if necessary.	Not yet implemented
Shine (S3)	Establish plans for cleaning / consolidation to avoid confusions	Not yet implemented
	Display “cleaning responsibility maps and schedules”, and “machines /equipment /tools /furniture at a high level of cleanliness and maintenance schedule”	Not yet implemented
	Improve frequencies and methods of the disposal system for both medical and domestic wastes.	Partly introduced in some units
Standardize (S4)	Secure places to keep equipment and devices with standardized manner	Not yet implemented
	Maximize standardized activities of S1, S2 and S3 with visible signs all around the Clinic.	Not yet implemented
Sustain (S5)	• 5S Slogan and posters competitions should be planned. • Develop regular training programs for existing teams	Although the training for 5S expansion has been conducted, continuous training session has not been implemented yet.

Indicators	Recommendations	Responses
	• Promote KAIZEN activities.	
	Set suggestion boxes and keep public comments on records.	Not yet implemented
	Advise employees and clients on 5S by posters and photos	Not yet implemented
	Conduct awareness programs, contests and prizes on 5S activities.	Not yet implemented
	Conduct employee satisfaction survey.	Not yet implemented

d. Report of the achievements at the wrap-up seminar

- As the achievements for the pilot activities, the following points were introduced; 1) seminars held for the staff members, 2) QIT established (consisted of 3 persons), and 3) KAIZEN school (whose target include not only the hospital staff members but also the government employees, too) opened.
- Many questions were made by the participants regarding the KAIZEN school, and it was described that this school would hold seminars by using manuals and share good practices. Additionally, importance for reducing "uselessness" and for enforcing implementation process of the national plans was introduced.

  These good practices were extracted at the summary session of the seminar.
- Establishment of the KAIZEN school (S4-S5)
- Leader for each S appointed in the 5S Committee
- Weekly schedule for implementing the 5S activities prepared (S4)

(5) Mali

a. Current status in the pilot hospital

The pilot hospital for the country Mali is Hopital Nianankoro Fomba which is located in Ségou Region, which is approximately 4 hour-driving from Bamaco, the capital city in Mali. The hospital is a secondary level hospital and is a core hospital in Ségou and the neighboring area. The hospital was first established as a maternity hospital in 1939, and has had other departments added since then, resulting in having 10 departments at present. It is also featured with improved facilities and equipment, such as being equipped with telemedicine facilities and having computers implemented for the purpose of information management. The hospital has 139 beds with the bed occupancy ratio of 68%, where this data for 2009 had been the highest occupancy ratio during the last 4 years.

The number of patients is 40,000 for general outpatients, 8,000 for emergency outpatients, and 6,000 for hospitalized patients, which showed an increase in all patient categories.

The information collected in this survey as the baseline for the 5S activities is as listed below.

Table 3-1-60 Results of the time study for patients' waiting time

Indicators	Sample	Average time
The time required from being accepted at the reception to the consultation	28	1 hr 05 min
Waiting time for payment (From reception to payment counter)	39	3 min 01 sec
The time required for providing medicines to patients at pharmacy	69	7 min
The time required from when a test is requested to the test results is provided.	19	1 hr 19 min

b. Progresses of 5S activities

Monitoring was conducted at the supervisory trip and before wrap-up seminar in 2010.

Monitoring results for 5S activities and leadership using the check sheet are as listed in Table3-1-61.

Table 3-1-61 Monitoring results of the check sheet

	Indicators	Overall	Leadership	Sort	Set	Shine	Standardize	Sustain
February 2010	Acquired points	105	17	15	32	18	14	9
	Achievement rates	46%	68%	43%	58%	45%	31%	26%
October 2010	Acquired points	105	22	23	37	34	22	20
	Achievement rates	69%	88%	66%	67%	85%	55%	57%

Sources: Monitoring Results

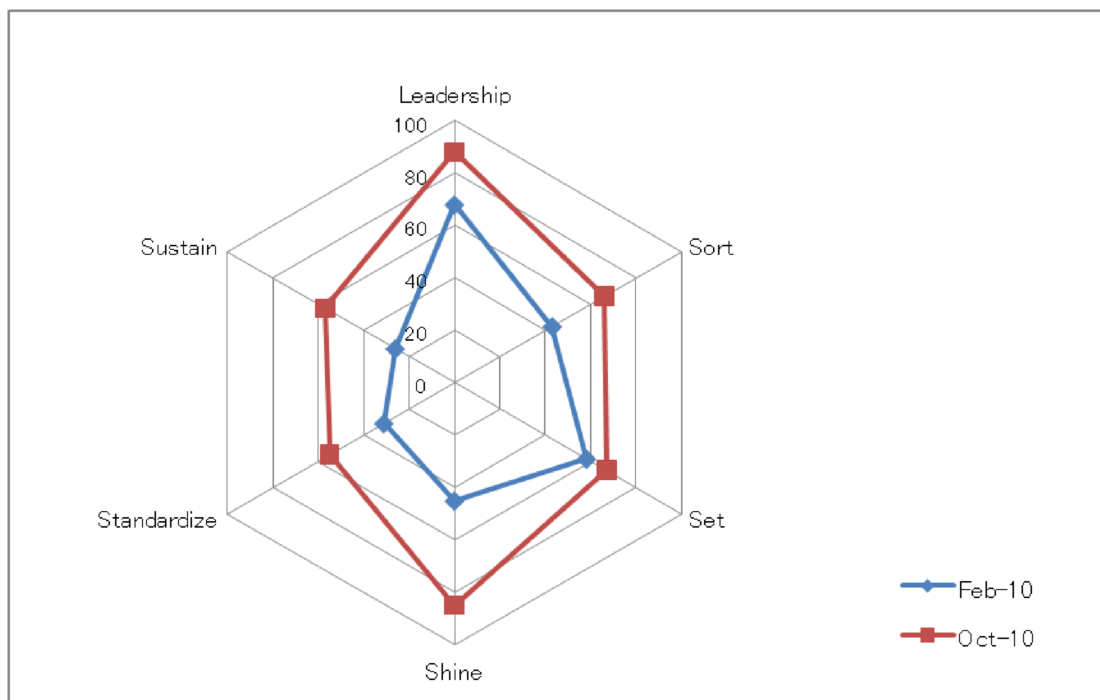

Figure 3-1-21 Evaluation Results by Monitoring Check sheet (Mali)

Table 3-1-62 shows the summary points of the 5S indicators at the supervisory trip in 2010.

Table 3-1-62 Key Points for Evaluation Indicators

	Indicators	February 2010	October 2010
1	Leadership	The members of the 5S Committee are highly committed and knowledgeable, and have high interest in the 5S activities, and were discussing to establish highly specific activity plans.	Leadership continues to be very strong, and the activities are implemented with the policy clearly specified.
2	Sort (S1)	Although unnecessary items were removed from the pilot units, the activity needs to be implemented in other areas so that a system or mechanism would be established to enable Sorting in those other areas.	Steadily implemented in the pilot units.
3	Set (S2)	Many guidance maps using various symbols were posted all over the hospital, showing that they were trying to make arrangements for the visitors. Color coded signs were also being implemented, too. The future tasks would be to expand the efforts to the entire hospital and to work upon displaying the achievements made for the 5S activities and implementing PR activities.	Certainly implemented in pilot units
4	Shine (S3)	The hospital was clean on the whole and efforts were being made for segregating the wastes and clearly describing the location of the dust bins and the towels. However, improvement was still required for posting the cleaning schedule, considering the daily cleaning activities for each staff member, implementing the waste disposal system, sorting out the cleaning tool storage status, and cleaning up and maintaining / managing the equipment.	Certainly implemented in pilot units
5	Standardize (S4)	The hospital was clean on the whole. Dangerous objects such as fire extinguishers were being called for attention using uniform symbols. The hospital was also considering of implementing a centralized sterilizing system, etc.	Achievement ratio did not reach 60% for this evaluation, and we understand that we need to make further efforts.
6	Sustain	Activities for establishing, implementing and firmly	Achievement ratio did not

	Indicators	February 2010	October 2010
	(S5)	familiarizing the rules and the system for making the 5S activities familiar and firmly established among the entire hospital including the visitors would be required to be implemented.	reach 60% for this evaluation, and we understand that we need to make further efforts.

c. Recommendations at the supervisory trip and responses

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

Table 3-1-63 Recommendations at the supervisory trip and responses

Indicators	Recommendations	Progresses
Total	Establish WIT at other units, make WIT and QIT function and expand 5S activities to the whole hospital. Apply the activities practiced at the pilot unit to other units and departments.	Already done
	Waste management systems should be undertaken promptly. In such case, keep in mind to consider 3R (Reduce, Reuse, and Recycle) and assure safety for both hospital staff and visitors.	The 1st step has been done
Sort (S1)	Creating some systems to distinguish unwanted items such as red tag systems	Not yet
	Apply administration system of the wall and notice boards and expand it to other units.	Already done
	Surgical tape should not be used to put posters and other guidance on walls.	Already done
Set (S2)	Establish and strengthen inventory systems and manage equipment and materials properly with labeling.	On the process of implementing
	Assure storage places for broken and unwanted items.	Already assured
Shine (S3)	Make cleaning schedule at each unit and poster it.	Approved the plan
	Secure storage places for cleaning tools.	Selected the pilot unit
	Apply segregation system of the wastes to other units/departments	Already done in all the department
	Improve medical waste management methods	Utilizing carts
Standardize	Standardize S1, S2 and indicators for safety utilizing visual control and	The 1st step has

Indicators	Recommendations	Progresses
(S4)	other methods.	been done
Sustain (S5)	Practicing periodical training at hospitals.	Not yet
	Spread 5S information with posters, slogans, and pictures	Already done
	Practicing 5S promotion activities utilizing contests and 5Sawards.	Already done

d. Report of 5S achievements at the Wrap-up Seminar

As the achievements of the pilot activities, it was reported that 9 stages of action indicators have been established to introduce and execute 5S activities. Also, the comparison between the supervisory trip and results of the monitoring trips were reported for implementing and executing the 5S activities, the results gained from the supervisory trip implemented in February 2010 and from the self-monitoring activity implemented in August, (where achievement was confirmed for 3S, but not for S4 and S5) and the following points learned and implementation effects were introduced;

A) Points learned

- Although there are some difficulties in improving the quality, such difficulties can be solved with the patience and commitment of the staff members.
- Positive attitude is a method required for all improvement cases.
- The important keys for making the 5S-KAIZEN-TQM efforts successful are; practical participation of all members, teamwork, and operational dynamism.
- The significant potential and creativity need to be identified and realized from the staff members.

B) The effects for having implemented 5S-KAIZEN-TQM

- Satisfaction of the patients and users: their impression towards the hospital has improved.
- The attitudes of the medical staff members in the pilot units have changed to positive ones.
- The organization in the pilot units has been improved.
- Almost all staff members are convinced that the activities are effective for both the staff members and the patients.

As for the policy for the future activities, a declaration was made to enforce Standardize (S4) and Sustain (S5), to make 5S familiarized among the entire hospital, and for the vision for becoming the model country for 5S-KAIZEN-TQM within the African-French speaking region.

In the seminar wrap-up session, the following good practices were identified;

- Making significant appeals for the government policy level (S5)
- Implementation of patients and staff satisfaction survey (KAIZEN)
- Hospital internal 5S contest held (S5)
- 5S implementation steps standardized within the hospital (S4)

- Having a vision for becoming the model country within the African region such as in the case of Sri Lanka (S5 / leadership)

(6) Morocco

a. Current status in the pilot hospital

The pilot hospital Salé District Hospital is located in Salé District which is next to the capital city Rabat, and is a secondary hospital which accepts patients from both Salé District and Rabat. Its major departments are surgery, obstetrics and gynecology, external injury, internal medicine, pediatrics, emergency, and ICU departments, and the number of staff members are 69 doctors, 152 other health Professionals, 50 members in the operational and management section, and 22 other staff members, totaling to 293 staff members. (2009: derived from the documents provided by the hospital)

The hospital is a foundation hospital for the 1 million residents in the vicinity, and the annual number of hospitalized patients is 13,293, number of surgery operations is 3,959 cases, number of deliveries is 7,728 cases, and it has 169 beds with the average bed occupancy ratio of 80.3% and the average hospital days per person is 3.7 days. (2008: derived from the documents provided by the hospital)

b. Progresses of 5S activities

Morocco is setting prevention of nosocomial infection as one of its key national policy, and therefore Salé Hospital has a structure for measures against nosocomial infection firmly established. Those who had participated in the seminar for Salé Prefectural Hospital had established an activities' plan to utilize this organization for the 5S activities. At the time of the supervisory trip, it had been reported that external injury and obstetrics and gynecology departments had started their 5S activities, and some of the hospital staff members had been talking about the effects that had been achieved by those activities.

However, virtually no explanation had been made for the hospital staff members regarding the 5S activities, and therefore no efforts had been made for 5S. The Moroccan government has listed prevention of nosocomial infection as one of its key national policy, and therefore the pilot hospital is also placing higher priority on measures against nosocomial infection, and 5S activities had been positioned as part of such measures. Additionally, the structure for implementing the 5S activities is using the structure organized for the measures for nosocomial infection without changing anything, and therefore not the entire hospital including the backyard is incorporated into the structure, which means that these organizations were not in the stage of playing the role of QIT. No seminar had been implemented for the hospital staff members regarding 5S activities, making the level of acknowledgement regarding 5S low, and no activity had been implemented by having the major staff members participated, either. That has resulted in implying heavier load onto those who had participated in the seminar, and therefore they were not being able to make reasonable progress. Based on this situation, the technical support committee explained that it is important to first enable the 5S activities to be firmly established within the hospital all the more for the purpose of ensuring the measures for preventing nosocomial infections rather than handling the 5S activities as part of the measures for nosocomial infections.

In Morocco, all the units and departments visited by the supervisory trip were evaluated respectively based on the opinion of the resources person. Table 3-1-64 shows average scores of the all departments visited by the supervisory trip at the pilot hospital.

Table 3-1-64 Monitoring results of the check sheet

		Total	Leadership	Sort	Set	Shine	Standardize	Sustain
Mar-2010	Acquired points	94	13.5	22.4	20.2	15	13.2	9.3
	Achievement rates (%)	40	54	64	37	50	33	27
Oct-2010	Acquired points	175	19	24	42	35	29	27
	Achievement rates (%)	69	72	69	76	88	73	77

Resource: Monitoring Results

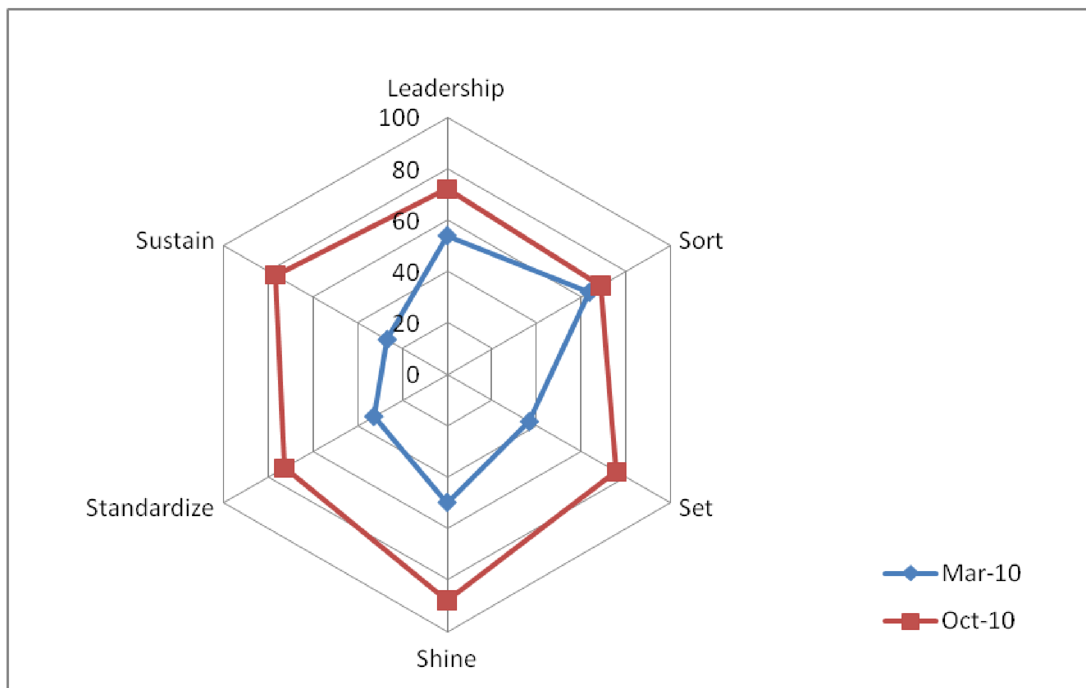

Figure 3-1-22 Evaluation Results by Monitoring Check sheet (Morocco)

Table 3-1-65 shows the summary points of the 5S indicators at the supervisory trip in 2010.

Table 3-1-65 Key Points for Evaluation Indicators

	Indicator	Mar-2010	Oct-2010
1	Leadership	Although the hospital director has an intention to encourage the 5S activities, he has no choice but to prioritize other programs including the one for	A seminar was held regarding the effects gained through the activities such

	Indicator	Mar-2010	Oct-2010
		preventing nosocomial infections in order to follow the government's policy.	as 5S and improvement in the work environment and service quality.
		The mid-level managers are not making active participation into the 5S activities.	
		No specific organization has been set up for implementing the 5S activities.	
2	Sort (S1)	There is no warehouse for storing the unnecessary items, and they are being left outside the hospital.	− Methods for implementing practical measures for the 5S activities introduced − Example shown by the Quality Team, and implemented − Support provided by each team for implementing 5S
3	Set (S2)	Although guidance maps are being posted within the hospital, no other activity has been implemented yet.	
4	Shine (S3)	The cleaning works are being outsourced, and the hospital is being maintained clean. However, no approach or activity for ensuring each individual to acknowledge the necessity for cleaning up around him/herself has been implemented yet.	
5	Standardize (S4)	No activity has been implemented.	
6	Sustain (S5)	Although no activity has been implemented, signs for warning the patients, hospital staff members, and visitors are being posted in the corridors, etc.	

c. Challenges pointed out at the supervisory trip and responses for them

Below shows the summary points of the 5S indicators at the supervisory trip in 2010.

- Other activities were being prioritized at the point of the survey, and no activity had been launched for the 5S activities.
- The activities implemented in the country seemed to be highly influenced by the MOH. The MOH had also been having high expectations towards the values the 5S activities would deliver, but since they are not included in the national policies, the Ministry seemed to have prioritized other activities regarding the national policies. Those relevant with the MOH did not have sufficient understanding regarding the 5S activities, and there were some that would show skeptics towards the activities.
- Many of them tend to incorporate the 5S activities into the measures for preventing nosocomial infections as a part of them, and therefore the efforts being implemented were somewhat limited to "5S activities as one of the methods for preventing nosocomial infections", and the hospital staff members including those in the backyard were not being actively encouraged to participate in these activities.

- Since no seminar or study session had been held for those relevant with the activities, other hospital staff members were not providing sufficient cooperation, and therefore high load was being implied onto those who had participated in the seminar of the Program.
- The size of the hospital was small in comparison to the number of services provided, and many hospital staff members seemed to have been feeling inconvenience. The hospital is also planned to be renovated in a few years time, and therefore the staff members seemed reluctant to work on making any effort before that.

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

Table 3-1-66 Recommendations at the supervisory trip and responses for them

	Recommendation	Responses
1	First of all, the hospital director and the leaders of the hospital staff members need to understand the difference between the measures for preventing nosocomial infections and the concept and activities for 5S, so that they can plan for and implement the activities based on the correct understanding regarding the relationship between the two that 5S activities are not to be implemented as part of the measures for preventing nosocomial infections, but that by making 5S fully familiarized, the measures for preventing nosocomial infections can be implemented.	Activity plan regarding sanitary aspects established
2	Hold a seminar for the leaders and other general staff members to improve their acknowledgement regarding the 5S activities.	Pamphlets regarding 5S-KAIZEN-TQM seminar for the staff members in all categories prepared and distributed
3	If the existing team for the measure for preventing nosocomial infections is to be utilized for the 5S activities, it is necessary to review the structure and to reconsider the team organization appropriate for the 5S activities and to urge the hospital staff members adequate for implementing the 5S activities to participate in the activities.	Establishment of the committee responsible for the project Supervision and providing support to the relevant staff members Coordination within the hospital Wash basins and lockers, etc. installed in some of the departments
4	Since the MOH is highly influential for the	Ensure close cooperation with the person

	Recommendation	Responses
	implementation of the activities, JICA office or the program members are to make the necessary approaches to the MOH, and also the hospital is to report the outcomes achieved from these activities to the MOH so that the activities would be incorporated into the national policy at an early stage.	responsible within the MOH at all stages within the project. Person responsible at the central and regional level to participate in the activities

d. Report of achievements of 5S at the Wrap-up Seminar

The pilot hospital introduced the following points as its achievements gained for the pilot activities; 1) 5S strategy established for reducing nosocomial infection cases in the surgery and obstetrics and gynecology departments, 2) receive the 2nd place in the quality contest held by the MOH, and 3) the environment within the hospital improved by having posted guidance sign boards and by having coordinated the unused areas, etc. The participants pointed out the importance of the executive management being firmly committed for implementing strategic 5S activities.

The pilot hospital described its success factors, challenges, and future policies as listed below;

A) The success factors for the implementation of this method;

- The MOH being strongly motivated
- Management method enforced which was required for ensuring higher quality
- Manuals in place, method of procedures specified, technical card, treatment standard, and protocols in place
- Quality Project implemented by the MOH (patients safety, prevention of infectious diseases, and medical consultation audits)
- The persons responsible at the central and regional level highly committed
- The officer of the top level in the MOH actively participating in the seminars
- Staff members highly motivated in implementing improvements

B) The challenges for the implementation of this method

- Aging of the buildings
- Facility space limited
- Amount of works
- Shortage in staff members
- Not enough budget allocated for the project
- Hospital budget issue

C) The future policies for the activities

- Sharing of the experiences
- Setting of the focal points for sharing the experiences
- Preparing a 5S-KAIZEN TQM guideline
- Enforcing seminars for relevant staff members

In the seminar wrap-up session, the following good practices were identified;

- 5S approach implemented as the prevention of nosocomial infection cases (jointly worked upon with the Nosocomial Infection Prevention Committee) (KAIZEN)
- Clinical audit regarding 5S implemented within the framework of the preventions for nosocomial infection cases (S5-KAIZEN)

(7) Niger

a. Current status in the pilot hospital

The pilot hospital in Niger, Hopital National Lamorde is a tertiary medical institution located in the capital city Niamey. The number of hospital staff members is 345, and it has 253 beds with 13 departments, and 9 departments among them have in-patients wards, too. The annual number of outpatients is approx. 74,000, the number of emergency patients is approx. 2,000, and the number of hospitalized patients is approx. 8,000. The average length of hospital stay is 8.7 days, and the bed occupancy rate is 83.2%. (2009)

b. Progresses of 5S activities

QIT has been organized after the intermediate seminar implemented in August 2009 with the hospital director and the deputy director as the central members following a few months' preparation. No regular activity had been implemented at the time of the survey, and the activities themselves were limited to the pilot units only. The hospital director has a good understanding towards the 5S activities and is highly enthusiastic. With his significant leadership, the director is actively introducing the 5S activities to all hospital staff members, and has called for many staff members to participate in the seminars, making the interest level for the 5S activities very high within the hospital.

Then, immediately after the supervisory trip made in January 2010, the hospital director was replaced with a different person.

The evaluation results for the 5S activities and leadership using the check sheet are as listed in Table 3-1-67. For this survey, the evaluation has been made together with the resource person in a comprehensive manner for all parts within the hospital which we had visited during the supervisory trip.

Table 3-1-67 Monitoring results of the check sheet

		Total	Leadership	Sort	Set	Shine	Standardize	Sustain
Jan-2010	Acquired point	100	14	19	20	25	12	10
	Achievement Rate (%)	43	56	54	36	63	30	29
Oct-2010	Acquired point	175	19	28	35	34	20	11
	Achievement Rate (%)	76	72	69	76	88	73	77

Resource：Monitoring results

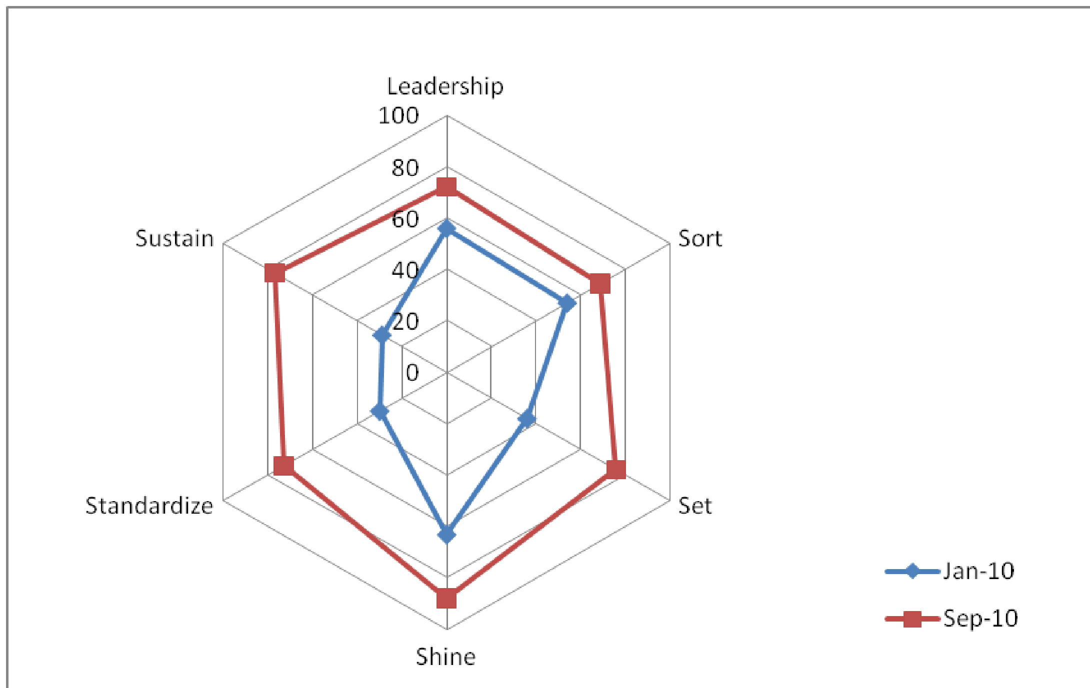

Figure 3-1-23 Evaluation Results by Monitoring Check sheet (Niger)

Table 3-1-68 shows the summary points of the 5S indicators at the supervisory trip in 2010.

Table 3-1-68 Key Points for Evaluation Indicators

	Indicator	January, 2010	October, 2010
1	Leadership	The hospital director and the deputy director are highly committed for the 5S activities, and the director himself had implemented S1 and S2 in his own office to approach the hospital staff members in an active manner. Since the 5S activities had only started at the time of the survey, no regular activity had been launched for the QIT or no specific action plan had been prepared for the 5S activities, either. It is expected that the hospital would create specific plans for the activities, form the WITs, promote activities to be implemented on a continuous basis, and expand the activities to the entire hospital.	5S activities are continuously implemented under the management of the new director.
2	Sort (S1)	Not only the pilot units but the entire hospital, the appearance of the hospital, and the inner garden were all maintained clean, and unnecessary items were being removed, too. The red tag system had not been implemented and no effort had been made for	Unnecessary items are removed from among those required for executing the business. A place for storing unnecessary items has been

	Indicator	January, 2010	October, 2010
		establishing the system for Sort yet.	secured, and beds have been recycled.
3	Set (S2)	Although guidance maps were posted on the passages, corridors, and rooms, but no action was made for the notice boards or labeled signs yet. Although limited to the pilot units and some departments, certain efforts for implementing S2 had been confirmed such as creative ways being considered for storing the documents and the color coded system being implemented, etc.	Medicines are categorized by implementing the labeling method, and displays are made within the hospital.
4	Shine (S3)	Inside and outside the hospital was maintained very clean. Creative efforts were being made for utilizing the existing goods such as placing plants below the drainage from the air conditioners or cutting out a large opening from the lid of the dust bins so that the patients can use them easier. They had also been implementing efforts regarding the safety of the patients and hospital staff members such as prohibiting wearing shoes in the in-patients ward where the critically ill patients are being hospitalized. As for waste disposal, although a waste storage location had been set up within the hospital premise by surrounding that area with walls, some waste was still scattered at some locations where the general public was able to touch.	The status for implementing cleaning activities within and out of the hospital has improved even more (based on the results shown on the monitoring check sheet)
5	Standardize (S4)	Efforts made for the 5S activities were still limited, and no activity was implemented to accomplish S4. Activities for S1, S2, and S3 were already implemented, and such efforts were often seen in various places throughout the hospital.	The S1 – S3 activities are implemented in the hospital on a limited basis only, and have not been standardized among the entire hospital yet.
6	Sustain (S5)	We were informed that study sessions were held for all hospital staff members and that many members participated in them. Efforts were made to make the 5S activities familiar starting from simple actions such as having a sign notifying of the 5S activities in front of the tuberculosis ward which is one of the pilot units for the 5S activities, or describing KAIZEN in the plant pot described above.	No comment

c. Efforts for 5S-KAIZEN

Below shows the summary points of the 5S indicators at the supervisory trip in 2010.

- A motorbike parking lot was renovated by utilizing the project support budget provided by JICA, and the parking locations of various types of visitors were clarified using the color coded system and the number tag system.
- The pilot hospital had created a bicycles / motorbike parking lot by utilizing the support fee. The parking lot had the color coded system and number tag management system implemented to clarify the parking location for each visitor, which are efforts that can be lead to KAIZEN in the future. The motorbikes were parked in good order by having implemented these systems.
- Some of the units had reviewed their design structures to change them into those appropriate for the services provided in each department such as creating additional examination rooms by utilizing the space where it used to be a parking lot in the past. The designs for the new examination rooms were well considered such as being segregated into adequate room size by installing walls in between them or being well equipped by having air conditioners and running water installed.
- We visited "Hopital National de Niamey", a neighboring tertiary medical institute, and the resource person explained the 5S concept. The hospital staff members were highly interested in the method and some the management staff of Niamey National Hospital participated in the supervisory trip reporting session for the pilot hospital which was held on the next day of our visit. It is desirable to implement the 5S activities in Niamey National Hospital and to expand the implemented area while also confirming the progress status in the pilot hospital, too.

d. Recommendations for 5S activities at the Supervisory trips and responses for them

As for the challenge shown above, the survey team provided the following recommendations. At the wrap-up seminar held in October 2010, the pilot hospital said that they are appropriately addressing these recommendations.

Table 3-1-69 Recommendations at the supervisory trip and responses for them

	Recommendations	Responses
1	Since the pilot units had not been providing any service such as making diagnoses or providing treatment, etc. at the time of the survey, the activities need to be deployed onto the departments where actual services are already being provided.	Deployed and implemented in the Cardiac Internal Medicine Department, etc.
2	Create a storage location for the unnecessary items, and consider a waste disposal system which includes the procedure for the final stage of waste disposal, too.	Storage location specified for unnecessary items.
3	Promote preparing documents such as operational manuals for the purpose of standardizing the processes	Not implemented yet.

	Recommendations	Responses
4	Since the hospital director was replaced after the survey, the QIT members need to encourage the new director to maintain a structure for continuing the activities.	The QIT members and the new director are cooperating in implementing the activities.

e. Report of achievements of 5s at the Wrap-up Seminar

As the achievements for the pilot activities, the following points were introduced; the warehouse was sorted by following the recommendation made for the supervisory trip, manuals prepared, and aged equipment recycled. After the presentation, the participants held a discussion, saying that it would be difficult to move onto Standardize (S4) and Sustain (S5) unless the approaches for Sort to Shine (S1–S3) are firmly established as the hospital's culture, and that positive leadership and continuous activities are important.

In the seminar wrap-up session, the following good practices were identified;

- 5S activities are being implemented although the leader had been replaced (S5)

3-2 Progress Status of the Program

3-2-1 Data Collection Status of Baseline Information

The survey team explained purposes of the survey such as (1) purposes of the supervisory trip and the baseline survey for KAIZEN, (2) purposes and the significances of the questionnaire format and the time study, (3) definitions and purposes of evaluation items to the MOH and directors and 5S committees in the pilot hospitals and ask them to submit replies for the questionnaire and cooperate with the time study. The evaluation items listed in this survey had been comprehensive and had also included some objective measurement surveys, which may require some time for collecting data. Therefore, in any case where the target hospital would say that it is difficult to complete collecting the information during the period allowed for the field survey, we made the necessary arrangements to enable the hospital to submit the replies for the survey documents at a later time via the JICA office or by directly delivering the documents to a member of the survey team. This is list of the methods and status of collecting the survey documents in each country.

Table 3-2-1 Situation of the data collection in the pilot hospitals (Group 1)

Country	Hospital	Data collection methods	Timing of Data collection	Collected information and the collection status (for the 2nd survey)
Eritrea	Orotta General Hospital	Data was prepared beforehand and submitted during the survey	Results of the time study was submitted through JICA expert at the	The time study was submitted at the beginning of February, and other data was submitted during the survey.

Country	Hospital	Data collection methods	Timing of Data collection	Collected information and the collection status (for the 2nd survey)
			beginning of April	
Eritrea	Halibet Hospital	Data was prepared beforehand and submitted during the survey	Results of the time study was submitted through JICA expert at the beginning of April	All the information was submitted at the end of February through the JICA expert.
Kenya	Mazali Hospital	All data was submitted. Some of the data was submitted as original formats and written by the member of the study team.		The survey forms with the responses described by the hospital (in handwriting) and relevant documents collected. As for some parts of the questionnaire, the survey team collected the original data and described the responses.
	Coast Province General Hospital	All data was submitted. Some of the data was written by member of the study team		The survey forms with the responses described by the hospital (in handwriting) and relevant documents collected. As for some parts of the questionnaire, the survey team collected the original data and described the responses.
Madagascar	CHU Mahajanga	Most data was written by the hospital. The study team gathered some of them supplementarily.	The results of the time study was submitted in the middle of March	The time study was submitted in December, and the rest was submitted during the survey.
Malawi	Dowa District Hospital	The team asked hospital to submit results through JICA field office	Completed at the beginning of March	The survey forms with the responses described by the hospital (in handwriting) and relevant documents collected. As for some parts of the questionnaire, the survey team collected the original data and described the responses.
	Mzimba District	The team asked hospital to submit	Completed at the beginning of	The survey forms with the responses described by the

Country	Hospital	Data collection methods	Timing of Data collection	Collected information and the collection status (for the 2nd survey)
	Hospital	results through JICA field office	March	hospital (in handwriting) and relevant documents collected. As for some parts of the questionnaire, the survey team collected the original data and described the responses.
Nigeria	Lagos Island Maternity Hospital	The team asked hospital to submit results through JICA field office	Gathered information in the middle of May and completed at the beginning of June.	Most documents were collected during the survey, but some of them were collected later via the Technical Cooperation
Senegal	Tambacounda State Hospital	The team asked hospital to submit results through JICA field office	Since data was not submitted by the hospital, the team gathered part of data by itself.	Explanation was provided regarding the time study at the hospital, and then the hospital implemented the study by itself and sent us the responses in January. The rest was collected by the survey team, and some were based on the interviews made with the staff members.
Tanzania	Mbeya Referral Hospital	The data was submitted mainly by effort of the hospital to fill it and the team got information supplementarily.		The hospital filled the answers before the survey and the team supplementary interviewed during the survey
Uganda	Tororo General Hospital	The team gathered original data and filled in the survey sheets. Some of the data was written by the hospital staff with the team.	Questionnaire for the participants of the JICA seminar was submitted later.	As for the documents that had not been able to be collected during the survey, we made a request to JOCV for the pilot hospital to collect them, and all responses have been collected by the end of January 2011.

Table 3-2-2 Situation of the data collection in the pilot hospitals (Group 2)

Country	Hospital name	Data collection methods	Timing of Data collection
Benin	Lagune Maternal and Child Hospital (Hôpital de la Mère et de l'Enfant Lagune)	The team asked the hospital to submit results through JICA office and the data was submitted	After collecting date at the end of March, the team asked the hospital to submit missing data
Burkina Faso	Banfora Regional Hospital Center (Hôpital de la Banfora State)	The team asked the hospital to submit results through JICA office and the data was submitted	After collecting date at the end of March, the team asked the hospital to submit missing data
Burundi	Prince Regent Charles Hospital (Hôpital Prince Regent Charles)	The team asked the hospital to submit results through JICA office and the data was submitted	Completed in the middle of March
DRC	Ngaliema Clinic (Clinique Ngaliema)	The team asked the hospital to submit results through JICA office and the data was submitted	The results of the time study was submitted at the late March Other data was submitted in May
Mali	Nianankoro Fomba Hospital (Hôpital Nianankoro Fomba de Segou)	The team asked the hospital to submit results and the data was submitted via e-mail.	Completed at the beginning of March
Morocco	Sale District Hospital (Hôpital de Sale)	The team asked hospital to submit results through JICA field office	Not submitted yet
Niger	Lamorde Hospital (Hôpital de Lamordé de Niamey)	The team asked JICA Office to coordinate with gathering data at the hospital	Completed at the late June

Status of the kinds of information how to submit the information on the questionnaires by countries is shown on Figure 3-2-1.

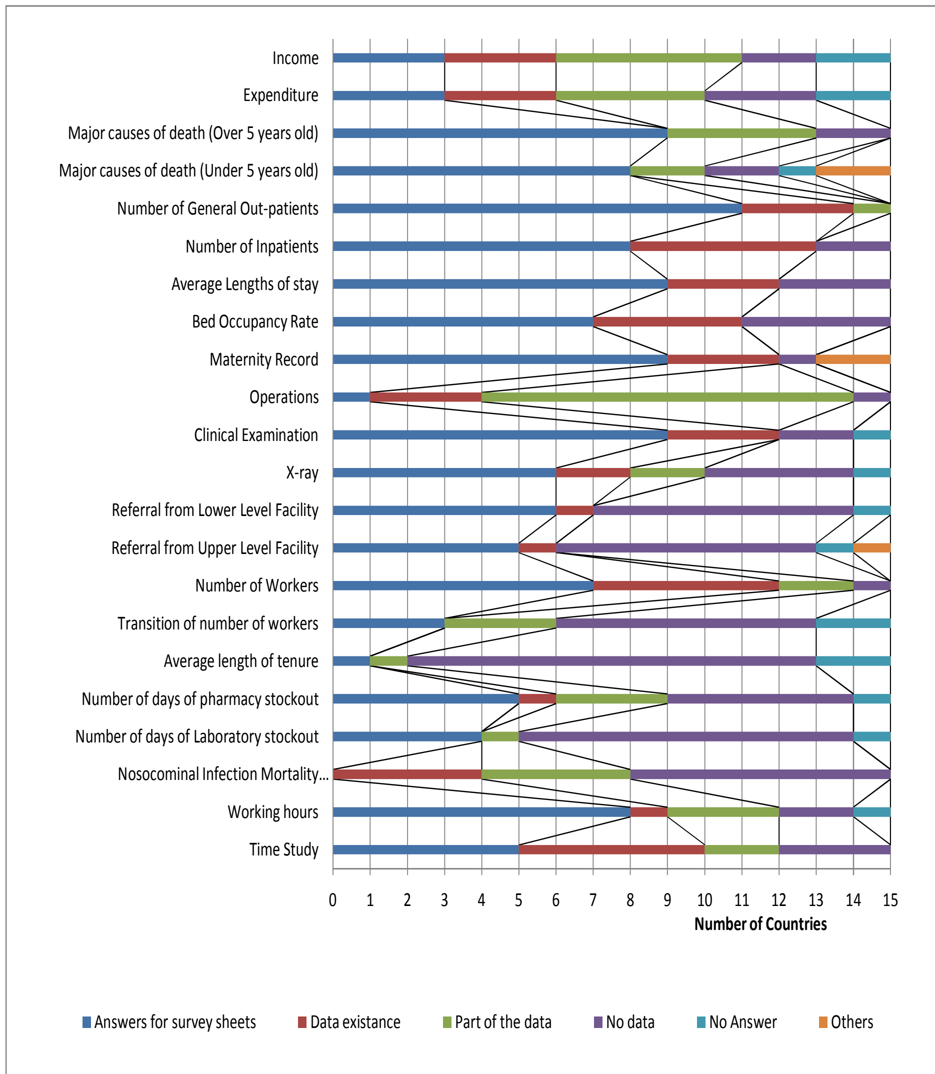

Figure 3-2-1 Data collection methods and status of submission by kinds of information

Status of the countries how to submit the information on the questionnaires is shown on Figure 3-2-2.

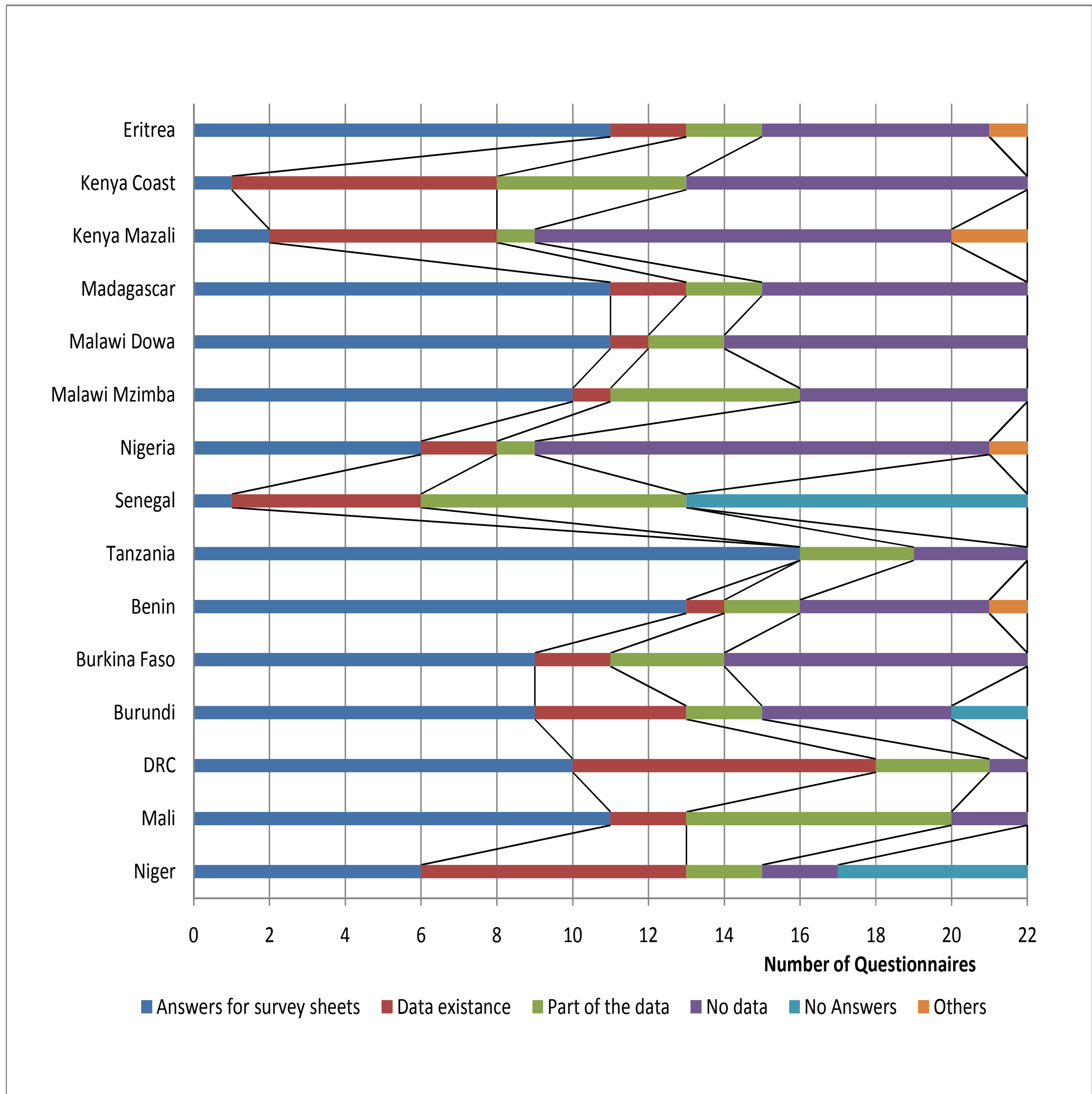

Figure 3-2-2 Number of kinds of information how to submitted by countries

The pilot hospitals had collected the required information based on the existing data such as those saved in their health management information systems, etc., being able to provide the information related to the number of services provided. However, many countries did not have any data accumulated for matters such as average length of tenure, the number of stockout days of medicines and reagents (inventory control status), and information regarding the safety level of the hospitals, and in many cases, the data for these matters had been newly collected for this survey. Many of the hospitals had systematically gathered the information related to their financial status and health services, but not many had gathered the information that would be useful for evaluating effects of the 5S activities on a regular basis such as those related to the hospital administration status and the safety level of the hospital.

The possibility for obtaining individual data and for utilizing such data as the index for this approach is as described below;

- Among the financial data, the data for financial resources and the payment purposes for the major items are relatively extensive and therefore can be shared. However, since the hospital budget cannot be considered by the individual hospital, such data is not utilized for making decisions for their businesses in most cases, and it is difficult to utilize the data as the index helpful for improving their businesses. However, as in the case of countries such as Tanzania or Burundi, where the payment from the health insurance would vary according to the performance of the hospital's, the 5S activity is highly appreciated as a tool for showing the superior performance of the hospital, and therefore it can be said that their improvement in income is the achievement gained through the 5S activities.
- Although the data collected from the patients information can be easily shared, such data has not been collected in a way where the relevance with the achievements gained through 5S or KAIZEN activities can be readily confirmed, and therefore some creative method would be required for accumulating such data.
- Although the inventory information for the medical drugs, etc. is described in the ledger, such data is not utilized and processed into management information where the minimum inventory amount and ordered amount, or losses such as number of stockout dates and number of expired items can be confirmed, and therefore some creative method would be required for utilizing such data as the index showing the achievements from the 5S or KAIZEN activities.
- Some countries are promoting preventions of nosocomial infection as their national priority policy, and such countries seem to utilize in-hospital mortality rate as the base index. No country had been calculating the rate of postoperative infection or had been cultivating bacteria on a regular basis such as in the case of Castle Street Hospital for Women in Sri Lanka.

3-2-2 Progress Status of the 5S-KAIZEN-TQM "Action Plan"

The countries in Group 1 started their efforts for making their hospital staff members familiarized with the 5S activities and for proceeding onto KAIZEN based on the action plan created in September 2009. Then, they revised their action plan described above in the region focused training course implemented in July 2010. The overview of the efforts made in each country as of the 1st supervisory trip (Jan. – Apr. 2010) and as of the 2nd supervisory trip (Nov. 2010 – Jan. 2011) is as described in Table 3-2-3.

Table 3-2-3 Progress of action plan in the Pilot Hospitals (Group 1)

Country	Ministry Hospital	Goal by March 2010	Achievement level	The target set as of Jan. 2011	Achievement level
Eritrea	Ministry of Medical Services	Expand to other hospitals	Considering establishment of a guideline	Complete the guideline and deploy it to other	The 1st draft of the guideline completed Seminars to be held in the near

Country	Ministry Hospital	Goal by March 2010	Achievement level	The target set as of Jan. 2011	Achievement level
				Districts	future for 3 Districts out of the metropolitan area
	Orotta Medical Hospital	Creating training manual	Conducting seminars	Implementation of 5S into the Financial and Accounting Office Start KAIZEN activity	Already implemented KAIZEN activity has not been implemented yet. A seminar is to be held for the hospital staff members during Feb. – Mar.
Kenya	Coast State Hospital	Introducing coding and labeling	Progressing as schedule	Make the hospital internal staff members familiarized with the concept of 5S-KAIZEN, and implement the activities	Improvement of the service charter; seminar, etc. currently in process
Madagascar	Mahjanga University Hospital Center	Reducing waiting time for patients	Improving patients registration and payment system	Firmly establish the 5S activities and implement KAIZEN activity	Various targets achieved for firmly establishing the 5S activities Trial efforts have been made for the KAIZEN activity
Malawi	Mzimba District Hospital	Strengthening QIT	Launching activities at 2 pilot units	Improve the inpatients / outpatients satisfaction	5S activities currently being established internally within the hospital
Nigeria	Lagos State MOH	NA		Implement the 5S activities into the state policy	It had been decided to consider establishing a quality control unit, which had been proposed by the Technical Cooperation Project experts during the survey, and we will submit a proposal to the state health commissioner.
	Lagos Island Maternity Hospital	Improving ability of staff members	Conducting KAIZEN Training	Establish the monitoring and evaluation system	Although supervisory trip is made by QIT, etc., the evaluation system is yet to be established
Senegal	MOH	Selecting 12 pilot hospitals for 5S activities	Selecting 12 pilot hospitals	Establish a national policy regarding the quality	National policy currently being established within the Quality Program implemented by the MOH
	Tambacounda State Hospital	Establishing organizational framework and	Implementing 5S activities by QIT and WIT	Coordinate the seminars and the structure for implementing	Seminars yet to be implemented. The structure was on its way of being coordinated.

Country	Ministry Hospital	Goal by March 2010	Achievement level	The target set as of Jan. 2011	Achievement level
		promoting its activities		KAIZEN	
Tanzania	Mbeya Referral Hospital	Establishing KAIZEN Team	Conducting KAIZEN training last February	Implement KAIZEN seminar for departments newly included into target departments	To be implemented by the end of February 2011
Uganda	MOH	N/A		Develop the quality improvement framework	Currently the Quality Assurance Office is preparing the draft version
	Tororo District Hospital	Establishing TQM Office Introducing KAIZEN Suggestion scheme	Establishing TQM Office	Evaluation of 5S-KAIZEN	To be implemented by using the M&E tool which had been developed by the hospital in November 2010

In Kenya and Malawi, it was requested to have the pilot hospitals changed, and as a result, one hospital in each country, 2 hospitals in total started their 5S activities 2 years later than the others as new pilot hospitals. At the region-focused training course held in 2009, those 2 new pilot hospitals also participated in the course where the participants prepared strategy papers. Although these 2 newly added institutions did not have any opportunity to take part in the implementation seminar of 5S where all other pilot hospitals had participated in, the resource persons and the MOH in each country provided their support, and therefore have been able to promote their activities in a smooth manner. Eritrea, Senegal, and Tanzania are placing emphasis on their activities for making the nations familiar with the 5S activities, where especially Tanzania is providing support for the 5S activities for the neighboring countries by accepting trainees from Uganda and Malawi. The pilot hospital in Uganda has revised its action plan in October 2010 to one that is matching with the hospital's actual status.

Tanzania, Nigeria, and Uganda have proceeded onto the KAIZEN stage, and Madagascar and Senegal are also implementing trial activities for the KAIZEN stage.

Each country has started its efforts for familiarizing the 5S concept and for making a progress onto KAIZEN activities based on the activities' plan prepared in August 2009. The outline of the efforts made by each country as of March 2010 is as listed in Table 3-2-4.

Most countries had achieved their targets or had been making efforts for achieving their targets at the point of the survey in general. In Morocco, activities required by the national policy such as the measures

for preventing nosocomial infection were prioritized, and therefore efforts for the 5S activities had not started on full scale yet.

Table 3-2-4 Progresses of activities in the Pilot Hospitals (Group 2)

Country	Hospital name	Goals at the survey	Achievement level
Benin	Lagune Maternal and Child Hospital	Utilizing 5S at all the departments	All the departments are tackling but the progresses are different.
Burkina Faso	Banfora Regional Hospital Center	Preparation for the Information Education Communication formats for WIT	It is not achieved yet
Burundi	Prince Regent Charles Hospital	Preparation for the monitoring and evaluation sheets for 5S activities	Evaluation sheets are not prepared yet
DRC	Ngaliema Clinic	Settlement of the 5S activities in the whole pilot hospital	5S activities are conducted to complete 5S in the pilot unit. The hospital plans to expand 5S activities to other units.
Mali	Nianankoro Fomba Hospital	Conducting 5S activities in the pilot unit	The hospital has initiated but it does not prepare for warehouses for unwanted items
Morocco	Sale District Hospital	Introducing saving system of the record formats of the warehouse management for un wanted items	The activities for the program will start soon.
Niger	Lamorde National Hospital	Establishment of the quality control unit	Quality control unit has been already established and pilot unit will initiate the 5S activities at the beginning of January.

The progress statuses for the 5S activities implemented in the pilot hospitals in each country after the supervisory trip, the quality / safety policy implemented by the MOH, and the strategy for making the nations familiar with the 5S activities were presented at the "Wrap-up Seminar" held in Morocco in October 2010. As for the achievements gained in the "Wrap-up Seminar", please refer to "3-2-5 Identifying the Good Practices".

3-2-3 Results Gained through the Monitoring Check Sheet

Although the same check sheet was used in the supervisory trip which had been implemented during Jan. – Apr. 2010 in order to confirm the progress status of the 5S activities in the pilot hospitals, since different surveyors had visited each country, there had been variance in the survey implementation process. From among all survey target countries, Nigeria, Eritrea, Burundi, DRC, Mali, Senegal, and Niger implemented evaluation for the entire hospitals whereas other countries prepared check sheets for each pilot department to implement the evaluation. For the purpose of gaining an overview of the trend within the entire survey target country, the pilot institutions which had the data covering several different units had the average score

calculated by using the scores for each department to gain the overall evolution score for the entire hospital. After that, Group 1 had the region focused training course implemented in July, and then the 2nd supervisory trip implemented during Nov. 2010 – Jan. 2011, where the progress statuses of the 5S activities implemented in each pilot hospitals were confirmed using the same check sheet with the one used in the previous supervisory trip. For the 2nd supervisory trip, the outline of the survey was summarized in advance, and it had been confirmed among the surveyors that the survey using the monitoring check sheet would 1) evaluate the entire hospital, 2) have a single set of check sheet prepared for the entire hospital, and 3) monitor the hospital mainly by monitoring QIT, so that the survey method would be consolidated as much as possible. As for Tanzania, the MOH in the country had implemented a monitoring activity using the same check sheet, and therefore that data has been used for our survey.

Group 2 implemented self evaluation by using the same check sheet as the preliminary exercise for the Wrap-up Seminar in October 2010. In order to ensure that all hospitals will be able to make self evaluations in mostly the same procedure, the method for implementing the self evaluation had been delivered to each hospital together with the overview of the seminar. The results gained from the monitoring check sheet for Group 1 are as described in Table 3-2-5. The average values and the standard deviation values are calculated to identify the countries which had exceeded or had been below the range of average +/- standard deviation for each item.

表 3-2-5 List of the monitoring results by monitoring check sheet (Group1)

	Indicator	Eritrea	Kenya Mazali	Kenya Coast	Madagascar	Malawi Dowa	Malawi Mzimb	Nigeria	Senegal	Tanzania	Uganda	Average	Maximum	Minimum	SD	Countries with data higher than range of average (Average+SD)<	Countries with data higher than range of average (Average-SD)>
1st Supervisory Trip	Leadership	70	56	60		64	29	84	70	68	63	62.6	84.0	29.0	14.9	Nigeria	Malawi Mzimba
	Sort	80	53	59	74	58	35	60	50	70	54	59.3	80.0	35.0	13.0	Eritrea Madagascar	Malawi Mzimba
	Set	80	49	55	52	54	37	58	40	67	53	54.5	80.0	37.0	12.4	Eritrea	Malawi Mzimba Senegal
	Shine	50	61	58	55	68	47	65	30	73	62	56.9	73.2	30.0	12.3	Tanzania	Senegal
	Standardize	60	31	46	52	44	20	48	20	56	44	42.1	60.0	20.0	14.1	Eritrea Tanzania	Malawi Mzimba Senegal
	Sustain	80	31	37	55	37	20	51	20	64	42	43.7	80.0	20.0	19.1	Eritrea Tanzania	Malawi Mzimba Senegal
2nd Supervisory Trip	Leadership	92	72	84	80	62	50	84	72	78	63	73.7	92.0	50.0	12.6	Eritrea	Malawi Mzimba
	Sort	74	66	69	63	63	51	69	57	77	64	65.3	76.6	51.0	7.6	Eritrea Tanzania	Malawi Mzimba
	Set	73	62	62	65	56	48	75	56	72	61	63.0	75.0	48.0	8.5	Eritrea Nigeria Tanzania	Malawi Mzimba
	Shine	85	75	75	65	69	58	70	53	78	69	69.7	85.0	53.0	9.4	Eritrea	Malawi Mzimba Senegal
	Standardize	75	63	55	58	47	32	70	33	68	50	55.1	75.0	32.0	14.8	Eritrea Nigeria Tanzania	Malawi Mzimba Senegal
	Sustain	91	74	63	77	41	23	71	49	58	42	58.9	91.0	23.0	20.4	Eritrea	Malawi Mzimba

Based on the prerequisite that it is necessary to take into consideration the fact that evaluation method and the evaluating persons are different between the 1st and the 2nd supervisory trips, the evaluation results for each

institution were compared. As a general trend, the countries which had gained relatively higher scores for the 1st survey had also gained higher scores for the 2nd survey, and vice versa. Mzimba District Hospital in Malawi had been selected as the pilot hospital for the program in the regional focused training course in 2009, and therefore it is presumed that it has not sufficiently gained the know-how gained for the 5S activities via the AAKCP "Total Quality Management (TQM) for Better Hospital Services" as in the case for other pilot hospitals. Senegal was showing some delay in its progress when compared with other pilot hospitals, and this is assumed to be due to the strikes the hospital had been going on. Eritrea had many items superior to the average + standard deviation on the whole, but since it was not utilizing the guideline provided by the country in an effective manner, some improvement is required for standardizing the activities and for operating the guideline. On the other hand, Madagascar had sincerely followed the proposals made in the previous supervisory trip, and had promoted creative activities for ensuring standardization and Sustain. However, since it had made severe evaluations for the items it had considered to be lacking achievement, the overall scores are not very high. Additionally, since the pilot hospital in Madagascar was very large, it had been difficult to ensure the activities thoroughly, and this had led to making severe evaluations, too.

The average scores for each check item for the 1st and 2nd supervisory trip for Group 1 countries are shown in Fig. 3-2-3. All items are showing higher scores for the 2nd supervisory trip.

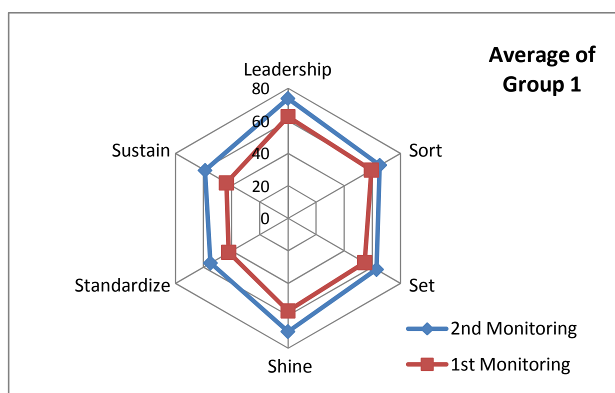

Figure 3-2-3 Transition of average monitoring results among Group1 countries

The standard deviation values for the target countries' 1st and 2nd supervisory trip (for each check item) are displayed in a radar chart. The values for the 2nd supervisory trip are smaller on the whole, which shows that there is less variance in the 2nd results, but Standardize (S4) and Sustain (S5) is showing larger values. As a result of a cross-sectional analysis of the results gained from the monitoring check sheet, it can be seen that Group 1 has been able to make relatively steady progress for Sort (S1) to Shine (S3) under the strong leadership,

but the variance in the progress for Standardize (S4) and Sustain (S5) has become larger. It can also be analyzed that by having standardized the method for utilizing the monitoring check sheet prior to making the survey, the variance in the survey results has become smaller.

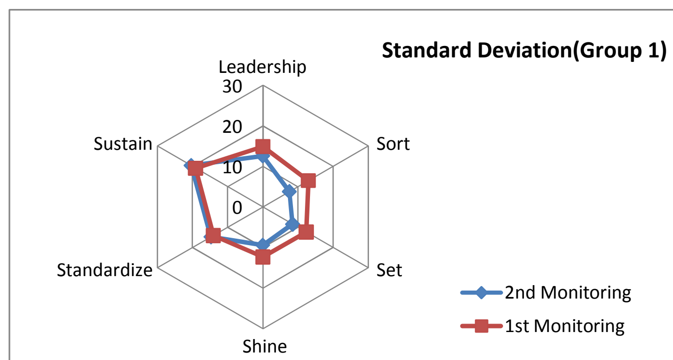

Figure 3-2-4 Transition of the standard deviation of monitoring results (Group1)

The results gained from the monitoring check sheet for Group 2 are as listed in Table 3-2-6. As it had been the case for the results for Group 1, the average and standard deviation have been calculated to identify the countries which had shown higher values than the average + standard deviation and the countries which had shown lower values than the standard deviation for each item.

Table 3-2-6 List of the monitoring results by monitoring check sheet (Group 2)

	Indicator	Burkina Faso	Benin	Burundi	DRC	Mali	Morocco	Niger	Average	Maximum	Minimum	SD	Countries with data higher than range of average (Average+SD) <	Countries with data higher than range of average (Average-SD)>
Supervisory Trip	Leadership	80	72	92	92	68	54	56	73.4	92.0	54.0	15.5	Burundi	Morocco
	Sort	63	49	37	60	43	64	54	52.8	63.9	37.1	10.3	Morocco	Burundi
	Set	55	56	25	55	58	37	36	46.0	58.2	25.5	12.9	Mali	Burundi
	Shine	50	58	43	75	45	50	60	54.3	75.0	42.5	11.1	DRC	Burundi
	Standardize	33	44	33	24	31	32	30	32.7	44.4	24.4	6.0	Benin	DRC
	Sustain	49	54	60	40	26	27	29	40.8	60.0	26.0	14.0	Burundi	Mali
Wrap-up Seminar	Leadership	93	--	100	72	88	72	72	82.8	100.0	72.0	12.5	Burundi	N/A
	Sort	89	54	83	71	66	69	69	71.6	89.0	54.0	11.5	Burkina Faso	Benin
	Set	81	36	60	65	67	76	76	65.9	81.0	36.0	15.1	Burkina Faso	Benin
	Shine	87	53	70	60	85	88	88	75.9	88.0	53.0	14.8	N/A	Benin
	Standardize	77	--	43	48	55	73	73	61.5	77.0	43.0	14.6	Burkina Faso	Burundi
	Sustain	82	--	71	49	57	77	77	68.8	82.0	49.0	13.0	Burkina Faso	DRC

Although it must be noted that the method for implementing the check up and the surveyors had been

different between the supervisory trip and the wrap-up seminar, still there were some items that each country was showing higher or lower scores for some certain items when compared with the average distribution. Benin insisted that it had been able to achieve the level that can be subject for check-up for Sort to Shine (S1-S3) only, and therefore is not making evaluations for other items, and it has made severe evaluations, which led to showing lower scores for those gained during the wrap-up seminar when compared with those gained in the supervisory trip. The scores for Burkina Faso gained during the wrap-up seminar had been higher than those gained during the supervisory trip, and Burundi also showed significant improvement in Sort (S1), Set (S2), and Shine (S3). This is assumed to be the effect gained from the indirect support (provided by JICA office for Burkina Faso and by the Technical Cooperation Project for Burundi) for the approach.

The average values for each check item gained during the supervisory trip and during the wrap-up seminar are as shown in Fig. 3-2-5. All items are showing higher scores in those gained during the wrap-up seminar. Additionally, leadership and Shine (S3) had shown higher values during the supervisory trip, but all other 4 items are showing similarly high values during the wrap-up seminar.

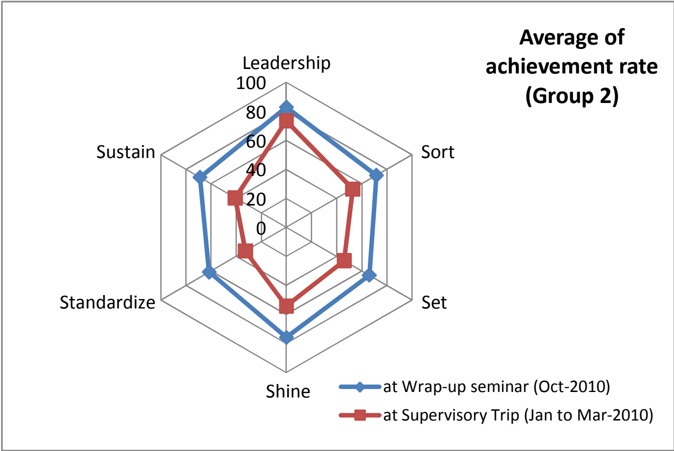

Figure 3-2-5 Transition of the average achievement rate among Group 2

In the radar chart displaying the standard deviation values (for each check item) during the supervisory trip and during the wrap-up seminar, values for “leadership” and Sustain (S5) are showing smaller values for during the wrap-up seminar whereas other values are showing larger values. This is assumed to be the variance resulting from the difference in the survey method for making self evaluation in each country.

Although Group 2 countries are making steady progresses for the 5S activities under the strong leadership, since there is significant variance among the progress of each country, those countries showing slower progresses may require some additional opportunities for reviewing how to implement the approach and for the definition of 5S all over again. On the other hand, since it is assumed that the monitoring procedures were not

standardized to a sufficient level and had therefore resulted in the variance gained in the evaluation results, it is important to clarify the definition of each item and the criteria for the scores for the monitoring check sheet in order to consolidate the procedures for implementing self evaluation.

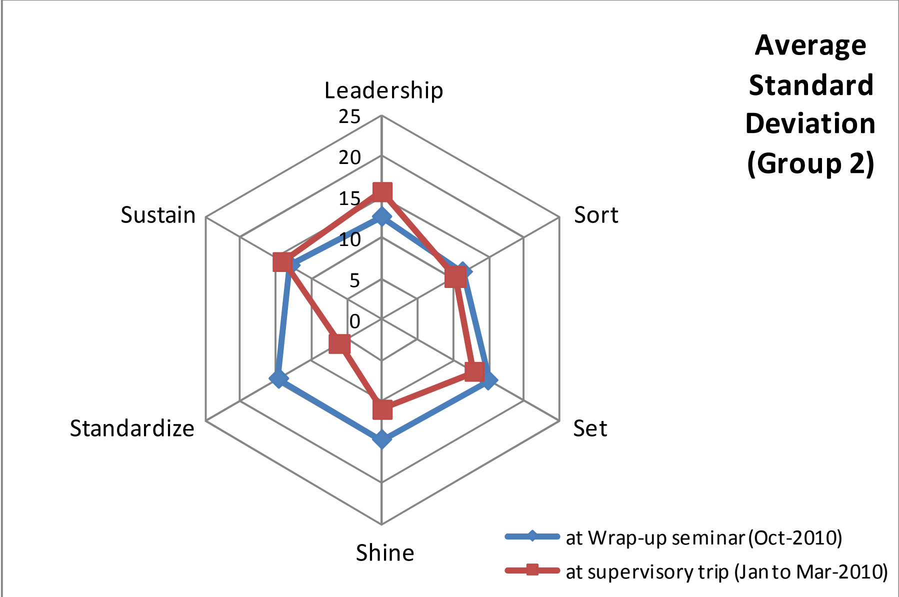

Figure 3-2-6 Transition of the standard deviations of the monitoring results (Group 2)

The comparison between the average values for each item gained in the two monitoring check cases for Group 1 and 2 is shown in Fig 3-2-7. The 1st supervisory trip for Group 1 and the supervisory trip for Group 2 had been implemented in the same procedure at the similar timing, but Group 1 had shown higher values except for Leadership. After that, Group 2 implemented self-evaluation before the wrap-up seminar, and Group 1 had the 2nd supervisory trip implemented during Nov. 2010 – Jan. 2011, and the same evaluation was implemented for both Groups. In this evaluation, Group 2 showed higher values than Group 1, which means that Group 2 countries have caught up with the progress made by Group 1 countries.

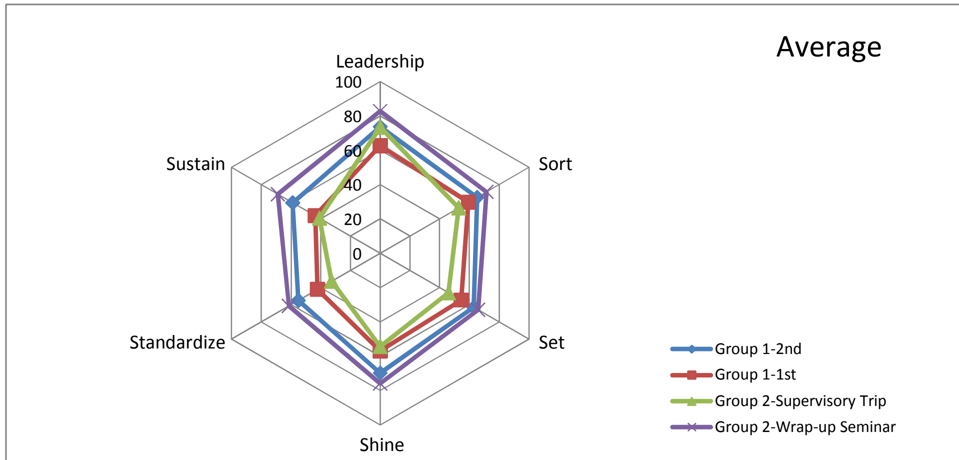

Figure 3-2-7 Difference in the average monitoring results between Group 1 and 2

When the standard deviation values are compared, as described above, the values for Standardize (S4) and Sustain (S5) are smaller for Group 1, where the values for all items are large for items other than Leadership and Sustain (S5).

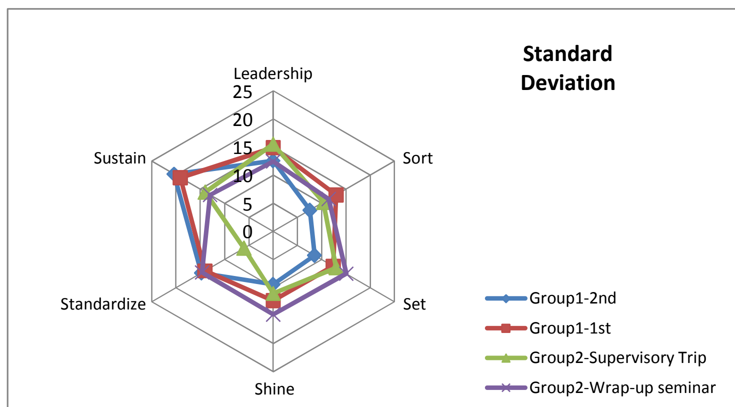

Figure 3-2-8 Differences in the standard deviation of each indicator between Group 1 and 2

The assumptions that can be considered based on the cross-sectional analysis for the monitoring check sheet results and on the opinion of the surveyors are as listed below;

- Group 2 countries are showing faster progress than Group 1 countries.
- Group 1 countries are all showing progresses of the similar speed.
- Group 2 countries are having variance in the progress made by each country, and the variance between

the active countries and the stagnant countries is significant.

- Self evaluations made by the hospitals had larger variance than the evaluations made by the surveyors during the supervisory trip.
- The tendency is that more serious the hospital is in implementing its 5S activities, the more severe evaluations it would be making.

The possible factors that may have impacted the assumptions shown above are;

- The difference in the contents of the supervisory trip implemented during Jan. – Apr. 2010 had resulted in the variance in the progresses.
- The difference in the hospitals' correspondences against the proposals and comments made during the supervisory trip has resulted in the variance in the progresses.
- Group 1 countries had been able to share the information at the region focused training course held during Jun. – Jul. 2010 which enabled the stagnant countries to catch up with the faster progressing countries.
- The relevant supports provided apart from this program had resulted in the variance of the progress made by each country.

3-2-4 Trend in the Ministry of Health

3-2-4-1 Trend in the Ministry of Health (Group 1)

The Program includes two actions such as establishing a strategy for quality of health services based on the activities implemented in the pilot hospitals and making that strategy familiarized at a nation-wide level. . The following policies are established for quality of health services and activities to expand a nation-wide level in each country.

Table 3-2-7 Progresses of the policies and implementation by the MOH (Group1)

Country/Department	Policy concerning quality of health services		Prospect to expand throughout the nation ()	
	1st Supervisory Trip	2nd Supervisory Trip	1st Supervisory Trip	2nd Supervisory Trip
Eritrea MOH : Department of Medical Services	There is an idea to establish the "Policy Guideline for Quality Improvement with 5S-KAIZEN-TQM" [8] (tentative name) for deploying the 5S activities to a	The first draft version of the Policy Guideline for Quality Improvement with 5S-KAIZEN-TQM was completed	The Ministry of Health has held seminars regarding the 5S activities for developing leadership in a series of several seminars for all hospital managers	5S seminars were held for the 9 hospitals in the capital city Asmara as the first step for deploying the activities to a nation-wide level.

[8] This policy guideline is positioned as an cross-task reference guideline for the vertical technical task guideline established for HIV/AIDS, malaria, and children's health.

Country/Department	Policy concerning quality of health services		Prospect to expand throughout the nation ()	
	nation-wide level under the Health Sector Strategic Plan[9], and the agency has requested JICA for its support regarding this matter.	during the survey. An action plan would be established based on completed version of this guideline.	and nursing instructors during 2008 and 2009.	The activities are to be deployed to all 26 hospitals in Eritrea by the end of next year.
Kenya Ministry of Medical Services : Division of Quality Assurance & Standards	The Ministry of Medical Services is currently working on revising Kenya Quality Model (KQM) which was developed for the purpose of guaranteeing the quality of medical services under the lead of the National Hospital Insurance Fund and the support provided by GTZ The country has also launched a program for evaluating the hospital quality monitoring results under the name of "Hospital Reform Program" from October 2009 with the target set to hospitals of level 4 and of higher levels	KQAMH has established its implementation guideline and manual in Feb. 2010. 5S-KAIZEN to be consolidated.	KQM (which includes the 5S-KAIZEN-TQM activities) planned to be deployed at the provincial level from April 2010. However, only 6 provinces out of 8 provinces have ensured the budget for the activities.	Currently making preparations such as printing the guideline, etc. in order to deploy the program to a nation-wide level.
Madagascar MOH Coordinator of Quality Control	The quality of health services at the health center level is specified in the "National Health Policy", but that of the individual	The MOH is considering of establishing the national quality program.	5S activities have already been introduced to 4 hospitals such as CHU Mahajanga and Fianarantsoa University Hospital,	The 4 institutions described on the left will start implementing the 5S activities, and implementation seminars have been

[9] As of March 2010, the plan is in its final stage of establishment under the technical support provided by WHO, and the plan includes the Quality Improvement Program.

Country/Department	Policy concerning quality of health services		Prospect to expand throughout the nation ()	
	hospital level is not officially documented yet. Currently considering of establishing a guideline for the 5S activities		and they are planned to be introduced in 2 more hospitals next year, which will result in having 5 provinces covered out of 6 provinces	held for the 4 medial institutions located in the capital city during the previous supervisory trip period.
Malawi MOH Nursing Services Division	There is no department which controls the improvement of the quality of health services within the MOH. The Nursing Service Office is responsible for this program.	SWAps 2nd 5-year action plan which will be launched in July 2011 will be discussing the necessity of consolidating the guideline and tools for quality management (including 5S-KAIZEN).	No confirmation	3 hospitals (additionally to Mzimba District Hospital and Dowa District Hospital, Chiradzulu District Hospital, which had participated in the visit to Tanzania in October 2010) have launched their 5S activities.
Nigeria Lagos State Ministry of Health: Division of Health Services Permanent Secretary	There is no related office either in the Federal MOH or in Lagos State Ministry of Health. The Federal Minister of Health proposed the establishment of various committees for the program for improving the quality of the medical institutions, and those committees have been established.	Since the Deputy Secretary for the State MOH had been replaced, the Ministry has been promoting its activities for establishing the quality control unit by following the proposals made by the Technical Cooperation Project experts.	Additionally, the "Project for Improving Maternal, New Born and Child Health" is working upon making the health center familiar with the 5S	Familiarizing the activities to the target areas for JICA's Technical Cooperation Project "Project for Improving Maternal, Infant and Child Health in Lagos State"
Senegal Ministry of Health and Prevention: Health Services Department	In October 2009, the Ministry of Health and Prevention established a national committee which will be responsible for enforcing and expanding the experiences gained in	In July 2010, a Quality Coordinator was appointed for the National Commission, and the national quality strategy is currently being revised under	14 hospitals have been selected as the pilot hospitals.	5S activities have been disseminated to the health centers within Tambacounda State.

Country/Department	Policy concerning quality of health services		Prospect to expand throughout the nation ()	
	Tambacounda State Hospital through its approach for the 5S-TQM activities.	the financial support provided by USAID. The plan positions 5S-KAIZEN-TQM as the 1st stage of the efforts to be made for improving the quality, which should be worked upon by all medical institutions.		
Tanzania Ministry of Health and Social Welfare Department of Health Services and Laboratory	The Ministry of Health has already established the 5S guideline under the "Tanzania Quality Improvement Framework" which is an upper-level plan regarding QI	5S activities have been introduced into 26 hospitals to day	The 5S activities are implemented in 26 hospitals.	The 5S activities are implemented in 38 hospitals, and 5S is positioned as one of the core pillar for the quality improvement strategy for the health sector.
Uganda MOH Department of Quality Control	Reformation of the organization related to the unit within the MOH which is responsible for improving the quality is planned, and the execution structure is being reinforced.	Based on the strategy paper developed in the region focused training course held during Jun. – Jul. 2010, active activities for making the nations familiar with 5S such as developing the quality improvement framework, TOT, and selecting the pilot hospitals, etc. are being implemented.	A discussion was held during the supervisory trip, and development of human resources is being implemented by following the Recommendations made during the discussions with the cooperation of the JICA offices in the surrounding countries.	JICA is providing active support by having JOCV utilized and enabling early launch of the Technical Cooperation Project, and has already enabled 5 hospitals to implement the 5S activities.

The policies and guideline for the healthcare quality are already established or are on the progress of being established in Kenya with support provided by GTZ, in Senegal with the support provided by

USAID, and in Tanzania and Eritrea with the support and cooperation provided by JICA. Malawi has started its establishment of the policy and guideline under the guidance of the resource person, and the Technical Cooperation Project is planning to provide support to Uganda for establishing the policy and guideline. Madagascar is also considering of hiring a consultant with the support provided by JICA. Nigeria is considering of establishing the policy and guideline, but no specific action is made yet.

As for the department which controls the approach within the MOH, although Malawi and Nigeria had no quality related departments in the MOH or within the relevant governmental institutions, they are making actions towards establishing one (in Nigeria, the action is being made by the state MOH).

As for deploying the activities to a nation-wide level, 5S activities are implemented in 9 hospitals in Eritrea, 4 hospitals in Madagascar, 3 hospitals in Malawi, 38 hospitals in Tanzania, and 6 hospitals in Uganda. Eritrea is planning to expand the activities to all 26 hospitals throughout the country, and Madagascar to 4 hospitals by the end of next year.

As a whole, it is considered that the strategy and guideline for quality assurance of the medical services can be established without the support provided from this approach, but when it comes to deploying the services to a nation-wide level, it seems difficult unless some support is provided in order to enable the target persons experience the approach such as by establishing a responsible department in the MOH or by holding seminars and study tours, etc.

3-2-4-2 Trend in the MOH (Group 2)

Establishing a strategy regarding the quality of the health services based on the activities implemented in the pilot hospitals and making that strategy familiarized at a nation-wide level are both included in the framework for the activities of the "5S-KAIZEN-TQM" approach which is implemented through AAKCP "TQM for Better Hospital Services" launched from 2009.

Table 3-2-8 is the progresses of the policy implementation in the participating countries. The following policies are established regarding the quality of the health services and activities implemented for expanding the activities to a nation-wide level in each country.

Table 3-2-8 Progresses of the policies and implementation by the MOH

Country	Policies concerning quality of health services	Prospect to expand throughout the nation	The status at the wrap-up seminar
Benin	The MOH is currently establishing the national strategy for quality assurance, and 5S is to be included as part of that strategy based on the efforts made in HOMEL	Although the country intends to deploy the activities to a nation-wide level by holding seminars, etc., the future challenge is to ensure the cost required for doing so	With the cooperation of the pilot hospital, a quality program and deployment plan at the nation-level is being established.
Burkina Faso	The country is currently working upon the improvement of the	The country is highly interested in the 5S	5S will be incorporated as the quality improvement approach for

Country	Policies concerning quality of health services	Prospect to expand throughout the nation	The status at the wrap-up seminar
	quality of the medical services based on the "Quality Assurance Program for the Health 2004-9", and a review is under process for establishing the program for 2010 and beyond	activities, and is holding discussions whether the concept can be implemented not only in public hospitals but also in private hospitals, too	the new national quality assurance program
Burundi	The MOH is currently working upon PBF (Performance-Based Finance) which is implemented mainly by the European international institutions	The country intends to consider whether to expand the activities to other medical institutions or regions based on the achievements gained in the pilot hospital	The 5S-KAIZEN-TQM strategy is implemented in the pilot hospital and in the city hall from 2009, and the aim is to expand the strategy to a nation-wide level
DRC	The country is currently establishing the national plan for the healthcare domain for 2010 and beyond, and has positioned "improvement of the quality of the healthcare services in each zone (regional divisions)" as the most important matter.	Once the achievements are confirmed in the pilot hospital, the country intends to expand the activities to hospitals in the Kinshasa city, and to hospitals in other areas in the future, too.	Based on the achievements gained in the pilot hospital, the country is aiming to incorporate and then to deploy 5S-KAIZEN-TQM into the national quality program by holding seminars for trainers
Mali	(None at the moment)	Once the activities implemented in the pilot hospital are ensured to a level established enough so that they can be standardized and visualized, the country intends to expand the activities to other hospitals	Explanation was made that 5S is being incorporated into various approaches made by the health sector in a cross-sectional manner as the characteristic aspect of the service quality improvement efforts made within the 10-year plan for improving the health sector. The country indicated its full commitment to 5S-KAIZEN-TQM, and has promised to expand the achievements gained in the pilot hospital to other hospitals.
Morocco	The country has positioned the improvement of the quality of the medical services as one of the most important tasks within the National Health Plan (2008 – 2012), and is working upon the measures such as enforcing the prevention of nosocomial infection, establishing the	If the achievements can be confirmed by having the activities implemented in the pilot hospital expanded to the hospital-wide level and have the methods established, the country would consider expanding the activities to other	Explanation was made regarding the importance of reforming the health system focusing on the quality of the services provided by the hospital, and of the 5S activities among the approach for improving the service quality

Country	Policies concerning quality of health services	Prospect to expand throughout the nation	The status at the wrap-up seminar
	Certified Hospital System, promoting evaluations for the quality of the hospital services, and implementing clinical audits and waste management.	hospitals	
Niger	The country has set a significant target in the National Health Development Plan 2005 – 2010 which is to "contribute for reducing the death rate of pregnant and parturient women and babies by improving the efficiency and quality of the health system starting from the parts that can be developed on a realistic basis", and has set some priority tasks for improving the efficiency and quality of the health systems.	Once the achievements are confirmed in the pilot hospital, the country intends to consider expanding the activities to other institutions, too.	The country explained that it is considering of implementing and firmly establishing 5S-KAIZEN-TQM as its practical activity for the health center level

Although the survey had enabled us to confirm a high level of commitment towards AAKCP "TQM for Better Hospital Services" in the health administration authorities in many countries, some of the countries such as Burundi, DRC had the AAKCP seminar participants move to other departments and therefore did not have any focal person appointed within the MOH. However, most of the countries in Group 2 had placed the highest priority in confirming the achievements gained in the pilot hospitals first so that they can use such results as the discussion material as for whether to include the activities into the national policy. After that at the point of the wrap-up seminar held in October 2010, many countries had already incorporated or were considering of incorporating the 5S activities into the health service quality control policy.

However, no country had started deploying the activities to a nation-wide level.

3-2-5 Identification of Good Practices

The good practices were identified from among the activities confirmed as being implemented by the MOH in each country and by the pilot hospitals in the wrap-up seminar held in October 2010 for Group 2 countries and in the 2nd supervisory trip implemented during Nov. 2010 – Jan. 2011 for Group 1 countries.

The matters confirmed as the good practices for the hospitals were mainly regarding Standardize (S4) and Sustain (S5) for both Group 1 and 2. The Group 1 countries were reviewing their structures to one where the activities would be able to be implemented in a smoother manner considering the physical and practical aspects of their organizations. Additionally, some efforts were being made for the KAIZEN

activity on a trial basis following the region focused training course regarding KAIZEN, and in consideration of the 3M (Muri: overdoing, Mura: unevenness, and Muda: wastefulness). Some of the Group 2 countries were being reported as having implemented activities equivalent with KAIZEN, such as implementing employees and patients satisfaction surveys or implementing active efforts for improving the service quality as the hospitals' original activities.

As for the efforts made by the MOH, those in Group 1 countries had implemented more practical activities for enabling deployment of the approach to a nation-wide level such as establishing the national guideline or coordinating structures at the level of the MOH. Although the Ministries of Health in Group 2 countries are also showing high interest, only a year has passed since the pilot hospitals had started their activities, and therefore they have not been able to establish any national policy which takes the achievements gained from the activities into consideration. This has resulted in having most countries merely showing their commitment for working upon 5S-KAIZEN-TQM, or implementing the activities in a limited area.

Table 3-2-9 Examples of good practices in the pilot hospitals (Group1)

Country	Activity description	Leadership	S1	S2	S3	S4	S5	KAIZEN
Eritrea	Ensuring alignment and creating positive competition by selecting more pilot hospitals	✔						
	Standardizing guidance displays and the labeling system					✔		
	Implementing and standardizing activities considering recycling				✔	✔		✔
	Cooperating with neighboring regional institutions such as junior high schools (Halibet Hospital)							✔
	Implementation of the bed arrangement which considers the patients' symptoms and the flow line of the patients and the staff members.(Halibet Hospital)						✔	✔
Kenya	Establishing 5S-KAIZEN office	✔					✔	✔
	Implementing seminars and making it a duty to report and share the information regarding the seminar contents	✔					✔	
	Measuring the patients waiting time using an original method							✔
	Providing knowledge and sharing experiences to other hospitals	✔						✔
Madagascar	Reviewing the reception area by considering the patients movement flow line							✔
	Increasing exposure by having the leaders participate in the activities, composing and singing the 5S song, creating T shirts, and specifying the KAIZEN tree, etc.	✔						
	Implementing the efforts for standardizing the 5S					✔		

Country	Activity description	Leadership	S1	S2	S3	S4	S5	KAIZEN
	activities (setting up bulletin boards, displaying guidance and notices, etc.)							
	Implementing the activities in response to the proposals made in the previous supervisory trip	✔						
	Utilizing comments and suggestions box						✔	✔
Malawi	Improving the S2 status by implementing labeling and making an appeal for the 5S activities (Mzimba)			✔			✔	
	Allocating budget for cleaning activities (Mzimba)	✔			✔			
	Setting a 5S corner near the entrance of the hospital (Dowa)						✔	
	Cooperating with the Overseas Cooperation Volunteers		✔	✔	✔	✔	✔	
Nigeria	Currently considering of controlling the hospital visitors (registering the visitors, setting up a security post, etc.).					✔		✔
	Holding monthly seminars which include descriptions regarding attitude changing. Additionally, preparing leaflets for fresh recruit orientations.					✔	✔	
	Preparing and posting patients flow chart					✔	✔	✔
	Considering of establishing a commendation system						✔	
Senegal	Reviewing and creating names for the implementation structure by considering the hospital organization, and setting a slogan	✔						✔
	Allocating doctors to the reception for the emergency outpatient department							✔
	Shortening the time required for the entire procedure time by reviewing the goods supply procedure within the hospital							✔
Tanzania	Implementing S1-S3 within the entire hospital (Document and stock storage in particular)		✔	✔	✔	✔		
	Enabling the pilot units to proceed onto KAIZEN activity in a staged manner							✔
Uganda	Appointing a facilitator from among the QIT members, who will make daily tours to the 2 departments he/she is responsible for (which would ensure the opportunities for sharing information)	✔						
	Considering effective usage of the goods possessed by the hospital such as effectively utilizing unused mosquito nets		✔					✔

表 3-2-10 Examples of good practices in the pilot hospitals (Group2)

Country	Activity description	Leadership	S1	S2	S3	S4	S5	KAIZEN
Benin	Establishing and implementing a plan for maintaining the hospital clean	✔						
	The Quality Circle where the 5S committees and WIT participate in holding monthly meetings					✔		
	Creating a check list for ensuring standardization					✔		
	Holding internal trainings implementing 5S					✔		
Burkina Faso	Implementing an employees and patients satisfaction survey							✔
	Preparing an implementation guidance for the national 5S strategy					✔		
	Establishing the concept (prepare a chart) for and implementing cascaded trainings					✔		
	Preparing an organizational chart for implementing the 5S activities	✔						✔
Burundi	Including the 5S activities into the hospital's action plan	✔				✔		
	The hospitals becoming able to participate in PBF by implementing the 5S activities					✔		
DRC	Establishing KAIZEN school					✔	✔	
	Appointing leaders for each S at the 5S committee	✔				✔		
	Preparing weekly schedules for implementing the 5S activities	✔				✔		
Mali	Making a strong appeal to the policy level						✔	
	Satisfaction survey							✔
	Holding a 5S contest within the hospital						✔	
	Standardizing the 5S implementation steps within the hospital					✔		
	Presenting the vision for becoming the model country in Africa as in the case of Sri Lanka	✔					✔	
Morocco	Incorporating the 5S approach into the preventions of nosocomial infection (by working together with the Nosocomial Infection Prevention Committee within the hospital)							✔
	Implementing the 5S clinical audit within the framework of the countermeasures for nosocomial infection							✔
Niger	Continuously implementing 5S regardless of the leader being transferred						✔	

表 3-2-11 Examples of the good practices conducted by the MOH (Group 1)

Country	Activity description	Change of mind	Coordinate structure	Prepare documents / establish plans	Deploy to a nation-wide level
Eritrea	Establishing a cooperation structure between the persons responsible in the relevant departments within the MOH (AAKCP Committee)		✔		
	The MOH establishing a guideline policy			✔	
	Clearly presenting the target for ensuring deployment to the nation-wide level, and holding seminars for achieving that purpose			✔	✔
Kenya	Establishing the Kenyan Quality Assurance Program model and making judgments for approvals within the model			✔	✔
	Establishing a guideline which is created by combining the model shown above and 5S-KAIZEN-TQM			✔	
Madagascar	Implementing seminars in order to enable expansion of 5S-KAIZEN-TQM to a nation-wide level by cooperating with the pilot hospitals				✔
	The Minister of Health himself participating in the supervisory trip	✔			
Malawi	Establishing the Quality Assurance Technological Advisory Committee to consider consolidating the existing guideline, etc. into one and expanding it to a nation-wide level. 5S-KAIZEN-TQM may be incorporated into them.		✔	✔	
Nigeria (Lagos State MOH)	Considering establishing the quality control unit into the state MOH		✔		
Senegal	Enforcing the structure for the quality program implemented under the control of the MOH (appoint quality coordinators)		✔		
	Revising the national quality strategy plan and clarifying the positioning of 5S-KAIZEN-TQM (5S-KAIZEN-TQM to be positioned as the activity to be worked upon at the very beginning)			✔	
Tanzania	Establishing the guideline for the national quality strategy and 5S-KAIZEN-TQM		✓	✓	
	Expanding the 5S activities to a nation-wide level under the administration of the MOH and by following the existing health administration organization (system)				✓
	Coordinating the donors quality improvement for each of the health services		✓		
Uganda	Effectively utilizing the participants to JICA's region focused training courses (appoint them as the facilitators who taken on the responsibility as the trainer)				✔
	Implementing the activities by aligning with new JICA projects, District Health Office, and pilot hospitals		✔		✔

表 3-2-11 Examples of the good practices conducted by the MOH (Group 2)

Country	Activity Description	Support for pilot hospitals	Change of mind	Coordinate structure	Prepare documents / establish plans	Deploy to a nation-wide level
Benin	Already started working upon coordinating / aligning for the implementation of the quality improvement approach			✔		
Burkina Faso	Supervising the 5S activities in the pilot hospital	✔				
	Implementing 5S into the quality assurance system and the health center	✔				
	Making high officials participate into the activities		✔			
Burundi	Applying 5S to the health center	✔				
	Translating 5S into the local language				✔	
DRC	5S action plan incorporated into the national health development plan				✔	
	The top management of the health institution having advanced acknowledgement regarding 5S		✔			
	Establishing 5S expansion mechanism according to the country's health provisioning structure			✔		
Mali	The policy maker level within the MOH strongly participating into implementing the 5S activities		✔			
	Coordination of the quality assurance activities (such as monitoring and supervising activities)			✔		
	Expanding the activities to the entire health system			✔		✔
Morocco	Being highly motivated in incorporating 5S into the quality program	✔				
Niger	A department working upon the quality of health exists			✔		
	National compensation strategy plan exists				✔	
	5S being implemented in the health center	✔				

3-3 Effects Gained through the AAKCP 5S-KAIZEN-TQM Seminars for the Program (Outcomes)

3-3-1 The ex-post evaluation for the seminars held in 2010 and before

During the supervisory trip held in Jan. – Apr. 2010, we have asked the past participants of the program to provide us with the answers for a set of questionnaires regarding the evaluation and requests

for the seminar. Responses have been gathered from 17 persons in Group 1 and 19 persons in Group 2.

As for the achievements gained from the seminars, most respondents replied that it is “easy” to apply what he/she has acquired to his/her organization or country after returning from the seminar, and the reason was that “because the purpose and content of this program accords with the directions of his/her organization”. On the other hand, the respondents replied that there was insufficient “financial backup”. Group 1 had highly appreciated 5S as practical activities, but they did not feel much familiarity with the experiences the Japanese people had. Although many of the respondents from Group 2 implied that the working attitude has changed to a positive one, many had also implied that it is “difficult” to apply what he/she has acquired since it is difficult to change the mindsets of the staff members.

As for the method for utilizing the seminar achievements, respondents in both Groups had acknowledged the effect that can be expected for improving individual skills, but they believed that there is limited effect for improving the system or facilities, or for ensuring the fund. Especially in Group 2, half of the respondents replied that the achievements cannot be utilized for ensuring the funds. It seems that the achievements gained from the seminar are being utilized by the individuals and groups within the hospital rather than by the organizational units.

The participants in Group 1 seemed to have the impression that seminars held in Japan and in Sri Lanka had been effective, whereas those in Group 2 had appreciated the seminar held in Sri Lanka rather than the one held in Japan as being advantageous. This may be due to the fact that the seminar held in Sri Lankan site had provided more opportunities for learning practical matters regarding the 5S activities. The seminar held in Japan is expected to become much more effective if it is introduced how what learned during the seminar can be utilized in the activities implemented in the participants’ own country.

As for the future seminars, many of the Group 1 members requested the seminar to be much more practical and to be able to have more communication with participants from other countries, whereas many of the Group 2 members requested to have the seminar period reviewed, and to clarify the program system such as the program schedule and the relationship with the government.

The replies for the questionnaires regarding the AAKCP and JICA Training and Dialogue Programs are as listed in Table 3-3-1 below.

Table 3-3-1 Results of the Questionnaire on JICA Trainings (1)

Number	Question Items	Answers				
Q1	Do you think it will be easy to apply what you acquired to your organization or country?	Very Easy	Easy	Difficult	Very Difficult	Blank
		4	12	1		
Q2-1	If you marked “very easy” or “easy” for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank

Number	Question Items	Answers				
A	Because I am in a position of making decisions.	7	7		1	1
B	Because the purpose and content of this program accords with the directions of my organization.	12	4			
C	Because I will have no difficulty in securing necessary financial resources.	1	3	11	1	
D	Because it's easy to get the understanding and cooperation of my colleagues.	7	9			
E	Because the situation in my country is very similar to the experience of Japan.		5	10	1	
F-1	Other Reasons→Please describe briefly.	- Concept of 5S does not require many resources(3Persons) - Selected as the pilot hospital(2Persons) - Same as the current quality management approach(2Persons) - Contents of the Seminars are useful for my task and make easier to work - Understanding concepts of 5S/TQM and sharing them to other workers. - Since having opportunities to explain 5S to the hospital staff members, staff proposes many ideas for 5S activities.				
F-2	Difference from the right after retuned from the JICA training course and "Now"	− Improving environmental circumstances(2Persons) − Improving knowledge and understanding of 5S(2Persons) − Practice of 5S(2Persons) − Increasing staff's motivation − Increasing capacity of staff members − Improving provision of health services − Waiting for other donors' supports since the project has been suspended.				
Q2-2	If you marked "Difficult" or "Strongly difficult" for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank
A	Because I am not in a position of making decisions.	1				
B	Because the purpose and content of this program does not accords with the directions of my organization.	1				
C	Because I will have difficulty in securing necessary financial resources.	1				
D	Because it's difficult to get the understanding and cooperation of my colleagues.			1		
E	Because the situation in my country is				1	

Number	Question Items	Answers				
	very different from the experience of Japan.					
F-1	Other Reasons→Please describe briefly.					
F-2	Difference from the right after retuned from the JICA training course and “Now”					

Table 3-3-1 Results of the Questionnaire on JICA Trainings (2)

Number	Question items	Answers				
Q3	How are you applying what you acquired to your organization or country “Now”? Please mark your degree of priority for each of the following items.	Frequently utilizing	Usually utilizing	Seldom utilizing	Never utilizing	Blank
A	Improvement of Policy/ Institution/ System	4	9	2		2
B	Securing Financial Resources	2	6	6	1	2
C	Improvement of Physical Infrastructure or Equipment	3	8	4	1	1
D	Improvement of the Mechanism and Management of Organizations	6	11			
E	Improvement of Technology or Know-How applied for operation of organizations	3	10	3		1
F	Capacity Improvement/ Attitude Change of Individuals in organizations	7	8	2		
G-1	Other ideas	− Improvement of the middle class leaders as an coordination between leaders and frontline staff and their leadership − Improving the pilot hospitals to be a good model for other institutions − Making plans of the seminars for hospital staff and actions for quality improvement competition to the government − Prevailing concepts on the supervisory levels and seminars for sanitation − Improvement of resources such as human, time and spaces				
G-2	Difference from the right after retuned from the JICA training course and “Now”	− Clearly improved management technique − Although the transition to KAIZEN has been just started,staff members could understand the process after the seminars. − Community and the Ministry (Government) are waiting for our action to extend 5S activities to the other districts. 5Sand CQI have been introduced in CHU Mahajanga. Management staff members are assured. − 5S theory has been practiced in CHU Mahajanga although there was some confusion at first.				

Num ber	Question items	Answers
		− Strengthening capacity − Standardization and systematization for continuous process are very important − Time management, improvement of attitudes, and utilization of spaces − We were able to negotiate about funding promptly − Difference is prominent. Management became easier. The hospital staff members understood very easily. Only the issue is financial limitations.

Table 3-3-1 Results of the Questionnaire on JICA Trainings (3)

Num ber	Question Items	Answers
Q4	What contents of the JICA trainings are the most useful for your activities "Now"?	
(1)	About Trainings in Japan	− Lectures by Professor Hasegawa and Professor Karandagoda and Seminars in Iizuka Hospital − Seminars which include Sharing experiences and improving technique to achieve TQM − Methods of situation and problem analysis − Documents of seminars − Lectures of theories with the documents and presentations are useful for level up of the seminars. − Introducing 5S principle and quality improvement. Making it possible to manage hospital services among limited resources − 5S/KAIZEN/TQM − Inspection of TQM utilization in the other sectors such as industrial sectors. − 5S and quality management − 5S principle
(2)	About Trainings in Sri Lanka	− Learning efforts to improve health services through management skills and abilities under resource limited circumstances in Castle Street Hospital. − 5S and KAIZEN theories and Hospital system, Quality Dimension − 5S practice methods, positive mindset of the staff members − Field visits, documents and photos − Seminar documents, presentation, and field visits − Leadership of many kinds of occupations and initiative spirits. Improving positive attitude of staff members through photos at the field visits and many kinds of documents such as presentation contents − 5S − Improving environmental circumstances, eliminating waste and shortening time. − 5S-TQM practice at the hospital which was in similar circumstances.

Table 3-3-1 Results of the Questionnaire on JICA Trainings (4)

Num ber	Question Items	Answers
Q5	Which document you receive in the JICA Training, are you utilizing most in your activities "Now"?	− Strategic action plan − Documents of KAIZEN − All (3 persons) − Summaries of many kinds of the presentations(3persons) − Documents relating 5S

Number	Question Items	Answers
		− Training documents: Attitude, Concepts of 5S, Planning of activities − Sharing with staff members at the seminars − Hand outs (2persons) − CDs with seminar materials (2 sets) and documents related to concepts and activities of KAIZEN − Since the seminar was held 2 years ago, the documents were rarely utilized. − Only seminar memo has been provided. Training manuals are provided by Tanzania. − Strengthening quality management in the hospital through 5S/TQM approaches.

Table 3-3-1 Results of the Questionnaire on JICA Trainings (5)

Number	Question Items	Answers
Q6	Please feel free to inform us about your opinion "Now" for the Improvement of the JICA Training course.	− Since seminar periods were short, it is better to spend time for more practical training then seminars. (2 persons) − It should be informed to the hospital staff members communicating with patients that high quality health services will be provided utilizing management level staff regardless of developed or developing countries. − It is necessary that the lecturers of the seminars visit hospitals and provide a lot of kinds of advises. − It should not be accepted only participating training and seminars at the beginning. We need to learn a lot of positive examples at symposiums and study tours. − Urging communication and share experiences (visiting other participating countries)(3 persons) − Training by JICA is very useful − It is great to make a consideration of improvement the JICA seminars − We need to train other hospital staff members to prevail this approach. − Providing trainings and seminars to more people − Training of the staff in the MOH. − Practical training in health services institutions. − Well-organized curriculums are needed for the seminars. − It contributes to provide trainings and seminars in accordance with participants' levels. It is needed to improve training manual for participants/ − The 5S concepts are easy to understand and practice.

The replies for the questionnaires are as listed in Table 3-3-2 below.

Table 3-3-2 Results of the Questionnaire on JICA Trainings (1)

Number	Question Items	Answers				
Q1	Do you think it will be easy to apply what you acquired to your organization or country?	Very Easy	Easy	Difficult	Very Difficult	Blank
		3	11	4		1
Q2-1	If you marked "very easy" or "easy" for Q1, could you clarify the reason for	Strongly agree	Agree	Disagree	Strongly disagree	Blank

Number	Question Items	Answers				
	it by rating following elements?					
A	Because I am in a position of making decisions.	2	6	2		5
B	Because the purpose and content of this program accords with the directions of my organization.	10	2		1	2
C	Because I will have no difficulty in securing necessary financial resources.		5	3	2	5
D	Because it's easy to get the understanding and cooperation of my colleagues.	4	9			2
E	Because the situation in my country is very similar to the experience of Japan.		4	2	3	6
F-1	Other Reasons→Please describe briefly.	- Complement for current activities - Commitment of leaders - Commitment of the hospital staff(2 persons) - Seminar is tangible and practical - Visible effects - Circumstance to easily introduce 5S(2 persons) - Spirit of the ingenuity - Well cooperated with JICA - Many good outcomes - Easy for us to make staff understand concepts - Since having personal brief to contribute to improvement of quality and safety				
F-2	Difference from the right after retuned from the JICA training course and "Now"	− Changing everyday(2persons) − Prevailing quality control in the MOH − Easy to apply of the technique learned at the training − Improving arrangement and smoothness of work procedures − Increasing motivation(2 persons) − Practice of 5S activities − Awareness of the staff − Improving work environment drastically − Fully accepted by hospital staff − Improving positive attitude to work − Applying 5S concepts − Acquiring positive attitude to work − Emerging positive change of the attitude for work. Improving work environment and some indicators in the hospital				
Q2-2	If you marked "Difficult" or "Strongly difficult" for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank
A	Because I am not in a position of making decisions.	1	1		2	
B	Because the purpose and content of this program does not accords with the		1		3	

Number	Question Items	Answers				
	directions of my organization.					
C	Because I will have difficulty in securing necessary financial resources.	1		1	2	
D	Because it's difficult to get the understanding and cooperation of my colleagues.		2	2		
E	Because the situation in my country is very different from the experience of Japan.			2	2	
F-1	Other Reasons→Please describe briefly.	many staff members tend to prioritize more technique than management				
F-2	Difference from the right after retuned from the JICA training course and "Now"	- change of the mentality regarding improvement of hospital environment - changing team work - difficult to persuade skeptical people and urge to participate in the 5S activities				

Table 3-3-2 Results of the Questionnaire on JICA Trainings (2)

Numbers	Question items	Answers				
Q3	How are you applying what you acquired to your organization or country "Now"? Please mark your degree of priority for each of the following items.	Frequently utilizing	Usually utilizing	Seldom utilizing	Never utilizing	Blank
A	Improvement of Policy/ Institution/ System	10	3	1	2	3
B	Securing Financial Resources	3	4	2	5	5
C	Improvement of Physical Infrastructure or Equipment	3	8	3	1	4
D	Improvement of the Mechanism and Management of Organizations	8	5	3		3
E	Improvement of Technology or Know-How applied for operation of organizations	7	6	1	1	4
F	Capacity Improvement/ Attitude Change of Individuals in organizations	15	3	1		
G-1	Other ideas	- Drugs and documents were sorted, selected necessary items and set them, discarded unneeded items and labeled. - Although our step is slowly, but positive mindset among staff members are emerging gradually. - Utilization of current resources				
G-2	Difference from the right after retuned from the JICA training course and "Now"	- Having experience to change both myself and organization - Significant improvement of work environment - Confirming needs of team, works by team and visible				

Num bers	Question items	Answers
		improvement − Gradually improving teamwork spirit − Priority is organizing human and physical components in the hospital in the best conditions − Participation of all staff members − Reducing budget request − Changing each person's behavior − Improving work attitude of hospital staff − Better institutionalization compared to before.

Table 3-3-2 Results of the Questionnaire on JICA Trainings (3)

Num bers	Question Items	Answers
Q4	What contents of the JICA trainings are the most useful for your activities "Now"?	
(1)	About Trainings in Japan	− There are few to be beneficial − Sustain and improvement of work environment − Evidenced-based medicine-Delivery (2 persons) − Lectures by 5S experts at Iizuka Hospital − Tea Ceremony − Everything is beneficial
(2)	About Trainings in Sri Lanka	− Making standards to deepen our knowledge − Sustain and positive attitude (2 persons) − Field study (2 persons) − Utilization of existing resources − Restructuring 5S model at offices − Utilization of 5S for TQM − 5Spractices (3 persons) − Positive mindset for strong leadership and 5S methodology − Improvement of ability and attitude of the hospital staff − Standardization − Positive spirit and everyone's smile (2 persons) − Observation of medical training − Dissemination of the 5S concepts − 5S Manuals − 5S concepts − 5S − Everything is beneficial

Table 3-3-2 Results of the Questionnaire on JICA Trainings (4)

Num bers	Question Items	Answers
Q5	Which document you receive in the JICA Training, are you utilizing most in your activities "Now"?	− All the documents (5 persons) − Documents of 5S (4 persons) − 5S and positive mindset (2 persons) − Ability of good responses (2 persons) − Genba, Kaizen (2 persons) − Productivity, quality and safety − Effort by team for KAIZEN − Leadership in KAKIZEN − Development of KAIZEN

Num bers	Question Items	Answers
		− 5S-KAIZEN-TQM methodology for improving quality and safety of health services in resource-limited countries − Documents regarding Castle Street Hospital − Developing positive mindset for KAIZEN (3 persons) − Documents of every steps of introductory processes on the 5S-KAIZEN-TQM and AAKCP − Documents for monitoring and evaluation

Table 3-3-2 Results of the Questionnaire on JICA Trainings (5)

Num bers	Question Items	Answers
Q6	Please feel free to inform us about your opinion "Now" for the Improvement of the JICA Training course.	− Reconsideration of the seminar period (too short) (10 persons) − Improvement of the coordination with travel agency − Organizing study tour − Materials for seminars (3 persons) − Flexibility of the seminar programs − Necessity of the materials for sharing knowledge − JICA supports for strengthening 5S strategies in all the domestic hospitals. − Improvement of the French translation at the Seminars. − Raising daily allowance − Uncertainty in the rest of the project period. It seems possible to conduct seminars or practical trainings at similar countries for at least 3 weeks to 1 month. It is expected to improve communication costs and create opportunities to visit recipient countries. − Reinforce communication with central and local governments and make them participate practically − Visiting more pilot hospitals during the seminars − Giving the participants of seminars in Sri Lanka opportunities to visit Japan − Building training center in some pilot countries in Africa (2 persons) − Although the contents of the seminars were well-planned, it is needed to strengthen communications.

3-3-2 Effects (Outcome) of JICA Training and Dialogue Programs

The 3-year region focused training courses set their targets for having the activities implemented in each country proceed onto TQM from KAIZEN, and to promote expansion of the activities to the nation-wide level. The seminar for this year, which would be the second year, will invite officers in the MOH and those who belong to the pilot hospital and have been implementing the activities, and sets its target for achieving the following matters;

1) Based on the strategic plan prepared during the seminar, the KAIZEN activity would be implemented in the pilot hospitals in each country, and the businesses will be improved.
2) Under the cooperation of the MOH of each country, the efforts to be made for improving the quality and safety of the health services utilizing 5S at the nation level will be clearly specified within the strategic plan.

The targets shown above shall be confirmed from the following perspectives;

1) The strategic plan for improving the hospital utilizing 5S-KAIZEN-TQM in each country will be

prepared during the seminar.

2) It would be confirmed by the supervisory trip to be made for each country by the Human Development Department by the end of this fiscal year that the strategic plan utilizing 5S-KAIZEN-TQM in each country prepared during the seminar is shared and implemented within the organization.

The achievement levels based on the perspective shown above will be identified as described below;

1) The strategic plan is created by following the form provided in advance, and describes the strategy for ensuring Standardize (S4) and Sustain (S5) and implementing the KAIZEN activity in the pilot hospitals in each country, and for expanding 5S to a nation-wide level. The individual action plan is prepared for each of the policy level, top management level, the middle management level, and the work improvement team (WIT) level of the pilot hospital.

2) When the progress statuses of these strategic plans were confirmed during the supervisory trip implemented during Nov. 2010 – Jan. 2011, many countries had been implementing the strategic plan. As for the details, please refer to “3-2-2 The Implementation Status of the Strategic Paper”.

The results gained from the questionnaire made as a part of JICA Training and Dialogue Programs regarding how the participants are utilizing what had been learned in the seminar are as listed in Table 3-3-3.

Table 3-3-3 Results of the Questionnaire on JICA Training and Dialogue Programs (1)

Number	Question Items	Answers				
Q1	Do you think it will be easy to apply what you acquired to your organization or country?	Very Easy	Easy	Difficult	Very Difficult	Blank
		8	8			
Q2-1	If you marked “very easy” or “easy” for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank
A	Because I am in a position of making decisions.	6	6	2		2
B	Because the purpose and content of this program accords with the directions of my organization.	8	8			
C	Because I will have no difficulty in securing necessary financial resources.		6	6	2	2
D	Because it’s easy to get the understanding and cooperation of my colleagues.	4	8	2		2
E	Because the situation in my country is very similar to the experience of Japan.	1	3	7	2	3

Number	Question Items	Answers				
F-1	Other Reasons→Please describe briefly.					
F-2	Difference from the right after retuned from the JICA training course and "Now"					
Q2-2	If you marked "Difficult" or "Strongly difficult" for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank
A	Because I am not in a position of making decisions.					
B	Because the purpose and content of this program does not accords with the directions of my organization.					
C	Because I will have difficulty in securing necessary financial resources.					
D	Because it's difficult to get the understanding and cooperation of my colleagues.					
E	Because the situation in my country is very different from the experience of Japan.					
F-1	Other Reasons→Please describe briefly.					
F-2	Difference from the right after retuned from the JICA training course and "Now"					

Table 3-3-3 Results of the Questionnaire on JICA Training and Dialogue Programs (2)

Number	Question Items	Answers				
Q3	How are you applying what you acquired to your organization or country "Now"? Please mark your degree of priority for each of the following items.	Frequently utilizing	Usually utilizing	Seldom utilizing	Never utilizing	Blank
A	Improvement of Policy/ Institution/ System	8	7			1
B	Securing Financial Resources	1	8	4	2	1
C	Improvement of Physical Infrastructure or Equipment	4	8	3		1
D	Improvement of the Mechanism and Management of Organizations	10	5		1	
E	Improvement of Technology or Know-How applied for operation of organizations	6	9		1	
F	Capacity Improvement/ Attitude Change of Individuals in organizations	11	5			

Number	Question Items	Answers
G-1	Other ideas	
G-2	Difference from the right after retuned from the JICA training course and “Now”	

Although the results gained from the questionnaires did not vary largely from the direction provided in “3-3-1 The ex-post evaluation for the seminars held in 2010 and before” which included the previous region focused training courses into the subject periods, more participants of this seminar had been replying that they wish to utilize the seminar for the “Improvement of the Mechanism and Management of Organizations” and for “Capacity Improvement/ Attitude Change of Individuals in organizations”.

The following challenges have been identified through this seminar;

- Since the participants do not understand the Japanese health system, some of them had acknowledged Iizuka Hospital, which is a private hospital, in a same way with the private hospitals (commercial hospitals) in his/her own country. It may be a good idea to distribute the multimedia educational material “The Healthcare System in Japan”, which was once used in a seminar in the past.
- The Training Coordinators (interpreters) had been different between the seminars held in Japan and those held out of Japan, and some of the participants were complaining about that. From the perspective of maintaining a good relationship between the Training Coordinators and the participants, it is desirable to appoint the same Training Coordinators throughout the entire course of seminars.
- Although support had been provided for the seminar from the staff of preparatory survey, it is an irregular manner for Region focused seminars, and therefore the roles and responsibilities had not been clear in some parts.

3-3-3 Outcomes of Wrap-up Seminar

The achievements gained for this seminar through the discussions between the participants are as listed below. Additionally, as for the reference information for the future activities, good practices for Standardize (S4) and Sustain (S5) were identified. As for the details, please refer to “3-2-5 Identifying the Good Practices”.

1) Confirming up to what level the 5S activities have been implemented into the pilot hospitals in each country via the project activities.

It had been confirmed that the activities such as establishing strategies for implementing 5S for the purpose of improving the quality of health services, preparing the guideline for implementing 5S, and implementing seminars for expanding 5S are being implemented in an active manner. Group 2 was showing faster progress than Group 1 at the same stage, which showed the motivated state of the pilot

hospitals and the Ministries of Health towards the approach.

2) Fully acknowledging the current statuses of the activities implemented by the MOH in each country for expanding 5S.

Each country is applying the 5S-KAIZEN-TQM program for improving the quality to the level appropriate for the national strategy, and establishing the plan for expanding 5S, etc., which enabled us to confirm that they fully understand the importance of the 5S activities within the approach for improving the quality of the health services. They also had been acknowledging that it is necessary to discuss not only what to do but also in what way those actions are to be implemented, too.

3) Clarifying the challenges that exist for each country for realizing Standardize (S4) and Sustain (S5) in view of the implementation of KAIZEN planned for next year, and also reconfirming the accurate understanding for blackbelt 5S (Super 5S).

The following points were raised as the challenges for realizing Standardize (S4) and Sustain (S5) in the achievements presentation and the discussions held during the seminar;

- The importance of the management level being highly committed when implementing strategic activities
- Implementation of the continuous activities and seminars for firmly establishing the 3S approach as a culture of the hospital's
- Rousing the interest and motivation of the staff members' by holding contests for 5S, etc.
- Understanding the current status and the needs by monitoring the current status, and utilizing such information for expanding the activities to other hospitals
- Substantiating and enforcing the implementation process such as the national plan, etc.

A survey regarding the seminar using a questionnaire was made after the seminar, and 16 participants provided us their replies. The results are as listed in Table 3-3-4 below.

Although there is not much difference in the direction of the replies when compared with the ex-post evaluation for the seminars held in 2010 and before, not many respondents affirmed that they are utilizing the seminar achievements for the "Improvement of Technology or Know-How applied for operation of organizations" or for "Capacity Improvement/ Attitude Change of Individuals in organizations". Additionally, as for AAKCP, there was a respondent saying that he (she) had learnt the logic in the seminar held in Japan, and had learnt the implementation method in the seminar held in Sri Lanka, which reflected the intention of the seminar very well.

Table 3--3-4 Results of the Questionnaire on Wrap-up Seminar (1)

Number	Question Items	Answers				
Q1	Do you think it will be easy to apply what you acquired to your	Very Easy	Easy	Difficult	Very Difficult	Blank

Number	Question Items	Answers				
	organization or country?	3	9	3		1
Q2-1	If you marked "very easy" or "easy" for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank
A	Because I am in a position of making decisions.	4	6	2		4
B	Because the purpose and content of this program accords with the directions of my organization.	8	4	1		3
C	Because I will have no difficulty in securing necessary financial resources.	1	5	4	2	4
D	Because it's easy to get the understanding and cooperation of my colleagues.	2	10			4
E	Because the situation in my country is very similar to the experience of Japan.	1	11	1	2	4
F-1	Other Reasons→Please describe briefly.	− Since I am engaged in implementing the national plan − Since HOMEL is committed to the quality improvement activity in order to promote healthcare seminars − Since it is a tool that can be easily utilized				
F-2	Difference from the right after retuned from the JICA training course and "Now"	− The work environment in the pilot department is being improved, and other environments are also being improved − A national strategy has been established − KAIZEN − Some positive changes are observed among the actions of the staff members and the work environment − Change in actions and visions (positive mindset)				

Table 3-3-4 Table 3--3-4 Results of the Questionnaire on Wrap-up Seminar (2)

Number	Question Items	Answers				
Q2-2	If you marked "Difficult" or "Strongly difficult" for Q1, could you clarify the reason for it by rating following elements?	Strongly agree	Agree	Disagree	Strongly disagree	Blank
A	Because I am not in a position of making decisions.			3		13
B	Because the purpose and content of this program does not accords with the directions of my organization.	3	1			13
C	Because I will have difficulty in	2			1	13

Number	Question Items	Answers				
	securing necessary financial resources.					
D	Because it's difficult to get the understanding and cooperation of my colleagues.	2	1	1		12
E	Because the situation in my country is very different from the experience of Japan.	3			1	12
F-1	Other Reasons→Please describe briefly.	− It is necessary to incorporate the ministers and the deputy secretaries who have the authority to make decisions for national level health policies or strategies into the 5S approach				
F-2	Difference from the right after retuned from the JICA training course and "Now"	− Rouse interest for the quality of health provided in DRC. − Implementation of 5S into each department in our hospital				

Table 3-3-4 Table 3--3-4 Results of the Questionnaire on Wrap-up Seminar (3)

Numbers	Question items	Answers				
Q3	How are you applying what you acquired to your organization or country "Now"? Please mark your degree of priority for each of the following items.	Frequently utilizing	Usually utilizin g	Seldom utilizing	Never utilizing	Blank
A	Improvement of Policy/ Institution/ System	7	8			1
B	Securing Financial Resources	1	6	2	3	4
C	Improvement of Physical Infrastructure or Equipment	1	9	2	1	3
D	Improvement of the Mechanism and Management of Organizations	8	6	1		1
E	Improvement of Technology or Know-How applied for operation of organizations	5	7	2	1	1
F	Capacity Improvement/ Attitude Change of Individuals in organizations	7	7	1		1
G-1	Other ideas	− Enforcement in development of human resources − Exchanging opinions between other departments within the MOH in order to proceed onto KAIZEN − For jointly implementing the activities together with other hospitals in Kinshasa. Implement seminars for those responsible for quality in each hospital and for the management.				

Num bers	Question items	Answers
G-2	Difference from the right after retuned from the JICA training course and "Now"	− KAIZEN for implementing TQM in HOMEL − Not only the concept but also the tools related with 5S-KAIZEN-TQM are being fully utilized

Table Table 3--3-4 Results of the Questionnaire on Wrap-up Seminar (4)

Num bers	Question Items	Answers
Q4	What contents of the JICA trainings are the most useful for your activities "Now"?	
(1)	About Trainings in Japan	− Positive mind − KAIZEN-TQM − 5S-KAIZEN-TQM Theory − 5S process − Mind change occurred on leaders and staff members − 5S-KAIZEN-TQM Approach − S1-S3 Practices
(2)	About Trainings in Sri Lanka	− Positive Mind − KAIZEN-TQM − The logic originally created in Japan can be implemented in a developing country, too − Coordination of the work environment − Visit to Castle Street Hospital for Women − Application of the project − A simple method for showing the status of the quality being improved (such as photographs, etc.) − The knowledge regarding the concept of 5S-KAIZEN-TQM (2 persons) − Apply the good examples identified in Sri Lanka into Morocco's context − Implementation of S1-S3 − Sri Lanka's experience in implementing 5S

Table 3-3-4 Table 3--3-4 Results of the Questionnaire on Wrap-up Seminar (5)

Num bers	Question Items	Answers
Q5	Which document you receive in the JICA Training, are you utilizing most in your activities "Now"?	- TQM Guide - Coaching methods - Hospital Management Reform - Dissemination of 5S-KAIZEN-TQM approach - 5S-KAIZEN-TQM practices - KAIZEN-TQM by Prof.Hasegawa and Dr. Karandagoda - Presentation by Dr.Ando - All the documents - 5S process - Action Plan - Sharing experiences with other countries

Additionally, based on the remarks made for the seminar by each lecturer and on the achievement status of the purposes, etc. the following challenges have been identified for this program;

- Selecting and providing support for the departments, offices, or institutions that will be responsible for coordinating the expansion of 5S
- Establishing the objective monitoring and evaluation method (standardizing the evaluation method)
- Clarifying the method and flow mechanism for analyzing the information and managing the records for 5S-KAIZEN-TQM
- Reconfirming the purposes for this approach (improving the services under the restricted resources: removing Muri (overdoing), Mura (unevenness), and Muda (wastefulness)
- Providing support according to the progress status in each country rather than providing uniform support

As for these challenges, it would be necessary to consider the following points at the "region focused training course" which is to be held in 2011;

- Provide lectures on substantiating and enforcing the implementation process of the national plan, etc.
- Allocate longer time for holding discussions regarding the monitoring and evaluation methods.
- Identify the good practices that can be implemented at low cost.
- Provide lectures on the knowledge necessary for enabling the seminar participants to expand the activities and for coaching.
- Select a pilot country from among the African countries to make it a seminar host country, enable the participants to smoothly acknowledge issues and link the countermeasures with the examples in the participants own countries.

3-3-4 Outcome of the Joint Workshop within the Global Forum for Workforce Alliances

(1) Purpose

Although the discussion regarding shortage in health human resources are often made in the direction of solving the shortage in the number of human resources, the significance of this workshop is that it would approach the issue of health human resources by including the aspect of "improving the quality". Specifically, the purpose is to identify the obstructive factors for promoting the expansion of this approach in each country and the solutions for them, and then to share such solutions and exchange opinions regarding them between the relevant persons in order to reconfirm the effectiveness of this cooperative efforts, and therefore to collect the information to be shared with outside parties.

(2) Components of the Workshop

The structure of the Workshop

In this workshop, as for presenting the challenges for this program, the 2 persons – the representative

of the pilot hospital and of the MOH made keynote lectures regarding the expansion of and the bottlenecks for establishing the system for the 5S activities. Then, the JICA staff members shared the good practices for Standardize (S4) and Sustain (S5) which had been considered during the wrap-up seminar for Group 2 implemented in October 2010. Next, the participants were divided into 2 groups to hold a group discussion in order to identify the bottlenecks and the solutions for them. In the end, the conclusions gained from the group discussion were presented, and the technical support committee provided reviews for them. Since the participants were from both English speaking countries and French speaking countries, the workshop was implemented by having simultaneous translation provided in English and French, but the group discussion was made with consecutive interpretation.

(3) Achievements gained from the workshop

1) Identifying the obstructive factors, their solutions, and the examples of successful cases for promoting the expansion of the approach

The group discussion was highly animated with the discussions regarding the obstructive factors, their solutions, and the examples of successful cases for promoting the expansion of the approach in each home country, and each group summarized some of the major examples and made a presentation about them. Although some insisted that communication was difficult since the participants were a mixture of those from English speaking countries and French speaking countries, the purpose of sharing the "identified obstructive factors and solutions for them" has been achieved.

Table 3-3-5 Discussion results: Main issues and solutions for promoting 5S-KAIZEN-TQM

Issues	Solutions
Resistance	Information and training Dissemination of the 5S text
Lack of motivation	Introduce reward systems to motivate healthy competition Competition between services
Poor planning	Ownership by the team members need to be carried along at the planning stage
No self discipline	Scheduling of the activities by service
No implication / Resistance of hospital director	Leadership and sensitization
Finance	Plan in detail from the beginning to include How, costs etc. of developments of labels, check lists and protocols as well, as trainings
Difficult to disseminate to other areas	Follow up, Evaluation (Meeting, monitoring with check list, internal evaluation) National award for quality services
Lack of political will/ Absence of	Implicate the political authorities by :

Issues	Solutions
advocacy	→Advocacy Publish the results of the pilot hospital →Training Include 5S in the national policy
Insufficiency of the proofs on 5S	Follow-up and evaluation Elaboration of manual 5S
Insufficiency of coordination between all stakeholders	Establish organization to coordinate collaboration among organizations
Absence of training of the trainers	Implement TOT and cascade training
Issue of harmonization (Several reform)	Establish Quality Improvement Team
No quality unit within the MOH	Put an quality unit within the MOH
Insufficiency of financial and technical JICA support	Request JICA to support materials and equipment, fund and training. Request milestone for plan for dissemination and evaluation Request to share and present reports and recommendation for MOH

2) Sharing information and establishing human network

Global Forum on Human Resources for Health is the first opportunity where the target countries for AAKCP "TQM for Better Hospital Service", and therefore information was shared and human network was established in an active manner. The participants also raise opinions saying that "discussions with participants from other countries had been a superior brainstorming opportunity" or "I found out that other countries are also making trials and errors regarding similar issues", which showed how interested they were in sharing information with participants from other countries.

3-4 Research on Trends of the International Organizations and Other Assistance Organization to Improve Quality of Health Services

In order to confirm the trends among the activities for improving the quality of the health services provided by the international institutes and assistance organizations in the countries target for the "5S-KAIZEN-TQM" approach, and in order to make the approach more familiar among the participants, we provided an occasion for exchanging opinions between the international institutes and assistance organizations who are responsible for improving the quality of the health services in each country. The outline is as described in Table 3-4-1.

Table 3-4-1 Situation of the supports by donors and international organizations

Country	Organization Department	Activities for quality of services	Interests toward this program	Possibility of collaboration
WHO Head Quarters (Switzerland)	Health System Division	Currently considering of re-defining the hospital functions	Requesting for active information sharing	Requested to attend the "Global Meeting on Hospital Forecast" which will be held in July 2010,

Country	Organization Department	Activities for quality of services	Interests toward this program	Possibility of collaboration
				and to make a presentation on the efforts made by JICA
	Patient Safety Division	Making the education regarding safety in Africa familiar	Requesting for continued information sharing	Highly interested in the 5S activities such as making the hospitals much cleaner, etc., from the viewpoint of preventing nosocomial infection
Eritrea	WHO MPN Advisor	Supporting the expansion of the public health activities by holding seminars and improving the strategy papers	Not in conflict with any other activities implemented for the purpose of improving the quality of the health services	Currently supporting logistics management. Logistics management is very similar with the 5S activities when seen from the technical perspectives.
Kenya	WHO Health Economics/ System Advisor	Pay the cost required for monitoring the hospitals for the "Hospital Reform Program" program Guarantee the quality of the health services / support the development of laws in order to promote standardization Support the establishment of the guideline for medical waste disposal	The extent of quality improvement achieved by having introduced the 5S activities into the pilot hospitals is being acknowledged, and it is highly appreciated that the required cost is limited to a minimum level, too	To be included into human resources development seminars, the check list for the service quality to be shared
	GTZ	Provide technical support for establishing a framework for Kenya Quality Model (KQM)	It is acknowledged that the supports provided by Japan and by GTZ do not interfere with each other	Cooperate with the effective seminars for developing human resources which are held by JICA, and recommend the JICA programs at the development partner meeting, etc.
Madagascar	AFD Alliance Frances (French Development Agency)	Reformation of the hospital services, and in particular, provide support for the management of human resources	Although we had heard the name before since we had support provided for CHU Mahajanga, but it is the first time that we have known the details	
	WHO	Provide support for the areas with higher needs based on the request made by the MOH, such as for the areas of human resource management, traditional medicine, and drug control	Although we had heard of the name of the project, we did not know the details	
	Africa Development Bank Health Project Department	Activities regarding matters such as Preventions of infectious diseases, epidemiology surveillance system, and treatment for AIDS patients	Although we had heard of the project, we did not know the details for the 5S activities. We find the concept very interesting.	
Malawi	GIZ	Financial and technical support for Quality	Understood 5S-KAIZEN	Harmonization through Quality Assurance-Technical Working

Country	Organization Department	Activities for quality of services	Interests toward this program	Possibility of collaboration
		Assurance-Technical Working Group		Group(Harmonization)
Nigeria	WHO Health Promotion Officer	Providing technical supports for the program (holding seminars and developing strategy papers)	Highly interested in this efforts which is relevant with enforcing management	The responsible officer strongly requested for the future cooperation with JICA
	DFID: Nigeria South West regional Office (Lagos)	Facilitating partnership in these three areas such as Governance, Growth and Human Development	Agreed on the 5S concepts such as Improvement of Work Environment, Identification of need/unneed, and mindset change	Share information of the Health Centers gathered for "PATH 2", which is the program for improvement of health systems
Senegal	Family Health International Advanced Technical Officer	Survey regarding the quality of the services provided for tuberculosis has been implemented since 2007	Find interest in the activities through this survey	Adjustment required with other quality-related national programs and the donors who are relevant with those programs
	GTZ West Africa Region Project Manager	No support provided since health area is not a focus area in Senegal	There is a person responsible for GTZ West Africa support in the MOH and Prevention, and this person will participate in the 5S meeting	
Tanzania	USAID	Currently implementing projects, etc. which executes QIP with the axis placed onto HIV/AIDS	Although they had heard about the project, they did not know about 5S in detail.	
	GTZ	Currently implementing quality improvement program for the targeted 20 hospitals	They understand what 5S is very well	The purpose of improving the quality of the hospitals is the same
Uganda	USAID Health Team	Health Care Improvement : HCI Evaluation of Improvement of Quality Care Initiative)	Highly interested in the outcome achieved at the pilot hospitals	Possible if the activities implemented in the pilot hospitals are described in the survey report described on the left.
	WHO Health System Advisor	Supervise and support the revision of the guideline for the Preventions of infectious diseases Support the establishment of the guideline	Interested in the outcome achieved at the pilot hospitals. Requesting to have the outcomes disclosed.	If a guideline is to be established prior to deploying the activities to a nation-wide level, cooperation will be required through the MOH.
	SIDA Senior Program Manager	Financial support	Requesting to have the outcomes achieved at the pilot hospitals disclosed Requested to make the activities familiar not only among the MOH but also	Adjustment within the MOH and between the donors

Country	Organization Department	Activities for quality of services	Interests toward this program	Possibility of collaboration
			among the support partners, too	
	RCQHC	Improving the quality of the top-down programs such as those for tuberculosis, HIV/AIDS, and reproductive health Providing support not only for Uganda, but also for the countries in east, central, and south African countries	Strong interest in sharing information via supervisory trips, the previous project formulation adviser, and the previous advisor in the MOH	Possible to gain cooperation by having facilitators for pre-employment education and continued education, etc.
	URC	Improving the quality of the top-down programs such as those for tuberculosis, HIV/AIDS, and reproductive health Providing support not only for Uganda, but also for the countries in east, central, and south African countries	Strong interest in sharing information via supervisory trips, the previous project formulation adviser, and the previous advisor in the MOH	Possible to gain cooperation by having facilitators for pre-employment education and continued education, etc.
Benin	IIFACQES	Support of improving not only health services but also quality improvement of the management (mainly obtaining ISO9001)	Representative is previous director of HOMEL and previous director of the hospital services in the MOH and high concerned with the program	Considering to establish ISO certification body in the future and regarding 5S as a basic step for the process
Burkina Faso	WHO	Technical support for the MOH programs Implementing the program regarding health services and patient safety	Concerning improvement of the consciousness and motivation among health workers	Planning to hold "the Symposium on quality assurance of health services and patients' safety" in 2010. It might be possible to expand 5S-TQM at sub-regional level
	ABMAQ	Established in 1991. Company support and holding seminars utilizing Japanese (Asian) quality control methods with support by Union of Japanese Scientists and Engineers.	High interest since hoping dissemination and settlements of the 5S and QC circle in health and education sectors	Possibility as training resources
Burundi	EC	PBF (Budgetary support based on outcomes)	Confirmation of the intentions to participate policy making with MOH	It is necessary to approach MOH to participate in policy making
	Belgium	Support to improve management and monitoring abilities at	5S-KAIZEN-TQM is effective to complement other projects. Also, it	It is expected to collaborate with 5S on the PBF

Country	Organization Department	Activities for quality of services	Interests toward this program	Possibility of collaboration
		the MOH level PBF	should be introduced in other sectors.	
DRC	(No discussion)			
Mali	WHO	Conducting simple approaches including quality improvement of health services	AAKCP activities are in accordance with WHO action policies	Sharing action plan of the pilot hospital
Morocco	WHO	Supporting to improve quality of health services at medical institutions (such as establishing guidelines, training for health professionals)	Working for quality improvement of health services utilizing existing resources and concept of 5S-KAIZEN-TQM is same as WHO action policy	Complementary effects will be expected to include 5S-KAIZEN-TQM in curriculum of education for health Professionals and training for maintenance of medical equipment and devices.
Niger	(No discussion)			

Although the WHO offices in each country are providing support for the establishment of the policies in the target country, most of them do not provide individual support for improving the health services, and are providing support for such matter as a component among the establishment of overall policies or among an individual business case. In general, the WHO office in each country mainly provides technical support for the country, and its support is not very large in size. However, the WHO office in Morocco is exceptional, having the budget of 200,000 Dollars in total, and is implementing 20-30 projects in 2 years' time.

GTZ has been expanding its effort for improving the quality of the organizations (Systematic Quality Improvement), which is a tool for managing the health services and improving the organizations, since 2002 to the countries of Guinea, Morocco, Cameroon, Yemen, and Congo.

USAID and DFID are implementing project cases based on the contract concluded with international or local NGOs, and RCQHC or URC in Uganda and local NGOs in Nigeria, which are the entities working based on such contracts, were showing high interests in this approach.

The political situation in Madagascar continues to be unstable due to the placement of the interim government, where even some of the international institutions are suspending their activities, the possibility for combining the activities implemented by the international institutions and the activities incorporating 5S-KAIZEN-TQM together is uncertain. As for Eritrea, since the supports provided in the health area apart from those provided by Japan and WHO are limited, it would be difficult to expect any alignment between the international institutions and other donors at these 2 countries would be difficult for a while.

The activities implemented in areas other than the health area such as the industrial area are implying impact onto the health area, such as in Benin, where mainly the French NGOs are providing support for

obtaining ISO9000, and in Burkina Faso, the institutions which are being supported by Japan are promoting quality control activities.

In Burundi and DRC, EC and Belgium are deploying PBF, where it is prospective to gain future cooperation by showing the achievements that can be gained by the 5S-KAIZEN-TQM approach in an objective manner.

In Tanzania, 1) GTZ will provide support for the quality control of the health services in 20 hospitals in total – the District hospitals in the 14 Districts in the 4 Regions, and the 4 Region hospitals, 2) USAID will implement a quality improvement program for the health services with its axis placed onto HIV/AIDS, 3) WHO will provide support in establishing Tanzania Quality Improvement Framework 2005, and 4) DANIDA has implemented quality improvement seminars for 33 District hospitals as a component of the Hospital Reform Program implemented by the MOH during 2006 – 2009 and is planning to continue its activity. 5S is also incorporated into "Tanzania Quality Improvement Framework 2005" described above where support is provided mainly by WHO, too.

3-5 Trends of JICA Programs/Projects regarding quality and Safety for Health

JICA has implemented other JICA Programs/Projects applying 5S-KAIZEN-TQM among the 15 participating countries in the program.

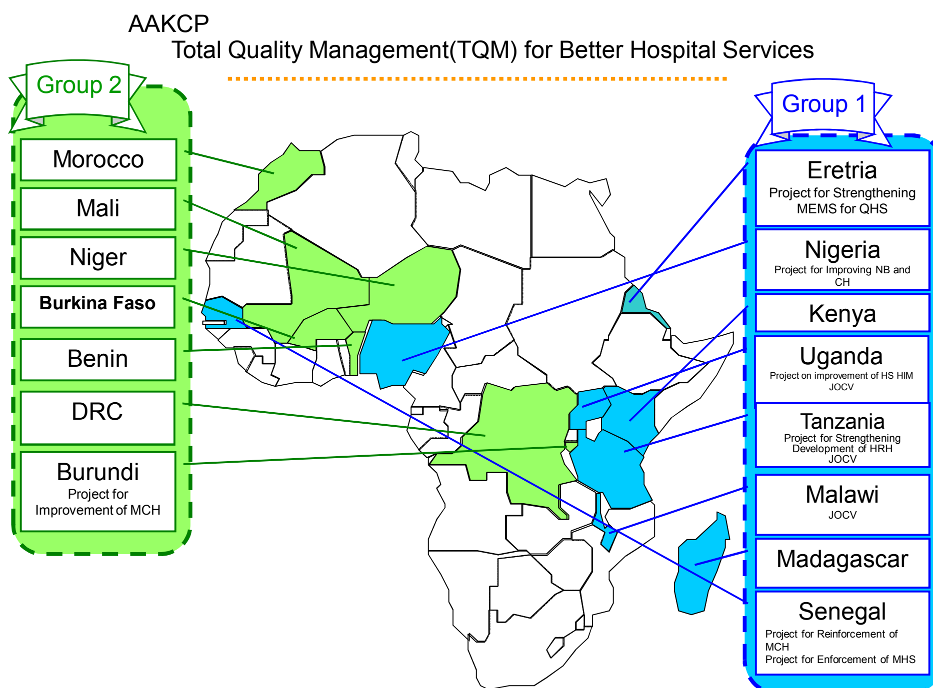

Figure 3-5-1 Other related activities in the member countries of the Program

1) Tanzania

<u>The project for Strengthening Development of Human Resource for Health (from November 2010, 4 years)</u>

This project supports the achievement of the 2 of 7 strategies in Human Resources for Health Strategic Plan in Tanzania such as 1) improvement of the plan establishment capability for health human resources development, and 2) providing education, nurturing, and improving the seminars for the health human resources, by enforcing the effective utilization of the health human resource information management system and the health human resource training information system and by improving the capabilities of the health human resources nurturing institutions. The core of nurturing the health human resources is the expansion of this approach, and therefore support will be provided for holding seminars regarding and for implementing the approach. Additionally, support will be provided for the implementation of the 5S-KAIZEN-TQM approach in the neighboring countries.

2) Uganda

The project on improvement of health service through health infrastructure management (from March 2011, 4 years)

The project assumes the implementation of the 5S-KAIZEN-TQM approach as one of the achievements for the method of improving the "health infrastructure management" additionally to the maintenance and management and effective utilization of the medical equipment. The district hospitals and the health centers within the district will establish the expansion model for the approach via the activities of this project, and will also establish the guideline for this approach for the country level.

3) Eritrea

The Project for Strengthening Medical Equipment Management System for Quality Health Services (from May 2008, 3 years)

This project is implemented for the purpose of changing the Biomedical Engineering Unit from a repairing institution to an institution providing guidance for equipment maintenance and management by following the request made by the MOH, and therefore assign the Unit with the appropriate authorities and function so that it can operate as expected, and to ensure that the preventive equipment maintenance and management structure would be firmly established by urging the change in the acknowledgement of the equipment users at the medical sites. The project is implementing the 5S activities as part of enforcing the organization's capability by holding seminars, etc., and is also including the pilot hospitals for the program into its target facilities.

4) Burundi

The Project for Strengthening Capacities of Prince Regent Charles Hospital and Public Health Centers in Bujumbura City for Improvement of Mother and Child Health (from January 2009, 4 years)

This project is aiming for improving the quality of the health services and of the accessibility by

providing care for the pregnant and parturient women and for newborn infants mainly in the obstetrics and gynecology department in the Hôpital Prince Regent Charles, which is one of the top referral hospital of the urban area of Bujumbura and in the 9 health centers in the region. As part of the activities for achieving that aim, this approach is being implemented as an effort for improving the business environment at the health sites since it can be implemented with relatively low investment and in an easy manner.

5) Senegal

Senegal has been implementing the "**Programme for Strengthening the Health Systems in the Tambacounda and Kedougou Regions, Senegal** (2007 – 2011)" from 2007 jointly with the Ministry of Health and Prevention. The activities for this program and the its former program "Better Hospital Services" are being implemented as part of the country's program described above together with the following businesses.

Project for Reinforcement of Maternal and Child Health Care in Tambacounda and Kedougou Region (from January 2009 to November 2011)

The "Tambacounda Regional Health System Enforcement Program (2007 – 2011)" which has been jointly implemented with the Ministry of Health and Prevention from 2007 is aiming for "improving the health conditions of the people, especially that of the mother and children in the Tambacounda Region". The project is implemented for the target of providing "care for the pregnant and parturient women and for newborn infants based on reasoning".

Dispatch of short-term expert: Strengthen of capacity for health policy in Tambacounda State (2009)

JICA and the Ministry of Health and Prevention are positioning the enforcement of the Region's "health administrative capabilities" as the core of the "Tambacounda Region Health System Enforcement Program" described above, and some experts have been dispatched as part of the support provided for the program.

The project for Enforcement of Management of Health System in Tambacounda and Kedougou (from March 2011, 3 years)

Based on the dispatching of the experts for individual case of the "Tambacounda Region Health System Enforcement" described above, a project was launched aiming for enforcing the health system in the 2 regions described above.

6) Nigeria

Project for Improving Maternal, New Born and Child Health in Lagos State (from January 2010, 4 years)

This project aims to detect abnormalities in the pregnant and parturient women via the medical check-ups for these women by enforcing the PHC functions, and to resolve the excessive concentration of the patients in the secondary medical institutions by establishing an appropriate referral structure from PHC to maternity hospitals and therefore to provide health services for the maternal and child of the better quality. As one of the expected achievements, the item of "strengthening the basic maternal and child health service at the Lagos Island Maternity Hospital", which is the pilot hospital for the program, which therefore provides support for expanding the 5S activities to the pilot hospital and to PHS together with the program.

7) Japan Oversees Cooperation Volunteers (JOCV)

In Uganda, Tanzania, and Malawi, the activities relevant with 5S have been promoted based on the alignment with JOCV which has been dispatched to the pilot hospital of the program. Efforts are being made by utilizing the office expenses and the framework of JOCV, such as conducting JOCV wide area seminars and a study tour to Tanzania which is implemented for Malawi JOCV.

3-6 Advertisements of the 5S-KAIZEN-TQM Approach

3-6-1 Holding the Public Seminar

Outline of the Public Seminar held in June 25th are shown below;

(1) Presentation for 5S-KAIZEN-TQM approach: Prof. Yujiro Handa

(Professor, Health Sciences University of Hokkaido)

The characteristics of this approach are introduced as described below;

- Although it is the medical technology that saves lives, management is also an important factor which saves lives, too.
- Improvement of the management means to change a disorganized hospital to an organized hospital, and in order to realize such change, it is necessary to improve the entire work environment including the backyard – logistics structure – front line.
- The approach is consisted of the 3 steps (5S-KAIZEN-TQM) and the 2 tracks (implementing activities at the pilot hospital and the health administration expanding the activities).
- In order to achieve high quality services, it is important to ensure positive efforts and superior leadership.

(2) Achievement of this program in Africa

1) Supports for health policy at national level: Mr. Hirohisa Ishijima

(JICA Expert on Human Resource for Health Planning, Ministry of Health and Social Welfare, Tanzania)

The reason why this approach was accepted by the Tanzanian government, in what way the approach is incorporated into the health policy, and in what way the approach is being expanded to a nation-wide level and is being maintained were described by following the perspectives described below;

- In order to implement 5S into a policy of the MOH, it is necessary to gain some achievements in the pilot hospital.
- The 5S-KAIZEN-TQM approach is positioned as a component of the Tanzania Quality Improvement Framework, and is being ensured of its consistency with other quality-related policies.

Currently, 37 hospitals are working upon this approach in Tanzania (all 28 national, special, and district hospitals and 9 division hospitals).

2) Training sessions in the pilot hospital: Ms. Mvula Adella Nganyagwa

(Deputy Head of Nursing Division, Mbeya Referral Hospital, Tanzania)

Explanation was provided regarding the seminar for expanding the approach within the hospital based on the perspectives shown below.

- Commitment of the participants is raised by asking the participants to sign for their approval for participating in the 5S activities after the 5S seminar.
- The businesses required for the role of QIT such as providing guidance to WIT, etc. have been specifically stated.

The purposes and roles of WIT have also been clearly stated and clarified.

3) JOCV activities and 5S: Ms. Mayumi Mizutani

(Former Japan Overseas Cooperation Volunteer for Uganda)

Explanation was provided as for what kind of support was provided for the activities for the approach as one of the Japan Overseas Cooperation Volunteers;

- Originally in the pilot hospital, since the human resources who had participated in the seminars held in Japan and in Sri Lanka had been transferred and therefore the 5S activities had been stagnant.
- Implementation of the 5S activities was recommended from the perspective of controlling the health of the hospital staff members (for preventing nosocomial infection).
- The 5S activities have been proven to be effective due to the leadership exercised by the hospital management, the supports provided by the MOH and JICA, and due to the commitment of the hospital staff members.

(3) Concept of cooperation: Prof. Toshihiko Hasegawa

(Professor, Nippon Medical School)

The background and the significance of the approach were described together with its inevitability based on the following perspectives

- This approach is placing the improvement of the medical service quality on mind, but the essence lies in transforming the medical management.
- Transformation takes the 3 steps of “Unfreezing”, “Change”, and “Refreezing”.
- The headstream of 5S lies within the Japanese tea ceremony, and the form and mind of tea ceremony connects with the mind of 5S and hospitality. The custom of offering hospitality is also implemented in the Arab and Africa in the form of coffee ceremony, and the mind of coffee ceremony also connects with the mind of hospitality as in the case of tea ceremony.

(4) Comments and Q & A：Mr. Shogo Kanamori
(JICA Expert on Medical Services Administration, Ministry of Health and Nutrition, Sri Lanka)

The progress status of the approach in Sri Lanka was introduced from the following perspectives;

- In Sri Lanka, ever since the Castle Street Hospital for Women had launched its activities in 2000, the 5S activities have expanded to a nation-wide level with the support provided by JICA, WHO, and the World Bank.
- Currently a national guideline regarding 5S, quality, and safety is being established, and is expected to be approved in the near future.
- It is important to improve the institutional capacity in the model hospital.
- Competition and award are effective in maintaining and improving the motivation.

(5) Questions and Answers

Question 1: What is the key for changing the mindset of the staff members (minor staff members)?

Answer 1: What is important is the leader’s commitment, praising good things, and showing successful examples.

Question 2: Will there be any change in the evidences by this approach, such as the changes in the clinical indicators?

Answer 2: There is none at the moment. The reasons are; 1) it takes time until the clinical indicator shows any change and it is necessary to establish the information collection system via the 5S activities, 2) the approach starts working upon work environment improvement (WEI) rather than directly starting working upon the improvement of the quality of the medical services or safety, and 3) currently measuring the qualitative effect (customer satisfaction, employees satisfaction) is being considered.

Approx. 70 persons participated in the seminar apart from the persons relevant with JICA Training and Dialogue Programs for Group 1. 34 out of them provided their replies for the questionnaire regarding the seminar.

Questionnaire	Strongly agreed	Agreed
Was it easy to understand?	16 persons	16 persons
Was it productive?	19 persons	13persons

The replies for the questionnaire indicated that the effects gained from the approach are; 1) that it utilizes the existing resources, 2) that it seems easy to start, 3) that it starts working upon improving the staff members' work environment, and 4) that the motivation will be improved. On the other hand, the following points were indicated as the challenges; 1) systematization of the approach, 2) quantification of the effect, 3) continuity of the activities, 4) maintaining the participatory form, and 5) the establishment of the network.

The open seminar was the first one held as part of the advertisement of the approach, and it seems that many participants became interested in the approach and therefore that a certain level of achievement has been gained. As their requests, the participants required to have such advertising efforts continued, and to enrich the documents.

3-6-2 Prepare the technical document related with 5S-KAIZEN-TQM (leaflets, materials, etc.)

The leaflet has been reprinted for and distributed at the 2nd GHWA Global Forum on Human Resources for Health held in January 2011. Both documents were saved in CD-ROMs, and had been distributed at the Global Forum.

The leaflet and the photo book is introducing the approach using photographs and charts and is therefore easy to understand even for those people who are not much interested in international health or in development aid. It has been fully utilized as an ad document for the general public, and is considered to be superior for the general purpose.

3-6-3 Releasing of the newsletter

The newsletter is helpful for sharing the information such as the activities implemented for the program, future schedules, and the efforts made in each country, etc., being effective along the expected purpose, but has also been pointed out for the following challenges regarding the future operations of the newsletter;

- Selecting the addressees of the newsletter; whether it should be sent to the individual relevant persons, or to the responsible persons in the offices of each countries or relevant departments and then to have it shared within the office or department
- Selecting the contents to be shared: whether to limit the contents to the information regarding the progress management or to include the information relevant with each country
- Frequency of releasing the newsletter: whether it is appropriate to issue it every month

3-6-4 Holding a workshop in the GHWA Global Forum

The purpose of this workshop (SBW) is to issue the information regarding this approach in an international stage, and to make the effectiveness of the approach widely known.

In this SBW, we had been able to send out the information regarding what 5S-KAIZEN-TQM are, and the strong message that superior leadership and improvement in work environment is required as the prerequisite for ensuring high quality medical services and for improving the customers satisfaction, and that the 5S activities are highly effective in achieving such prerequisites. It seems that we have been able to make the participants from each country even more motivated for implementing the activities in their own country by having introduced the example successful cases in each country during the workshop. Additionally, the fact that as many as nearly 100 participants had gathered at the workshop regardless of the fact that other sessions were being held at 10 other places show how much interested the participants were in this session. Therefore, it can be considered that the purpose of SBW – making the approach widely known among the participants – has been achieved.

Additionally, after the SBW, posters were displayed and leaflets, textbooks (in English and French), and lecture documents were distributed, and almost all of the documents that had been prepared had been fully distributed, which can be considered that we have been able to make sufficient appeal for the wide range of participants of the forum.

(1) Challenges

Although this SBW was completed successfully the following challenges had been pointed out, too.

- Longer discussion time required.
- The data for the case in Sri Lanka should have been introduced as the successful case.
- All of the participants the approach should have been introduced much more in a significant manner in the SBW.
- Preliminary rehearsals should have been made much more thoroughly.

3-6-5 Training results for health professionals through AAKCP and 5S-KAIZEN-TQM Seminars

Table 3-6-1 shows the training results for health professionals through AAKCP and 5S-KAIZEN-TQM Seminars.

Table 3-6-1 Number of seminar participants

Group 1		Group 2	
Country	Number of trainees	Country	Number of trainees
Eritrea	820	Benin	255
Kenya	372	Burkina Faso	318
Madagascar	186	Burundi	604

Group 1		Group 2	
Country	Number of trainees	Country	Number of trainees
Malawi	267	DRC	210
Nigeria	370	Mali	146
Senegal	260	Morocco	31
Tanzania	5012	Niger	313
Uganda	719	Group 2 Sub-total	1877
Group1 Sub-total	8066	Overall total	9883

3-7 Coordinating the supporting structure

3-7-1 Capacity building training course (for nurturing experts)

The achievements gained for each purpose of the training course are as described below;

1) Learn the international. regional and national trend within the general health area, understand the current status of the supports provided by Japan for the health sector, and consider the future state

It is assumed that the percipients have been able to learn a part of the trend and direction of the international health, and the positioning of Japan among the international health and of the supports provided by Japan. In particular, the world's viewpoint is shifting to the donor's synthetic cooperation due to the major trend of bilateral cooperation such as "aid donor coordination" and "international health diplomacy", and it is assumed to have been an important experience for having touched the challenges Japan has for international health strategy as the prospective candidates for experts whose is highly expected to become successful in the future international health area.

2) Nurture the immediately adaptable human resources such as the technology cooperation experts who aim for the improvement of the quality in the health management and services by utilizing 5S-KAIZEN-TQM, and the investigators for the plan for forming business cases, etc.

Many participants for this training course have the business experiences in forming business cases, etc. as the experts or survey team members of JICA related businesses, and for them to understand the 5S-KAIZEN-TQM approach by attending to this training course, it must have improved their potential for forming business cases. On the other hand, some offered their opinion saying that there was not enough lecture regarding the planning process or regarding the evaluation / monitoring activities when seen from the perspective of forming business cases, and therefore some aspects show that it was not sufficient from the aspect of project management.

3) Learn the practical method for 5S-KAIZEN-TQM to be used in the health cooperation business site

Since this training course is positioned as an implementation training course, the lectures and

exercises were implemented mainly regarding the practical method for implementing 5S. As a result, it is assumed that most of the participants have understood and learnt the practical method regarding 5S, but KAIZEN and TQM are yet to be worked upon as the future challenges.

In the questionnaire provided to the participants, many respondents had replied that they want to implement this approach. This can be considered to be due to the fact that they have become confident and have gained the knowledge for being able to explain the 5S-KAIZEN-TQM approach, which therefore means that the target of this training course has been sufficiently achieved. However, the status of whether the participants are engaged in the businesses relevant with this approach after having participated in the training course has not been confirmed.

3-7-2 Preparing the textbook

The original textbook was prepared in English, and the 1st draft version was completed in June 2010 and was distributed in the open seminar described above. After that, the French version which was prepared based on the aforementioned draft version in October 2010, and was distributed to the participants of the wrap-up seminar for Group 2 held in the same month.

The 1st edition of the English version was completed in January 2011, and was distributed at the GHWA Global Forum on Human Resources for Health together with the French version; all of the 150 sets of the documents and 300 CD-ROMs were sold out immediately after being placed in the JICA exhibition space. The Japanese version is planned to be disclosed in March.

It can be considered that by having prepared and distributed the textbook, the standard concept and the implementation process of the approach has been disclosed and therefore provided the path for the hospital managers and those relevant with the aid businesses, etc. who are planning to implement this approach to individually implement them, the expected achievements have been made.

It is necessary to have the contents of this textbook refined, and to promote continuous revisions so that the textbook would be utilized as a practical textbook.

Table 3-7-3 Contents of the Textbook

I. Introduction
  1-1. Objective and Contents of the textbook
  1-2. History of the newly developed stepwise approach
  1-3. Ultimate goal of the change management through stepwise approach "5S-KAIZEN-TQM" is to Change hospital toward "Value Creating Organization".
II. Basic Concept
  II-1. Why do we need "three-step approach" of 5S-KAIZEN-TQM?
  II-2. Process toward Total Quality Management (TQM) Framework
  II-3. Navigation through 3 steps (5S-KAIZEN-TQM) processes using change management: Team building and KAIZEN
  II-4. WHO concept of Health System
  II-5. Quality
  II-6. Productivity
  II-7. Safety management in 5S-KAIZEN-TQM approach
III. Methodologies
  III-1. 5S <Five S> Principles and the activities
  III-2. Navigation process of 5S from kick off to stabilization
  III-3. KAIZEN
  III-4. TQM
IV. Monitoring and Evaluation (M&E) for 5S-KAIZEN-TQM approach
V. Calibration of terminology
  V-1. Terminology
  V-2. Other methods
VI. Cases and Stories
VII. References