

英文要約

**“Needs Survey” under the Governmental
Commission on the Projects for
ODA Overseas Economic Cooperation
in FY2014**

Summary Report

Republic of the Union of Myanmar

**Needs Survey on Agriculture,
Food / Food Products, and Vocational Training
and Industrial Development Fields**

March, 2015

JAPAN DEVELOPMENT SERVICE CO., LTD.

The content of this report is a summary of the needs survey, which is commissioned by the Ministry of Foreign Affairs of Japan in the FY 2014 and was carried out by Japan Development Service Co., Ltd.. It does not represent the official view of the Ministry of Foreign Affairs.

Summary

Outline of the Survey

(1) Survey Objectives and Schedule

The Survey is intended to survey local development needs in the Republic of the Union of Myanmar (hereafter “Myanmar”) in the fields of 1) Agriculture, 2) Food / Food products, and 3) Vocational training and industrial development, to investigate the possibility of utilizing the products and technologies of Japanese SMEs for resolving development issues, and to examine the feasibility of formulating Official Development Assistance (ODA) projects and deploying business in the said country. In the Survey, the following team members implemented field surveys according to the following schedule.

Name	Department and Position	Responsible Field	Field Survey Period (2014)
Takamichi Ide	Senior Consultant Consulting Division	Team Leader / Food / Food products 1 / SME diagnosis	July 27~August 28 November 30~December 20
Akira Doi	Senior Consultant Consulting Division	Deputy Team Leader / Vocational training and industrial development 1	July 20~July 26 November 30~December 20
Kumiko Kasai	Senior Consultant Consulting Division	Agriculture 1	July 27~August 28 December 7~December 20
Kiyoko Hitsuda	Senior Consultant Consulting Division	Agriculture 2	November 30~December 20
Takanori Yasuda	Deputy Director Division of Overseas Business Development & Public Private Partnership Support Consultant Consulting Division	SME overseas deployment assistance 1/ Vocational training and industrial development 2	July 20~August 9 October 12~October 18 December 7~December 20
Hiroshi Nishizaki	Consultant Consulting Division	SME overseas deployment assistance 2/ Food / Food products 2/ Agriculture 3	July 27~August 28 November 30~December 20

(2) Survey Methodology

Before and after the field surveys, and also at opportune moments during the surveys, products and technologies deemed to be effective for the three target fields were examined and information collection was conducted including hearings with domestic enterprises and organizations, etc. Also, pre-existing surveys and official document and statistical information available in Japan were collected. Moreover, in the field surveys, emphasis was placed on paying visits to a broad range of agencies including the Japanese Embassy in Myanmar, JICA officials (local office and related projects), public agencies on the Myanmar side including future counterparts (CPs), producers’ groups, private enterprises, industrial groups and so on. Concerning the information that was collected in the survey in Japan, considering that there are numerous issues regarding accuracy and completeness, when conducting examination priority was given to the information obtained in the visit surveys. In addition, among others a survey

of prices of products from other countries competing with the Japanese products was implemented.

Through implementing the field surveys over two stages (the agriculture and food / food products fields) or three stages (vocational training and industrial development field), in the process of confirming the detailed local development needs and market environment and so on, the assumptions initially envisaged for products and technologies were reviewed in a phased manner, and the additional information necessary for doing that was collected in Japan between the field surveys. As a result, it was possible to conduct more focused examination and proposal of products and technologies.

Furthermore, concerning the fields of 1) Agriculture and 2) Food / food products, a total of five seminars were conducted in August (Pyay) and December (Taunggyi, Magway, Mandalay, Yangon) 2014, while in the field of 3) Vocational training and industrial development, a seminar was conducted in December (Mandalay). Discussions were held concerning local development issues, market environment, and needs for the products and technologies of Japanese SMEs, and these were referred to in examining the proposed items in this survey. (In Myanmar, industrial structure and products differ between the commercial and industrial center of Yangon and the regions. Accordingly, in the fields of agriculture and food / food products, emphasis was placed on making trips to regional production areas of envisaged products). In the trips made concerning 1) Agriculture and 2) Food / food products in August (Pyay) and 3) Vocational training and industrial development in December (Mandalay), activities were jointly conducted with the Myanmar-Japan Center for Human Resources Development, and collaboration was sought with project activities (including networking between Japanese and Myanmar enterprises). Cooperation was obtained from related agencies (branches and subordinate industrial groups, etc.) of the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI) in advertising for participants. Concerning the trip to Mandalay in December in the field of 3) Vocational training and industrial development, a joint presentation was made with a Japanese-affiliated enterprise that locally sells the automobile inspection equipment targeted in the survey. In doing so, it was possible to provide more concrete information on the Japanese automobile inspection system and automobile inspection equipment, etc. to stakeholders in the local area, where no such automobile inspection system exists.

(3) Main Destinations Visited in the Field Surveys

The following destinations were visited in the field surveys.

<Visited Agencies in the Agriculture / Food / Food Products Fields>

Administrative agencies	Ministry of Agriculture and Irrigation (Department of Agriculture, Department of Agricultural Research, Agricultural Mechanization Department), Ministry of Science and Technology (Scientific and Technological Research Department), Ministry of Commerce (Department of Trade Promotion), Ministry of Industry (Small and Medium Enterprises Development Department)
Industrial groups	Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI) , UMFCCI Affiliated associations (Myanmar Rice Federation (MRF), Myanmar Rice Millers' Association (MRMA), Myanmar Paddy Producers Association (MPPA), Myanmar Fruit, Flower and Vegetable Producer and Exporter Association (MFVP), Myanmar Food Processor and Exporter Association (MFPEA), Myanmar Pulses, Beans & Sesame Seeds Merchants Association (MPBSA), Myanmar Edible Oil Dealers' Association (MEODA), Myanmar Rice And Paddy Traders Association, MFVP Heho, MFVP Mandalay
Enterprises	Myanmar Agribusiness Public Corporation (MAPCO), Myanmar Inspection & Testing Service Co., Ltd. (MITS), ARKAR OO Co., Ltd., Myanmar Belle Co., Ltd., Pyey Phyong Aung Co., Ltd., Inspection and Surveying Co., Ltd.. (OMIC Myanmar), New Golden Gate Co., Ltd., Excel International Trading Co., Ltd., OK Brothers Co., Ltd., Good Brothers Co., Ltd., THAI-5, Shan Maw Myae Co., Ltd., SATAKE CORPORATION YANGON REPRESENTATIVE OFFICE, Thazin New Family Co., Ltd., Two Rabbits Co., Ltd., Green Wood Co., Ltd, Pioneer Agrobiz Co. Ltd., Mawn Trading Co., Ltd, Golden Rice Company Ltd., MAST Myanmar Technology, Sentosa Trading Co., Ltd., Toyota Tsusho Corporation Yangon Liaison Office, MITSUI & CO., LTD. Yangon Office
Others	Embassy of Japan in Myanmar, JICA Myanmar Office, JETRO Yangon, JICA Project (Project for development of Participatory Multiplication and Distribution System for Quality Rice Seeds, Project for development of water saving agriculture technology in Central Dry Zone, Myanmar-Japan Center for Human Resource Development, Agricultural machine market and Vegetable market in Yangon, small miller in Htan Tha Pin, Contract vegetable farmer in Heho, Sesame farmer in Magway, parboiled rice factory in Pyay

<Visited Agencies in the Vocational Training Field>

Administrative agencies	Ministry of Rail Transportation (Road Transportation Administration Department), Ministry of Science and Technology (Department of Advanced Science and Technology), Ministry of Industry (Directorate of Industry), Ministry of Labour (Department of Labour), Ministry of Commerce (Directorate of Trade)
Vocational training agencies and education agencies	Industrial Training Centre (Mandalay), Technological University (Thanlyin, Mandalay), Government Technical High school (Ywama), Central Institute of Transport and Communication (Ministry of Rail Transportation), Skill Training Centre (Yangon), Glory Career Training Centre
Enterprises	Myanmar Anzen Service Co., Ltd., Suzuki (Myanmar) Motor Co., Ltd., Daiichi Kotsu Sangyo Co., Ltd.(Yangon Branch), MITSUI & CO., LTD., Yangon Office, T.T.A.S. Co., Ltd, Ohgi International Co., Ltd., Japan Nexus Auto , Ligar Auto Co., Ltd , Sakura Trade Centre Co., Ltd., Ko Myint Naing, Ko Sai Auto Service, Auto Unic Myanmar Co., Ltd, VM Group Myanmar Co., Ltd., Emerald Crown Auto Parts & Service Centre
Others	Embassy of Japan in Myanmar, JICA Myanmar Office, Myanmar-Japan Center for Human Resource Development, Bridge Asia Japan, Myanmar Engineering Society, Mandalay Region Chamber of Commerce And Industry (MRCCI), Myanmar Automobile Manufacturers & Distributors Association (MAMDA), Myanmar Inspection & Testing Services Ltd. (MITS), Skill Training Center, National Automobile Inspection Center (Myin Thar Automobile Inspection Center, Ywa Thar Gyi Automobile Inspection Center) , Car Search Co., Ltd., Myanmar ECL Co., Ltd., Bayint Naung Auto Parts Market

(4) Outline of Seminars

< Agriculture / Food / Food Product Field >

Objective	<ul style="list-style-type: none"> Introduction of Japanese agricultural products value chain and cluster examples Grasping of the current conditions and issues of agricultural products value chain in Myanmar based on group discussions
Date and time	August 26, 2014. 9:00 Venue opened, 9:30 Start~ 15:30 Closing
Place	Ministry of Commerce Pyay Branch seminar room (Pyay)
Participants	78 persons (17 agricultural producers, 12 food processors, 11 persons from agricultural and food industry groups, 31 government officials, 7 university and research agency officials)

Objective	Introduction of Japanese SME products and technologies, and collection of detailed needs concerning production and processing of mainly vegetables and fruits
Date and time	December 11, 2014. 12:30 Venue opened, 13:00 Start~ 16:00 Closing
Place	Cherry Queen Hotel conference room (Taunggyi)
Participants	4 persons (the seminar coincided with another meeting of the Chamber of Commerce and Industry. The contents were changed to key informant interviews with two representatives each from the MFVP and MFPEA who attended).

Objective	Introduction of Japanese SME products and technologies, and collection of detailed needs concerning production and processing of mainly beans and sesame
Date and time	December 13, 2014. 8:30 Venue opened, 9:00 Start~ 11:30 Closing
Place	Nan Htike Thu Hotel conference room (Magway)
Participants	14 persons (5 members from MPBSA Magway, 5 from MEODA Magway, and 4 bean and sesame farmers)

Objective	Introduction of Japanese SME products and technologies, and collection of detailed needs concerning production and processing of mainly vegetables and fruits
Date and time	December 15, 2014. 12:30 Venue opened, 13:00 Start~ 16:00 Closing
Place	Triumph Hotel conference room (Mandalay)
Participants	23 persons (officials of MFVP, MFPEA, MRF, etc. (participants also came from Sagaing and other areas)

Objective	Introduction of Japanese SME products and technologies, and collection of detailed needs
Date and time	December 18, 2014. 12:30 Venue opened, 13:00 Start~ 16:00 Closing
Place	Myanmar-Japan Center seminar room (Yangon)
Participants	38 persons (officials of MFVP, MRMA, MFPEA, MEODA, and other industry groups, and managers of private enterprises, etc.)

< Vocational Training and Industrial Development Field >

Objective	Introduction of Japanese SME products and technologies, and collection of detailed needs
Date and time	December 9, 2014. 12:30 Venue opened, 13:00 Start~ 16:00 Closing
Place	Mandalay Region Chamber of Commerce & Industry (MRCCI) conference room
Participants	Approximately 30 persons (businesses and group companies that currently conduct auto maintenance, manufacture, and retailing of cars and parts, etc.)

Others Points

Among the products and technologies (seeds) that were not proposed for ODA in this survey, some were not designated as candidates for ODA project formulation in this report in light of compliance with local systems and social environment, and lack of retail market maturity and so on, even though development needs and private sector demand are deemed to exist. Despite this, when seen from the long-term viewpoint, there is ample potential for advancement when the local institutions and market have sufficiently matured, and the decision not to target them in this survey does not mean that the introducing enterprises have no chance of deploying these products and technologies in Myanmar.

Chapter 1 Current Conditions of the Target Country

Following 50 years of military rule, Myanmar held democratic elections based on the new constitution in November 2010. As a result, U Thein Sein was sworn in as president in March 2011, and currently the new administration is rapidly advancing various reforms following the transition to civilian rule. Under the U Thein Sein administration, controls on foreign capital are being phased out and investment activities are being stimulated in various fields. Singapore, South Korea, and Thailand are the top three countries investing in Myanmar, accounting for more than 80% of investment. In terms of sectors, manufacturing attracts 44.7% of investment, transportation and communications 29.0%, real estate development 10.7%, hotels and tourism 10.6% (2013). In terms of GDP share by industry, agriculture comprising mainly rice cultivation accounts for just under 30%, followed by commerce with just over 20%, and manufacturing with just under 20% (2010).

Chapter 2 Agricultural Field

In Myanmar, even though roughly 60% of the population is engaged in agriculture, the agricultural sector only accounts for approximately 30% of GDP. As is also mentioned in the fifth five-year plan for the agricultural sector that was formulated in 2011 (2011/12~2015/16), the first development issue that needs to be tackled in this sector concerns increase of productivity.

Concerning Japanese SME products and technologies that can address these development issues, examination was conducted on products and technologies for addressing such issues as the introduction of farm machinery (compact rotary tiller, plowsoilers and other tractor attachments), post-harvest quality control (grain moisture tester) and mechanization (rice milling machine), soil management (soil analyzer), seed production and cultivation technology, covering materials (shade net, agricultural mulch products), and lightweight packing materials.

Among the above products, the plowsoiler (tractor attachment), grain moisture tester, and soil analyzer are deemed to possess ODA needs and local market potential, and the Japanese SMEs that manufacture these clearly have a desire to conduct activities locally. Since various assistance has already been implemented concerning agricultural products by Japanese and other donor agencies, proposals for *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA*

Project and Verification Survey with the Private Sector for Disseminating Japanese Technologies will be made in such a manner that flexible linkage can be proposed and implemented with these pre-existing undertakings. Specifically, concerning the plowsoiler and soil analyzer, *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* has been proposed, while concerning the grain moisture tester, since distribution is already being conducted locally and Japanese-affiliated enterprises have reached the F/S implementation stage, *Verification Survey with the Private Sector for Disseminating Japanese Technologies* is advanced. (The Ministry of Agriculture and Irrigation is envisaged as the local counterpart agency for these three proposals).

Concerning the plowsoiler, it is proposed that survey be carried out on *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* and effects of use and development based on trial cultivation at education agencies, producers' groups, and a tractor station under the Ministry of Agriculture and Irrigation. Since the plowsoiler is a tractor attachment, the preferable business approach for Japanese-affiliated SMEs will be for plowsoilers to be purchased by large farmers who own tractors, and farm machinery rental operators and agencies so that they can be rented out to small and medium farmers.

Concerning the grain moisture tester, *Verification Survey with the Private Sector for Disseminating Japanese Technologies* is proposed with a view to enhancing the quality and added value of mainly rice through contributing to moisture content control in all stages of the value chain among producers, rice millers, rice retailers, exporters, etc. (Currently, moisture testers have been introduced to limited rice millers and so on, however, they are still not utilized in conducting moisture content management over the entire value chain). In practical terms, it is envisaged that the grain moisture tester will be introduced on a trial basis mainly for implementation of moisture control throughout the value chain in the rice producing regions of Yangon, Ayeyarwady, etc. As a feature of rice distribution in Myanmar, since many brokers, large farmers, and contract farmers also conduct distribution, the preferable business approach for Japanese-affiliated SMEs will be to approach such large farmers, the trading organizations that they are members of, producers' groups, and rice millers' groups, etc. at an early stage.

Finally, concerning the soil analyzer, it is proposed that *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* be conducted regarding trial use at research agencies and training centers under the Ministry of Agriculture and Irrigation, the Agriculture Extension Center, producers' groups and so on. Because it is necessary to build a system for comparing and analyzing soil analysis results with field tests, public agencies as well as producers' groups are included as targets in the Verification Survey with the Private Sector for Disseminating Japanese Technologies. The preferable business approach for Japanese-affiliated SMEs will be to first approach experts such as researchers and dissemination officers, and then in the second phase utilize them as channels to disseminate knowledge of soil improvement and awareness of products to the general public.

Chapter 3 Food / food products Field

According to industrial statistics of the Government of Myanmar, the food and beverage manufacturing sector accounts for 65.9% of registered manufacturers, and just under 70% of these are SMEs (2009). Domestic sales of processed foods in 2012 accounted for 1.547 billion USD, with dairy products, fat and oil, bakery products, sweets, and dried foods (mainly instant noodles) occupying a large share. Looking at the growth rate compared to 2002, all products display a high growth rate (annually 7.7% overall), with oil and fat (9.4%), bakery products (7.7%), canned and preserved foods (6.3%), and frozen foods (7.2%) displaying particularly high levels. Spreading the benefits of this growth in the processed food market to regional primary producers and small-scale processors can be described as a social issue, however, since this field is also deeply related to increasing the added value of primary products, it is also closely related to the development needs of improving standard of living for primary producers in agriculture, etc.

In this needs survey, from the viewpoint of enhancing added value mainly in the food processing and transportation/storage stages, among others the following products and technologies were examined: introduction of cold chain (Refrigerated transportation system, Flake ice making machine), rice flour processing (mainly for rice snacks) targeting the main product of rice, mechanization of dried food manufacturing processes, upgrading of bean and sesame sorting machines and vegetable oil manufacturing machines.

Among the above products, the Refrigerated transportation system (cooling box/cooling gel/freezer) is deemed to possess ODA needs and local market potential. Therefore, it is proposed that *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* be conducted. Since various assistance has already been implemented concerning agricultural products by Japanese and other donor agencies, proposals for *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* are made in such a manner that flexible linkage can be proposed and implemented with these pre-existing undertakings.

These products and technologies are deemed to have latent needs in wide-ranging value chains for agricultural products. Therefore, further analysis of value chains and verification of development effect, economy, etc. will be carried out through conducting trial introduction in the Ministry of Agriculture and Irrigation, Myanmar Fruit, Flower and Vegetable Producer and Exporter Association, and producers' groups in production areas (for example, vegetables in Shan, fruits in Mandalay, etc.). As a result, it is envisaged that value chains and areas will be specified and activities will be extended to the full-scale promotion of areas and value chains in a *Verification Survey with the Private Sector for Disseminating Japanese Technologies*. Since the products concerned are cheap and the field survey hearings revealed that value in use can be easily conveyed and needs can be stimulated, the preferable business approach for Japanese-affiliated SMEs will be to promote a sales strategy targeting farm product associations in regions away from major consumer centers where there is a high need for frozen transportation, and

transport operators who cater to such associations in the areas where such products are consumed.

Chapter 4 Vocational Training and Industrial Development Field

In Myanmar, controls on the import and sale of used cars have been greatly relaxed within the economic liberation policy adopted since the start of the U Thein Sein administration in 2011, and the increased sale and distribution of used cars has spurred the trend of motorization. On the other hand, automobile maintenance legal systems, skill standards and training curriculums for automobile mechanics, and systems at training agencies (equipment and teacher capacity, etc.) have been slow to keep up with these developments. Accordingly, the quality of automobile maintenance is low and the road transportation sector has issues in terms of environment and safety.

As Japanese SME products and technologies for addressing development issues such as these, this survey looked at automobile-related education and practical training equipment (cut models of mainly hybrid car engines, diagnosis ancillaries showing the principles of fault diagnostic devices and ECU and other electronic control systems recently fitted in automobiles, and software for enabling automobile instructors to explain car mechanisms using 3D animation), automobile inspection equipment, maintenance equipment (work tools, measurement devices, etc.), and used automobile parts recycling technology.

Among the above products, the equipment and material for automobile training and automobile inspection equipment especially are deemed to possess ODA needs and local market potential, and the Japanese SMEs that handle these clearly have a desire to conduct activities locally. Moreover, because the local systems and market environment are undergoing dramatic changes and development needs are acute, it is preferable to implement an ODA project earlier than conventional JICA assistance (technical cooperation project or expert dispatch, etc.), albeit on a limited scale. For these reasons, it is proposed that *Verification Survey with the Private Sector for Disseminating Japanese Technologies* and *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* be conducted.

Concerning the automobile training equipment, it is proposed that *Feasibility Survey with the Private Sector for Utilizing Japanese Technologies in ODA Project* (and accordingly *Verification Survey with the Private Sector for Disseminating Japanese Technologies*) be conducted whereby the above practical training resources are introduced to automobile maintenance vocational training agencies under the Ministry of Industry and Ministry of Science and Technology and guidance is provided for trainers.

For Japanese-affiliated SMEs, it is important for accelerating business to accommodate demand for ToT supports such as curriculum improvement, seminars about new mechanism and teaching method, etc. with introducing Japanese training equipment.

As for the automobile inspection equipment, considering that some Japanese SMEs jointly conducted seminars with the Myanmar Engineering Society and Japan Automobile Standards Internationalization Center concerning the vehicle registration and inspection system of 2013, and the private sector has started making appeals to the Government of Myanmar (Ministry of Rail Transportation), a *Verification Survey with the Private Sector for Disseminating Japanese Technologies* is proposed. Since the said ministry only has two state-run vehicle inspection workshops that are capable of implementing mechanical inspections throughout the country, the automobile inspection equipment will be introduced to these facilities and support will be given for transferring mechanical inspection technology and establishing automobile inspection standards based on the results of trial operation.

Regarding the business approach for Japanese-affiliated SMEs, there is no doubt that Yangon will remain the largest market for the time being, however, considering the rapid changes taking place in systems and market environment, it will be necessary to make an early start on developing sales channels in regional areas too. Moreover, since it is forecast that customers will have few human resources endowed with knowledge about automobiles, it is also worth considering offering customer services concerning responding to needs for technical training of local maintenance operators and so on in addition to general after-the-sale service such as installation, training about safe use and providing after-maintenance in the event of breakdowns.

Republic of the Union of Myanmar

Needs Survey on Agriculture, Food / Food Products, and Vocational Training and Industrial Development Fields

Research Company and Counterpart Organization

- Name of Research Company : Japan Development Service Co., Ltd.
- Survey Site - Counterpart Organization : Yangon, Mandalay, Magway, Heho, etc. / Ministry of Agriculture and Irrigation, Ministry of Rail Transportation, Ministry of Science and Technology, Ministry of Commerce, etc.

Concerned Development Issues

- ①Agriculture: issues concerning introduction of farm machinery, soil management, seed production and cultivation technology, post-harvest quality control (moisture content control, mechanization of rice milling), etc.
- ②Food / food products: issues concerning introduction of cold chain and mechanization for high value-added food processing
- ③Vocational training and industrial development: issues concerning delay in establishment of automobile maintenance and inspection systems and a setup for training automobile mechanics

Products, Technologies, etc. of SMEs, etc.

- ①Agriculture: plowsoiler, soil analyzer, grain moisture tester, rice milling machine, seed production and cultivation technology, etc.
- ②Food / food products: refrigerated transportation system / flake ice making machine, rice powder mill machine, compact food dryer, color sorting machine, oil expeller, etc.
- ③Vocational training and industrial development: automobile education and practical training equipment, automobile inspection instruments, etc.

Proposed ODA Projects and Expected Impact

- Trial introduction in local public agencies. Value chain promotion (Agriculture , Food / food products), education, training and institutional development (all fields)
- Contribution to improvement in added value of farm products and processed foods, higher farm incomes, development of the food processing industry, increased exports of farm products and processed products
- Contribution to development of a setup for training automobile mechanics, maintenance standards, automobile inspection system, etc.

Future Business Development of SMEs, etc.

- Expansion of sales based on examples of utilization in public agencies
- Establishment of a post-sales service setup modeled on implemented ODA Projects

