

"Project Formulation Survey" under the
Governmental Commission on the Projects
for ODA Overseas Economic Cooperation
in FY2012

Summary Report

SUDAN

Project Formulation Survey on Education and
Employment Support for Persons with Visual
Impairment in Sudan

March, 2013

Nippon Telesoft Co.,Ltd. And

Earth System Science Co.,Ltd. Joint Venture

This report is a summary of a project formulation survey conducted by the contractor, under the Governmental Commission on the Project for ODA Overseas Economic Cooperation, commissioned by the Ministry of Foreign Affairs of Japan in Fiscal Year 2012. It does not necessarily represent the official views of the Ministry of Foreign Affairs of Japan.

Introduction

1. Background and purpose of the study

In Sudan, there is little support for persons with disabilities because of the devastation of the country by civil war and poverty. People have a strong desire for employment support centers and education of the visually impaired with Braille devices and IT (IT : Information Technology) equipment. If these centers are made available, they can effectively increase opportunities for employment and education for the visually impaired. The purpose of this study is to assess the needs and to propose potential projects concerning assistance for education and employment in Sudan, and to assist developing countries by applying Braille devices through ODA funding .

2. Outline

Report on the followings.

- (1) ODA Project feasibility studies, (2) Market analysis, based on survey results, (3) ODA Project plan, (4) Investment plan and financial plan (draft)

Taking the Sudanese Government structure and capacity in the implementation of the survey into account, we should carry out a small and practical support scheme such as training business first using Braille devices. In future, we will provide equipment by a grant aid first, and extensive support such as education and employment support centers next.

Contents of the survey are as follows.

- 1) Description of the current situation and development needs of the development issues concerned in the surveyed country.
- 2) Possible applicability of SME's products and technologies, and prospects for future business development
- 3) Expected development impact and effect on business development of the proposing SMEs in the surveyed country through proposed ODA projects
- 4) Proposals for formulating ODA projects

3. Investigation schedule

Contract period : December 6, 2012 - March 15, 2013

Survey period : December 7, 2012 - January 5, 2013

4. Main interviews with partners

- Ministry of Finance
- Ministry of Welfare and Social Security
- Education Department Special Education Division
- Ministry of Human Resource Development
- National Disability Council
- United Nations Children's Fund Sudan Office
- Sudanese Ambassador to European Union delegation

- Elnour Institute for the Blind (Khartoum State)
- Elnour Institute for the Blind (Gedaref State)
- Elnour Institute for the Blind (Kassala State)
- Sudan Blind Association
- Sudan Blind Rehabilitation Center
- El Gezira in Blind Association
- Gedaref in Blind Association
- Kassala State Blind Association
- University of Khartoum (Faculty of Law, Central Library, Faculty of Education)
- El Gezira University
- Khartoum Teaching Hospital
- Committee for Assisting and Promoting Education of the Disabled in Sudan (CAPEDES)
- Vocational Training Center (Khartoum and Jabra)
- Khartoum Central County Office
- NATTIQ (Distributor of Dubai Inc.)
- Japan Embassy in Sudan
- JICA Sudan Office

I . Description of the current situation and development needs of the development issues concerned in the surveyed country

1.1. Overview of the country's political and economic situation

In the Sudanese Republic (hereinafter referred to as the "Sudan"), the consolidation and construction of peace after the North-South civil war, Darfur conflict and conflict in the eastern part are serious issues, and massive efforts have been undertaken internationally. Although the UNMIS (UNMIS: United Nations Mission in Sudan) activities that has taken place in both North and South Sudan ended when South Sudan became independent on July 9th , 2011, the UNAMID (UNAMID : African Union-United Nations Mission in Darfur) is still deployed. In addition, the United Nations Security Council started the UNISFA (UNISFA: United Nations Interim Security Force for Abyei) in Jun, 2010. Therefore, two UN peace missions are now deployed in the country.

From April 2003, the fight between the Sudanese Government and anti-Government armed forces in the Darfur region of Western Sudan became intensified and the massive humanitarian crisis was created, which resulted in the world's largest provision of international humanitarian assistance. In May 2006, the Darfur peace agreement (DPA: The Darfur Peace Agreement) was signed between the Government and the rebels. Only a few stakeholders, however, signed the agreement, resulting in a major setback. Since 2004, AMIS (AMIS: AU Mission in Sudan) replaced UNAMID which had been deployed from 2008 and performed peacekeeping operations for civilian protection and humanitarian assistance.

The International Criminal Court (ICC) issued an arrest warrant against the President Al-Bashir on March 2009, on charges of war crimes and crimes against humanity. In addition, the ICC added mass genocide crimes as a charge against the President in July 2010. In this area, tribal strife and fighting between the Government forces and armed opposition groups are still continuing, as well as robbery and kidnapping of the humanitarian workers. Thus, improving security is a top priority.

On the other hand, Sudan is rich in agriculture and animal husbandry. Major products are cotton, sorghum and sesame seeds, Arabian gum, and sugar. These agricultural products are exported to neighboring countries. Also, Sudan develops and exports mineral resources (oil, gold, manganese, etc.), which contribute to its economic development. Before the South Sudan independence, oil production per day amounted to about 500,000 barrels and it was exported to China and the Central Asian countries. After South Sudan's independence, however, it declined to 11.5 barrels per day.

Now, improvement of agricultural productivity, diversification of the industrial structure which was overly reliant on oil revenues, and the problem of its \$400 billion external debt have become major challenges for the country.

Sudan is a country which is heavily in debt.. It is a target country of the enhanced HIPC initiative. However, the PRSP is not properly formulated at this time. Also the country has a large amount of arrears to The IMF / World Bank. This problem is under consideration regarding resolution of debts in South Sudan. Situation for economic reforms under the IMF / World Bank loans has not been resolved. The debt relief process is not moving forward.

1.2. Current situation of the Development Issues Concerned in the Surveyed Country

The development issues concerning the education and employment of persons with visual impairment (PWVI) in Sudan could be categorized into the following three groups: (1) insufficient educational opportunities for PWVI, (2) inadequate quality of education for PWVI, and (3) insufficient opportunities and support for the employment of PWVI.

According to the national census carried out in 2008, which also included the southern part of Sudan before its independence, the estimated number of persons with disabilities (PWD) in North and South Sudan was about 1,865,000 (4.9% of the total population), including 584,000 of persons with low vision (31.5% of PWD) and 92,000 of the blind (5.0% of PDW), which is a high proportion of PWVI among the entire PWD. Lack of a social security system based on tax revenue commonly brings severe distress to vulnerable groups of people including PWD, while an Islamic mutual-aid mechanism called *Zakat* mitigates the impact of poverty. There is a PWD organization called Sudanese National Association of the Blind in Khartoum, the capital of Sudan, and its state branches are in every state except for Kordofan and Darfur.

Among PWVI between 6 and 24 years of age, 69% of the blind and 35% of those with low vision have never attended schools (2008 National Census), and only 4,696 students with visual impairment

currently receive education at school (Educational Statistics 2009-2010). While there are special schools at the basic education level in the cities of Khartoum, Gedaref and Kassala, which have no more than 130 students, a great majority of children with visual impairment generally attend ordinary schools. However, their special educational needs are not adequately met there so that their learning totally relies on their listening to the teacher's lecture. Even in the institutes for the blind, teachers are now pursuing the full implementation of education in Braille. As far as higher education is concerned, not only several universities have students with visual impairment, but also University of Khartoum and the University of Gezira have a Department of Special Education to train new teachers for special needs education.

The 2008 National Census shows that 21.8% of the blind and 32.8% of the people with low vision are employed. The Government of Sudan promotes employment of PWD so that they account for 2% of all civil servants. Therefore, graduates with visual impairment often become civil servants including teachers after leaving universities. Some become religious leaders after learning the Quran, and a few others work as singers. Meanwhile, a very limited number of PWVI are employed by private companies.

1.3. The Related Policy, Strategy and Legal Framework in the Surveyed Country

The Interim National Constitution of the Republic of Sudan (2005) guarantees the equitable rights of persons with special needs to education, employment and participation in society, and respects their human dignity. The Convention on the Rights of Persons with Disabilities was ratified in 2009, which led to the enactment of the National Disability Act of 2009 stipulating the rights of PWD in multiple dimensions (National Bill of Persons with Disabilities for the year 2012 is currently under consideration). The National Council for Persons with Disabilities (NCPD) has developed its Five Year Strategic Plan (2012-2016). It has been endeavoring to construct a legal and institutional framework and is going to make more efforts to improve actual services for PWD.

With the assistance of UNICEF, the Department of Special Education in the Ministry of General Education is developing a strategy for inclusive education which will promote education for children with disabilities in the mainstream schools, improvement of quality of special needs education, and so on. Promotion of PWD's employment is stipulated by the National Civil Service Act 2007.

1.4. Analysis of Activities of Japan's ODA and other Donors' Aid to the Development Issues Concerned in the Surveyed Country

Japan's ODA activities related to the issues concerned in Sudan includes Project for Strengthening Vocational Training; Training and Dialogue Program—Economic Empowerment of Persons with Disabilities through a Community-Based Employment Support; Capacity Development Project for the Provision of Services for Basic Human Needs in Kassala, and JICA's Volunteer Programs. In addition, UNICEF's assistance in developing an inclusive education strategy, EU's assistance for Sudanese National Rehabilitation Center for the Blind, and the activities of a Japanese NPO called

the Committee for Assisting and Promoting Education of the Disabled in Sudan (CABEDS) are closely related to the development issues discussed herein.

II. Possible applicability of the SME's products and technologies, and prospects for future business development

2.1. Proposed products

We have a range of products for the visually impaired, such as Braille printers, Braille displays, equipment for people with low vision, and related software. These are much appreciated for their high functionality and have received the Tokyo Venture Technical Award, as well as an award for middle and small sized companies. These devices support 32 different languages including English and have been popular in Western and Asian countries as world class products. In education such as by using our printer which prints in Braille and ink simultaneously, they effectively support the visually impaired.

2.2. The Reason for overseas operation

The national market is shrinking due to several factors, such as decrease in the birth rate. In order to overcome these difficulties, the company aims to operate in overseas markets. We have already attended many exhibitions and fairs, in order to expand our business territory, and in the future we need to become a company which is based on overseas sales. As with all low- volume manufacturing enterprises, an increase in sales directly means an increase in manufacture, parts procurement and employment. Moreover, our overseas business market brings many chances to other middle and small sized companies, and they will have a beneficial effect directly for the local economy.

2.3. Benefit for the local economy

Introducing our equipment through the ODA project, we can secure a prime advantage in the market in that country. If other countries' products are introduced first, they will be the standard and then it will be very hard to enter the market. It is essential to be the first in the market.

2.4. Business Plan

We would like to assure people in the interested countries of our structural sales support, and we will build an office for supporting equipment usage and establish a staff system, so that it could be a center of our business operation in Africa. In the future, some products can be manufactured there and it should boost local employment.

We can achieve this goal by providing equipment and skill training service to visually impaired people so they can work in a relatively new area of employment, information processing with computers, or being an operator at a call center.

2.5. System and Schedule

Our business will be developed in two areas, in the urban offices and the rural areas. After the decision of ODA is made, our office will initially provide some software which supports the language of the region where the ODA interested country is situated. Secondly, in the intended country, we will give training for the equipment operation and leaders of education for visually impaired people. The training will be the infrastructure of our business. At the same time, we will deploy and set up the equipment in the region. This should be done within three months after the decision is made.

2.6. Handling business risk

Business risks can be caused by a variety of local factors and national/international political instability. We are determined to reduce and minimize risks and obstacles of management, for example by controlling the operating environment in terms of dryness, dust, and safety for the visually impaired users, eliminating the need for refund or replacement of products, hedging against exchange fluctuations, etc.

III. Expected development impact and effect on business development of the proposing SMEs in the surveyed country through proposed ODA projects

3.1. Relevance of the Proposed Products and Techniques to the Development Issues Concerned

Although the Government of Sudan has stated its policy of promoting inclusive education, the educational opportunities for children with disabilities are insufficient because ordinary schools are not well prepared to receive them in too many cases; an absolute lack of textbooks for students with visual impairment is an illustrative example. A Braille embosser can be used to produce national textbooks in Braille to distribute them to schools. It is good for the embossers of Nippon Telesoft to be used in a developing country because of their high stability and durability. Furthermore, in higher education institutions, application of information and communication technologies including Braille embossers, Braille displays and audio devices may effectively mitigate the information gap between students with and without visual impairment to guarantee equitable educational opportunities for all.

The Improvement of education for PWVI requires multiple approaches to the issues such as teacher training, instructional methodology, curriculum, and others. Meanwhile, the provision of learning materials appropriate for students with visual impairment should be a minimum requirement to ensure the quality of education. Concerning the improvement of the quality of education through the distribution of textbooks in Braille to ordinary schools, Nippon Telesoft's embossers can print texts in ink and in Braille simultaneously, so that the produced books can be easily used by a sighted teacher to teach children with visual impairment.

In order to improve the employment assistance for PWVI, it is crucial to assist them in being

equipped with skills which meet the labor market's needs. It is commonly presumed that computer operation skills may have a positive influence on the increase of PWVI's employability. Therefore, Nippon Telesoft's equipment, such as Braille display and embosser, can be very effectively utilized for the capacity development of PWVI, because it facilitates PWVI's access to information and communication technology.

3.2. Expected development impact and effect on business development of the proposing SMEs in the surveyed country through proposed ODA projects

As the market of assisting equipment is rapidly declining in Japan, an increase of sales will affect the management of the company directly, especially a small company. For example, on the manufacturing side, an increase of sales will bring multiple effects such as reducing manufacturing costs and purchase prices, as well as better treatment for employees, and the like.

Installation of the equipment to the ODA intended countries is a very important chance to be recognized as the standard equipment in the countries. Therefore, it would be a great opportunity for our company to mark the beginning of overseas business. After ODA support, experts being trained in the operation of the equipment will help future sales, and an increase of sales can be expected when they start to do business on their own behalf.

As an ODA interested country's main equipment, it could sell widely in neighboring countries. Particularly in Africa, where many places are still not technologically well equipped, there is a chance to gain market dominance. For example, in the case of Brazil, the country decided to start a big campaign of supplying Braille products, and purchased around 2,000 Braille printers. Looking at the whole market in Africa, it can be expected that the demand would be even more than in Brazil and it will be a great opportunity for our company. So we hope the ODA project can open up to us great overseas business opportunities.

IV. Proposals for formulating ODA projects

4.1. Outline of the Proposed ODA Projects

The principles applied to the formulation of the proposed ODA projects are as follows:

- 1) Provision of the equipment using the technology of a Japanese small and medium enterprise (SME) and technical assistance for the improvement of education and employment support should be carried out at the same time;
- 2) The proposed projects should be comprehensive and embrace education and employment support in order to fulfill the basic human needs of PWVI in Sudan; and
- 3) After pilot activities to confirm the effectiveness of the provided equipment and technical assistance, projects should gradually cover a larger area.

In accordance with these principles, projects could be proposed by the use of different ODA schemes including (1) feasibility survey and pilot project under the private sector's proposal (under construction), (2) technical assistance project, and (3) JICA's volunteer programs.

4.2. Proposed Project Components and Expected Effects on the Development Issues

The proposed projects are described as follows:

- 1) A feasibility survey and pilot project under the private sector's proposal to measure the effectiveness of the provision of supporting devices for PWVI and the technical assistance for its proper use, and to provide lessons learned and recommendations for further expansion through pilot activities.
- 2) A technical assistance project aiming to develop appropriate methodology of education and employment support to fulfill the special needs of PWVI in the pilot areas.
- 3) JICA's volunteers such as "assistance for persons with disabilities", "computer instructor", "physiotherapist" and "practitioners of acupuncture, moxibustion and massage".

4.3. Possible Linkage with Other ODA Projects

The proposed projects may collaborate with Project for Strengthening Vocational Training and Capacity Development Project for the Provision of Services for Basic Human Needs in Kassala. Especially in the field of employment support, the linkage with the vocational training projects to utilize the existing know-how and institutional framework will easily increase the effectiveness and efficiency of the proposed projects.

4.4. Other Relevant Information

Japan's ODA aims to strengthen the partnership between the private sector's businesses and ODA's funding; this survey is also carried out along this policy. As for Japan's country assistance policy for Sudan, the proposed projects are relevant to the priority areas such as "assistance for basic human needs" and the development subject "assistance for vocational training". Moreover, it is important to seek the collaboration with other agencies including UNICEF, European Union and Committee for Assisting and Promoting Education of the Disabled in Sudan (CABEDS).

Project Formulation Survey Impairment in Sudan

SMEs and Counterpart Organization

- Name of SME: Nippon Telesoft Co., Ltd. / Earth System Science Co.,Ltd. Joint Venture
- Location of SME: Chiyoda-ku, Tokyo, Japan / Shinjuku-ku , Tokyo, Japan
- Survey Site/Counterpart Organization: Khartoum, El Gezira, Gedaref & Kassala/
National Council for Persons with Disabilities

Concerned Development Issues

- **Insufficient educational opportunities for persons with visual impairment (PWVI):** Limited number of institutes for the blind; ordinary schools not prepared to receive PWVI despite policy for inclusive education
- **Inadequate quality of education for PWVI:** Lack of learning materials in Braille; over-reliance on sound
- **Insufficient opportunities and support for the employment of PWVI:** Few job opportunities in the private sector despite possibility to become civil servants

Products and Technologies of SMEs

- **GEMINI PRINTER**
Simultaneous Braille and Printer.
This Braille printer is capable of multilingual correspondence, and is utilized in the West, China, etc.
- **SEIKA Series**
- **Braille Display**
- **Electronic Video Magnifier**

Proposed ODA Projects and Expected Impact

- **Project for the improvement of education and employment for PWVI** (Technical Assistance Project): Improved quality of education and training with learning materials in Braille
- **Feasibility survey on the assistance in education and employment for PWVI:** Confirmed effectiveness in the use of Braille devices
- **JICA's volunteer programs** (assistance for persons with disabilities, computer instructor, massage, etc.)

Future Business Development of SMEs

The welfare business is a small market in Japan. Our company can expand its business by the advance to foreign countries and wants to cooperate in the area of employment and local development.

