Chapter 8:
Cross Border Transport Infrastructure (CBTI)

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Cross Border Transport Infrastructure (CBTI) is indispensable to economic activities in Africa. However, the high cost of distribution due to the limited capacity of infrastructure facilities and inefficient customs/cross-border formalities constrains economic and social development in Africa. Under the circumstances, TICAD IV, held in May 2008, designated regional infrastructure development as a key task and have been striving to improve both the physical and software sides of CBTI in Africa in order to improve the efficiency of physical distribution.

This report summarizes the current situation of trading and physical distribution in Africa, discusses the importance of CBTI, and proposes a course of action for assisting CBTI.

Cross Border Transport Infrastructure (CBTI) is defined as follows:[1] CBTI is a comprehensive and necessary infrastructure for cross-border transportation between countries. Such infrastructure includes physical infrastructure such as ports, railroads, main roads, transshipment facilities, border facilities including one-stop border posts (OSBPs), weigh bridges (vehicle weight measuring scales), and inland container depots (ICD), all of which constitute international transit corridors. CBTI also includes legal systems related to various cross-border matters, such as cross-border traffic regulations (police check), customs, international agreements, quarantine, and bond/security systems, as well as organization control/legal systems for smooth operation and maintenance of physical infrastructure.

1. The Current Conditions of Trading and Physical Distribution and Issues of Cross Border Transport Infrastructure in Africa

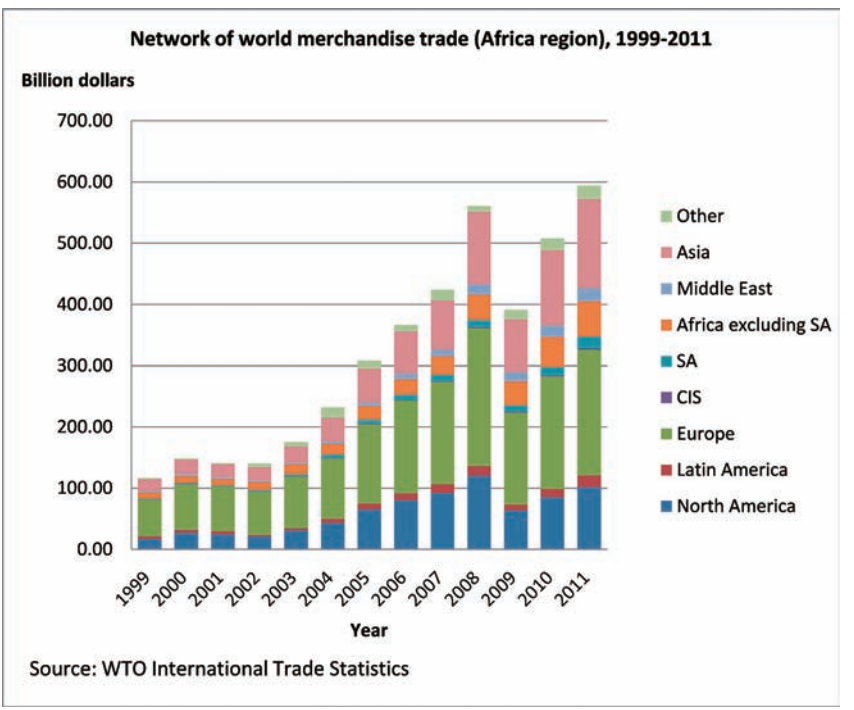
1.1 Trading/physical distribution

The value of exports in the whole of Africa including North Africa

1. This is based on the definition in JICA "Cross Border Transport Infrastructure Feasibility Study Phase 3 (Project Study)" (March 2009)

rapidly increased from 2003, dipped in 2009, and reached 594.2 billion dollars in 2011 (433.3 billion dollars for the Sub-Sahara Africa (SSA) region) (Figure 1). The ratio of exports to Europe has been high, but recently trading with emerging countries including China and India has been expanding. Africa has been attracting global attention as a region rich in fuel and mineral resources, and the development of its resources has taken off and caused the export volume to surge.[2] The value of imports increased from 481.5 billion dollars in 2008 (342.1 billion dollars for the SSA region) to 559.5 billion dollars in 2011 (404.1 billion dollars for the SSA region). Trading in Africa is on the rise and increased from 12.03 billion dollars in 2000 (8% of total trading volume) to 62.48 billion dollars in 2010 (12% of total trading volume).

Figure 1. Transition of African Export Value by Destination (1999–2011)



There are many issues concerning the time and cost of importing and exporting by countries in Africa. According to the Logistic Performance Index (LPI) in the world, which is an analysis of indexes related to

2. According to 2011 data, fuels and minerals account for 64% of import value.

import, export, and trading of 155 countries in the world (IBRD/WB, 2012), the highest ranked country in the SSA region is South Africa (23rd) followed by Benin (67th), Botswana (68th), and Malawi (73rd). Other countries in the SSA region were ranked below 80th.

The number of documents, days, and costs required for export and import in the SSA region is higher than the world average (Table 1).[3] Complicated port paperwork, lack of information sharing systems, delays in introducing IT, and excessive check points along the routes prolong the time for physical distribution and cause delays in cargo transportation. Especially, figures for inland countries[4] such as Burundi, Central African Republic, Chad, Republic of Congo, Niger, Rwanda, and Zimbabwe are particularly poor. Thus, there is a critical need to reduce the days and cost requiring for physical distribution in inland countries.

Table 1. Number of Documents, Days, and Cost required for Import and Export

Region	Export			Import		
	Number of Documents	Required Days	Cost (US$/ Container)	Number of Documents	Required Days	Cost (US$/ Container)
East Asia/Pacific	6	21	923	7	22	958
East Europe/Central Asia	7	26	2,134	8	29	2,349
South America/ Caribbean	6	17	1,268	7	19	1,612
Middle East/North Africa	6	19	1,083	8	22	1,275
OECD High-income Countries	4	10	1,028	5	10	1,080
South Asia	8	32	1,603	9	33	1,736
Sub-Saharan Africa	8	31	1,990	9	37	2,567
World Average	6	22	1,470	7	24	1,742

Source: Doing Business, June 2012, World Bank
(http://www.doingbusiness.org/data/exploretopics/trading-across-borders)

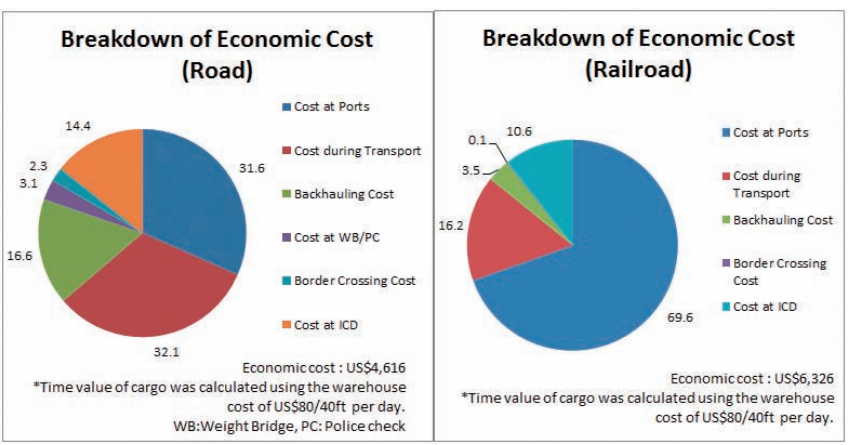
Reasons for long transport time and high transport cost vary from region to region. Major bottlenecks include insufficient capacity and the

3. Compared to the averages in the SSA region for 2006 and that for 2012, days required for export have reduced from 36 to 31 and for import have reduced from 45 to 37, showing a gradual improvement.

4. For example, the maximum days required for import is 101 days in Chad, the minimum is 10 days in Mauritius, the maximum import cost is 8,255 dollars in Chad, and the minimum is 577 dollars in Sao Tome and Principe.

inefficient physical distribution system of ports. For example, the holding time at ports is 2 to 3 days for regions with efficient physical distribution systems, less than 7 days for Asia, North Africa, the Middle East, and Latin America, but 14 days on average for the SSA region (IBRD/WB, 2012). JICA (2009) calculated the economic cost (necessary expenses are added to the cost based on the required time for the cargo) for exporting a 40ft container from Mombasa in Kenya to Kampala in Uganda. The result showed that the cost at ports accounted for 31.6% (1,666 dollars) of the entire economic cost by road transport and 69.6% (4,402 dollars) of the entire economic cost by rail transport. Nathan Associates (2011) evaluated the cost, required time, and reliability of ports, railroads, and border facilities for physical distribution in the North Corridor and Central Corridor, and found that scores for ports and railroads were lower than those for roads and border facilities.

Figure 2. Comparison of Economic Cost of Transport
(40ft container from Mombasa in Kenya to Kampala in Uganda)



Source: JICA, 2009

1.2 Cross Border Transport Infrastructure (CBTI)

Many transport infrastructures in the SSA region were built and developed as corridors connecting ports with hinterlands for exporting resources and agricultural products in the colonial period.

Since African countries gained independence in the 1960s, the conditions of roads, railroads, and ports in each country have deteriorated due to

insufficient skills and funds for maintenance as well as damage to road surfaces caused by overloaded vehicles. As for railroads, in addition to aging freight vehicles and tracks, the volume of traffic has decreased on many lines due to operational reasons including failure of the concessions. The use of containers at ports was introduced in the early 1990s in Africa, but the development of roads and ports to handle the physical distribution of large containers has not kept pace.

The necessity of CBTI development in the SSA region was recognized in the 1970s. Aid agencies and regional economic communities (RECs) in Africa have pointed out the necessity of a "corridor approach" that develops interregional physical infrastructure and legal/procedural systems in an integrated manner. For example, the Trans-Africa Highway was proposed in 1971, the Sub-Saharan Africa Transport Policy Program in 1987, the Spatial Development Initiative in 1996, and the Corridor Diagnostic Study of the Northern and Central Corridors of East Africa (CDS) in 2011, as outlined below.

BOX

(1) Trans Africa Highway (TAH)

The concept consists of nine corridors traversing Africa lengthwise and crosswise (total length of 56,683 km), and was proposed in 1971. In 2003, the United Nations Economic Commission for Africa (UNECA), African Development Bank, and AU examined the development status of the TAH and addressed the needs for TAH development, maintenance, and control by securing funds for each country along the route. Since then, development of the TAH has been promoted mainly by the African Development Bank.

(2) Sub-Saharan Africa Transport Policy Program (SSATP)

This was established in 1987 through the combined efforts of the World Bank and UNECA. The SSATP has identified eight important regional economic corridors for developing transportation corridors from inland areas to each large-scale international port. The SSATP itself mainly conducts research on transport infrastructure development and formulates strategies and political measures. Under the strategy, each donor and cooperative agency, mainly the World Bank, supports individual infrastructure issues.

(3) Spatial Development Initiative (SDI)
The SDI is a concept proposed in the industrial development strategy of South Africa in 1996. Not only physical corridors such as roads, railroads, bridges, ports, and inland channels but also electric power, resources development, and industry policy were comprehensively considered. The New Partnership for Africa's Development (NEPAD) took up this approach and has proposed a program for broad-ranging regions.

Figure 3. Major interregional corridors in Africa

Source: JICA, 2010

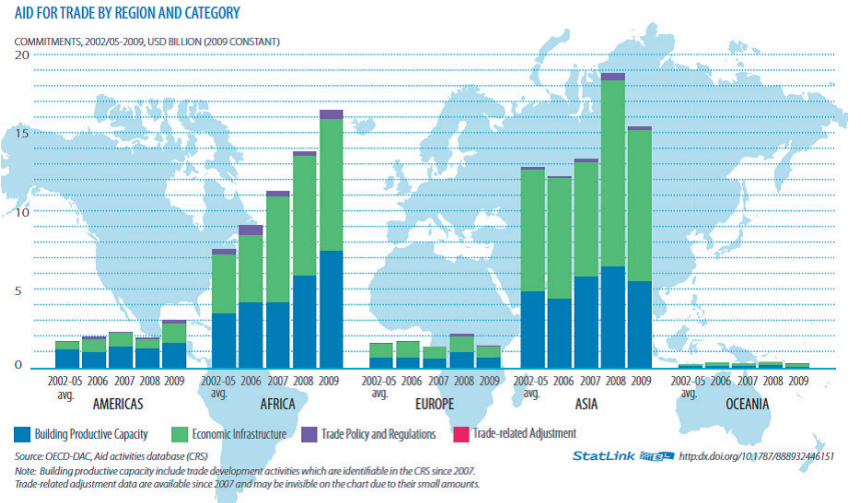
(4) Corridor Diagnostic Study of the Northern and Central Corridors of East Africa (CDS)
Starting in 2009, the corridor diagnostic study of the Northern and Central corridors of the five EAC member countries (Kenya, Tanzania, Uganda, Rwanda and Burundi) was conducted with the support of USAID and DFID. In the study, priority projects were specified based on the results of analyzing the physical performance of ports, railroads and roads in two target corridors and also forecasts for 2030.

(5) Programme for Infrastructure Development in Africa (PIDA)
In 2010, the African Union Council decided to formulate PIDA, which provides a guideline for comprehensive infrastructure development in the whole of Africa. Studies were conducted mainly by the African Union Commission, African Development Bank, and NEPAD, and PIDA was approved by the African Union Summit in January 2012. In the transport sector, 24 programs (worth 25.4 billion dollars in total) that should be given priority to go forward by 2020 were selected based on the analysis of the African Regional Transport Integration Network (ARTIN), TAH, and 40 important corridors, 19 ports, and 53 airports. PIDA is an innovative program that was started by African initiatives. Relevance with PIDA is desired for the future development of regional infrastructure. Following approval by AU, NEPAD and the African Development Bank have been introducing PIDA to stakeholders throughout the world. It is necessary to pay particular attention to the future formulation and implementation of the project.

In addition to infrastructure development efforts, it is important to consider "Aid for Trade (AfT)." AfT activities promote technical assistance related to trading, supply-side assistance including improving production capacity and developing distribution infrastructure, and structural adjustment related to the deregulation of trade by initiatives of the World Trade Organization (WTO), OECD, and the World Bank. A regional comparison of assistance to Africa shows that the amount committed has greatly increased since 2002, doubling by 2009 to reach 13 billion dollars. Most of the resources have been used for the development of trade-related capacity and infrastructure (Figure 4). According to a case study analysis, an increase in AfT leads to an increase in export volume and reduction of import cost.[5] Especially in Africa, it is effective to reduce the cost of container transport (OECS/WTO, 2011). Trade facilitation in the SSA region is expected to be promoted through this initiative.

5. A doubling of AfT related to infrastructure increases import volume by 3.5%, and a doubling of AfT related to trade facilitation decreases import cost by 5%. (OECD / WTO, 2011)

Figure 4. Aid for Trade by Region and Category, Transition of Commitments (2002 – May 2009)



Also, the World Bank and the African Development Bank implemented the East Africa Trade Transport Facilitation Project (EATTFP) in four countries in East Africa (Kenya, Tanzania, Uganda, and Rwanda) and provided assistance for improving systems related to CBTI including railroads, roads, ports, customs, borders, and weigh bridges of two major corridors. USAID conducted a feasibility study of OSBP development of major borders in East Africa and also assisted in establishing OSBP for railroads at the Malaba border between Kenya and Uganda. Great Britain implemented Trade Mark East Africa (TMEA) and Trade Mark South Africa (TMSA) and assisted in regional integration such as assistance in enforcement of Tripartite that unites three RECs, COMESA, EAC and SADC, and improvement of the tariff system.

Recently, countries in Africa formed Regional Economic Communities (RECs)[6] with neighboring countries to take measures for facilitating

6. The Africa Union has authorized the following eight agencies as RECs: (1) The Community of Sahel-Saharan States (Cen-Sad), (2) Common Market for Eastern and Southern Africa (CMESA), (3) East Africa Community (EAC), (4) Economic Community of Central African States (ECCAS), (5) Economic Community of West African States (ECOWAS), (6) Intergovernmental Authority on Development (IGAD), (7) Southern African Development Community (SADC), and (8) Union of Maghreb Arab (UMA).

trade and physical distribution and regional integration. Issues to be focused on and progress of economic integration differ among the RECs, but they have promoted discussion and harmonization related to regional infrastructure studies, formulation of development plans, harmonization of regulations, standardization of cross border formalities, union of customs tariffs, and the common market. In recent years, they play an important role in the implementation of the CBTI development programs supported by aid agencies. The increasing trade volume in Africa shown in Figure 1 confirms that regional integration is moving forward.[7] Since 2010, discussions on establishing an African Continental Free Trade Area (C-FTA) have been held in the African Union (UNECA, 2012). CBTI is extremely important to support the efforts by countries in Africa to accomplish economic growth.

2. Japan's Contribution to Cross Border Transport Infrastructure Development

Including the period before TICAD IV, Japan has strived to develop infrastructure in Africa in cooperation with the international community. Below are cases that are especially closely linked to CBTI. Japan has focused on three approaches: corridor development, facilitating border formalities (OSBP assistance and customs capacity improvement), and institutional development of cross border transport systems.

2.1 Corridor development

(1) Mombasa port and port area road development project (North Corridor)

This is a project to improve CBTI by integrally developing Mombasa Port in Kenya and roads to strengthen the regional corridor to inland countries. Mombasa Port is the only international trading port in Kenya and is among the largest in East Africa.[8] It functions not only as an import and export base in the country but also as a gateway to the North Corridor connecting to Uganda, Rwanda, and Burundi. With steady economic growth in Kenya and East Africa since 2003, the volume of cargo handled at Mombasa Port has been increasing and reached 695,000

7. However, many RECs are funded by contributions from member countries. There are many issues related to promoting interregional integration because RECs do not have legal force over their own project budgets or member countries.

8. In entire Sub-Saharan Africa, the capacity of the Mombasa Port is placed in fifth after Durban and Cape Town in South Africa, Lagos in Nigeria, and Abidjan in Cote d'Ivoire (JICA, 2009).

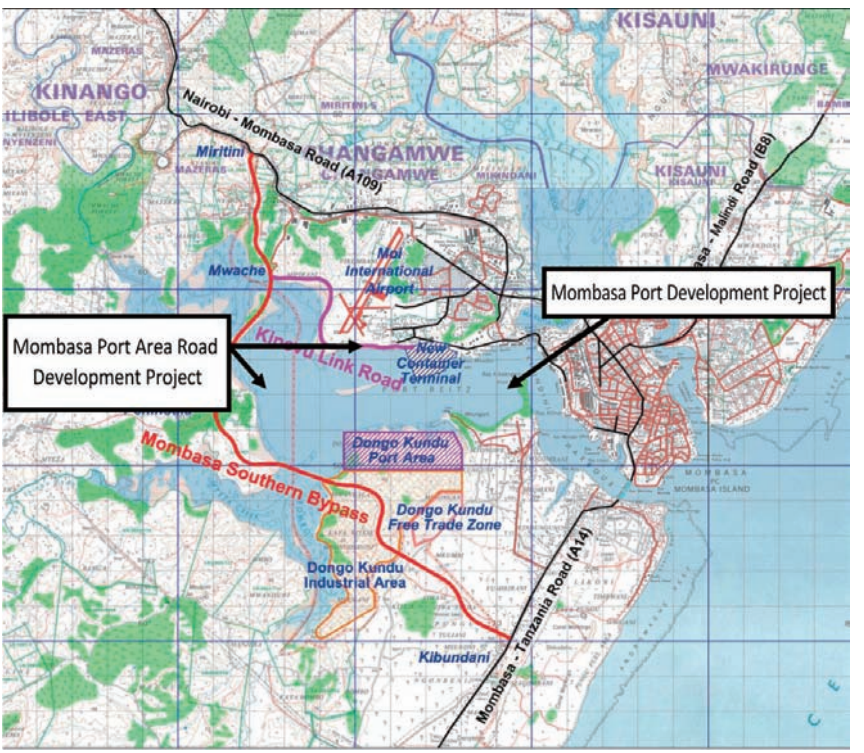
TEU in 2010 even though the annual container handling capacity is only 450,000 TEU,[9] causing issues such as ships having to wait at sea for loading and unloading and the prolonged storage of unloaded containers. It is necessary to improve the capacity to handle large container vessels, accessibility to ports, and operational efficiency. Regarding port area roads, traffic congestion on the road connecting Mombasa Port to the North Corridor is already serious, and is expected to worsen after 2016 when a new container terminal that is being built by an ODA loan project is completed. The only transportation from the center of Mombasa including the port to the southern part of the city is by ferry which crosses the channel. This is hindering the development of the southern city region and the physical distribution toward Tanzania. Backed-up physical distribution caused by undeveloped infrastructure at Mombasa Port and port area roads is hindering economic growth in Kenya and inland countries in East Africa. There is an urgent need to facilitate physical distribution through infrastructure development.

To solve such problems, Japan decided to implement the "Mombasa Port Development Project" (L/A signed in November 2007) and "Mombasa Port Area Road Development Project" (L/A signed in June 2012). These two projects will develop a container terminal where large container vessels can come alongside the pier, a road connecting the new container terminal to the North Corridor, and roads to Mombasa Port (road length 25.51 km, two long bridges, and one elevated bridge) to increase the capacity of Mombasa Port.

9. TEU (twenty-foot equivalent unit): Cargo volume converted into the number of 20-foot containers.

Figure 5.

Figure 6.



When the Port Development project is completed, the container volume that can be handled at Mombasa Port will increase from 480,000 TEU in 2006 to 990,000 TEU in 2017, more than double that in 2006. A significant increase of material handling capacity is expected (see Table 2).

Table 2. Expected Benefits of Mombasa Port Development Project

Index	Reference Value (Result in 2006)	Target Value (2017) [2 years after project completion]
Container cargo volume	480,000 TEU	990,000 TEU
Total tons of vessels entered	9 million GT	15.43 million GT
Ratio of container shipping (annual)	62%	73%
Vessel waiting time	1.49 days/vessel	1.0 day/vessel

(2) Nacala Corridor in Mozambique

In the Nacala Economic Corridor located in northern Mozambique, there are expectations for natural resource development of coal in Tete Province, agricultural development using the vast land and abundant water resources in Nampula Province, Niassa Province, and Zambezia Province, and industrial development based on the potential of Nacara Port, which is a natural good port. Development of the Nacala Corridor will provide a dependable transport link from Nacala Port not only to Nampula Province with the largest population in Mozambique and Niassa Province but also to inland Malawi and Zambia at moderate prices. Expected benefits include increased physical distribution in northern Mozambique, economic vitalization of widespread areas, improvement of living standards, and reduction of poverty.

Comprehensive development of the Nacala Corridor under the Nacala Corridor Development/Improvement Program is being conducted, as shown in Table 3.[10] The main project, "Tropical Savannah, Agriculture Development Program, Japan – Brazil – Mozambique Triangular Cooperation (ProSAVANA-JBM)," is intended to enhance agricultural production capacity in Mozambique using the experience in agricultural

10. Projects in education, water supply, and health fields are implemented or planned in addition to infrastructure and agriculture projects, to attain comprehensive development of the entire region.

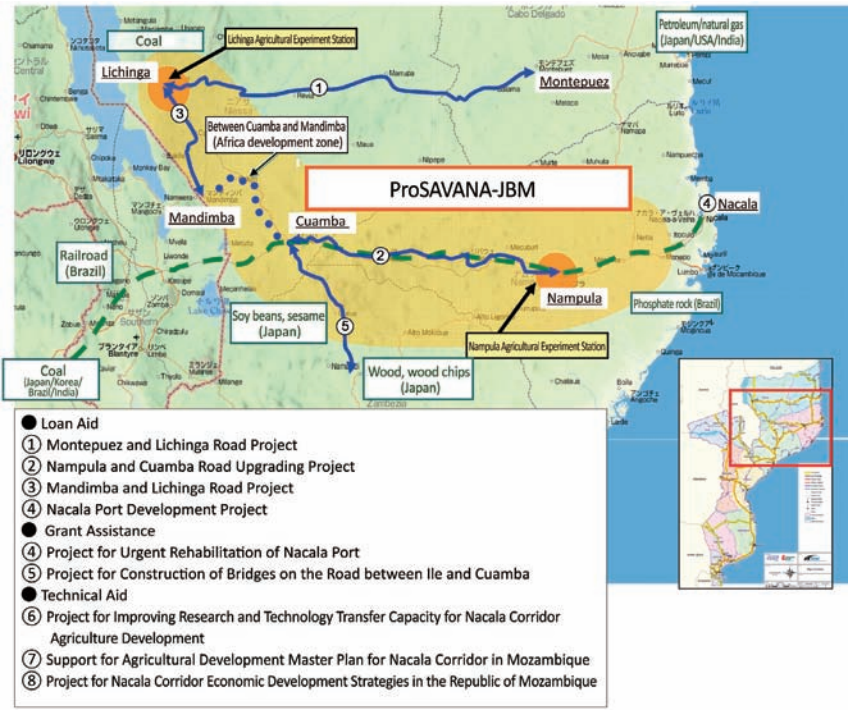
development of Cerrado in Brazil and to establish an economic model that benefits not only food security but also small-scale farmers.[11] In the Nacala Corridor development, cooperation between governments and private sectors in the three countries of Japan, Brazil, and Mozambique is emphasized, and the activities are focused on maximizing mutual benefits.[12]

Table 3. Infrastructure Projects of Nacala Corridor in Mozambique

Project Name (Cooperation Type)	Expected Result
Montepuez and Lichinga Road Project (loan)	Paving, improving and expanding the width of 201 km of road, which is part of the 516-km national road connecting Montepuez to Lichinga and related infrastructure improvement
Nampula and Cuamba Road Upgrading Project (loan)	Road improvement between Nampula in Nampula Province and Cuamba in Niassa Province (building approximately 350km road and six bridges)
Project for Construction of Bridges on the Road between Ile and Cuamba (grant)	Road development and replacing 13 bridges between Ile and Cuamba
Mandimba and Lichinga Road Project (loan)	Road improvement of 88.88-km road between Mandimba and Lichinga
Project for Urgent Rehabilitation of Nacala Port (grant)	Improvement of yard capacity for storing new containers Container cargo volume: 89,714 TEU (2011) → 161,590 TEU (2017)
Nacala Port Development Project (loan)	Increase of cargo handling volume at Nacala Port · Total cargo volume: 16.39 million tons (2011) → 47.38 million tons (2019) · Container cargo: 89,714 TEU (2011) → 234,000 TEU (2019)

11. For more discussions on this project, see chapter 5 of this volume.
12. http://www.jica.go.jp/topics/news/2012/20120514_02.html

Figure 7. Cooperation Projects of Nacala Corridor in Mozambique



Source: Compiled from various JICA project documents

2.2 Facilitation of border formalities

(1) One stop border posts (OSBPs)

Border posts are installed at many cross border points in the SSA region to conduct immigration control and customs clearance, screening, and quarantine. There are many time-consuming border points to be crossed, for the following reasons:

(1) Insufficient agreements between countries
(2) Complicated paperwork that differs from country to country
(3) Delay in computerizing documents
(4) Quality and moral issues of cross border officials
(5) Undeveloped cross border facilities

One stop border post (OSBP) have been introduced as a solution to these problems. In this system, neighboring countries at a border jointly

conduct immigration control, customs clearance, and quarantine at the one-stop border post. These tasks are handled separately at present.
The experience of OSBP at three places (Chirundu, Malaba, and Namanga) in the SSA region is introduced below.

Chirundu (Zambia/Zimbabwe)
Chirundu is at the border between Zambia and Zimbabwe and is located on the North-South Corridor. The border is important for the transport of inland mineral resources such as copper produced in Zambia to Durban Port in South Africa and Beira Port in Mozambique. Japan has implemented assistance by drawing up a bilateral agreement between Zambia and Zimbabwe, grant aid assistance for the Chirundu Bridge Construction Project, and the Chirundu Border Related Facility Construction Project by providing non-project grant collateral funds and dispatching volunteers. Many partners have participated in this project. The World Bank conducted the baseline study[13] which analyzed the traffic volume and reasons for delays at Chirundu. The British DFID allocated a project manager and introduced ICT. Such cooperation related to facilities and personnel was accumulated in 2009, and the first OSBP in Africa started operating after an OSBP-related legislative bill was enacted in the two countries.[14]

The effectiveness of the OSBP has been confirmed. For example, regarding the number of passing trucks, 225 trucks passed per day in 2007 (120 north-bound trucks, 105 south-bound trucks) but 380 trucks passed per day in 2011 (200 north-bound trucks, 180 south-bound trucks) (JICA/EAC, 2011). As for time taken to cross the border, that for passenger cars was reduced from 1–2 hours to 20 minutes, that for buses from 2 hours to 1 hour, and that for trucks from 1–2 days to less than 1 day. Future challenges are to fully utilize introduced facilities, standardize customs formalities, and promote further cooperation between the agencies of the two countries.

Malaba (Kenya/Uganda)
Malaba is an important border between Kenya and Uganda in the North Corridor. The first OSBP exclusively for railroads in East Africa was

13. Barney Curtis, "The Chirundu Border Post: Detailed monitoring of transit times", SSATP Discussion Paper No. 10, World Bank, 2009.
14. Zimbabwe One Stop Border Posts Control Act, No. 21 of 2007 and Zambia One Stop Border Control Act, No. 8 of 2008.

established in 2007 at Malaba based on a bilateral agreement concluded by the governments of Uganda and Kenya in 2006. Malaba is one of the target sites of "Capacity Building for the Customs Administrations of the Eastern African Region (Phase 2)", a technical assistance project by JICA. Major activities of this project are introduction of a customs clearance system necessary for operating the OSBP (Real Time Monitoring System and Cargo Control System: RTMS/CCS) and capacity building through training of joint border monitoring and customs clearance work (tariff classification and customs valuation).

As a result of introducing the OSBP, the time required for railroad crossing has been reduced from 4-7 days to 2 hours. For road cargo, the time was reduced from 4 days to 3 hours (JICA/EAC, 2011).[15] The improvement of yard and customs facilities and the implementation of 24-hour operation and joint customs screening by the two countries for some items (12 items accounting for 30% of all cargo) have influenced such improvement.

The handling of extra-territorial rights and administration (management and execution) under the bilateral agreement is an issue for the OSBP at Malaba.[16] The further development of systems is planned.

Namanga (Kenya/Tanzania)

Namanga on the border of Kenya and Tanzania is located on the corridor connecting Nairobi, the capital of Kenya, and Arusha, the central city of northern Tanzania. Namanga is used for 41% of exports from Kenya to Tanzania and 20% of exports from Tanzania to Kenya. In the yen-loan "Arusha-Namanga-Athi River Road Development Project" Japan will build 104.3 km of road between Arusha and Namanga on the Tanzania side, which is part of the international main road (240 km long) connecting Arusha in Tanzania to Athi River in Kenya, and will also develop infrastructure related to OSBP. This project is co-financed by the African Development Bank, which has provided loans for road construction on the Kenya side (135.7 km) and part of the Tanzania side,

15. The Trade Mark East Africa "Review of the impact of trade facilitation instruments", 2012 introduces other ex post valuation of OSBP in Malaba (shortened from 3 days to 3 hours, and from more than 12 hours to 6 hours on average).

16. For example, regarding criminal investigations of violations of the Immigration Control Law, such as large-scale tax evasion, smuggling, and handling of prosecuted defendants, it is not clearly stipulated which country's authority should seize the articles and arrest and detain the defendant (JICA, 2009).

consulting expenses, and OSBP facilities on the Kenya side.

The same as Malaba, Namanga is also a target site of "Capacity Building for the Customs Administrations of the Eastern African Region (Phase 2)." It is planned to develop OSBP operation manuals for the cross border related agencies including customs, quarantine bureaus, and immigration bureaus and OSBP facility administrative rules to enable OSBP to operate smoothly when the facilities are completed.

Based on the experience at Malaba and Namanga, EAC compiled the "OSBP Source Book," a practical guidebook, with the support of JICA. This source book outlines steps necessary for establishing OSBP and indicates points for developing organizational and institutional systems, simplifying cross border formalities, designing facilities, and introducing ICT. After the completion of the EAC, workshops related to the OSBP source book were held in SADC in Southern Africa and UEMOA in Western Africa, and a local-version source book, which incorporates the actual conditions in each region, has been compiled. The book is expected to be upgraded based on detailed information, cases, and lessons in each country and to be used in the future.

Photo: Workshop related to OSBP Source Book (2011)

(2) Capacity Development of Customs on the Borders of East Africa, Nambia and Botswana

As described in the previous section, JICA is implementing a project for improving the customs ability on the borders of five East African countries as well as Nambia and Botswana. The abolishment of tariffs in the region and the introduction of common external tariffs were realized in the five East African countries by 2010. At present, work is underway on building a common market. As cooperation for facilitating trade in the region, since 2007 JICA has implemented "Capacity Building for the Customs Administrations of the Eastern African Region" to introduce RTMS/CCS and provide training (Master Trainer Program) for training instructors on customs duties including the tariff classification and customs valuation.

On the border of Mamuno/Trans-Kalahari between Botswana and Nambia, the "Project for the Establishment of the One Stop Border Post (OSBP) between Botswana and Namibia at Mamuno/Trans Kalahari Border Post" has been implemented since 2010. The border is becoming increasingly important because the border connects Walvis Bay in Nambia and Johannesburg in South Africa, and the route connects North America, Europe, and Southern Africa with shorter times and distances. Both Botswana and Nambia have strategic intentions to establish a model case of OSBP in the region in order to lead the negotiations with other countries in the future. Although the initial project plan has been reviewed because of the belated approval of the bilateral agreement between the two countries, OSBP is expected to be steadily introduced with the support of the Project.

2.3 Harmonization of cross border transport system

In many regions in Africa, overloaded vehicles constantly travel on the paved roads, damaging the road surface. However, appropriate measures to control overloaded vehicles cannot be taken because regulations differ from country to country. Furthermore, there are issues such as shortages of appropriate vehicle weighing machines and facilities and lack of cooperation by transportation companies. In response, the EAC has studied a legal framework of regulations on overloaded vehicles since 2010 with the support of JICA (JICA, 2011).

As a result of discussions on harmonizing regulations, five member states agreed on 23 items, including vehicle gross weight limit (56 tons)

and interlink vehicles (full length of up to 22 m permitted on only specified routes), to build the foundation of institutionalization. Going forward, institutionalization at the EAC will be undertaken by the following process. The EAC assembly will approve an EAC law that defines broad principles of vehicle regulation, and the EAC Council will proclaim domestic laws and ordinances that stipulate detailed operational and administrative matters. The EAC laws and ordinances will supersede conflicting domestic laws and ordinances in member states.[17] This is a strong and immediate mechanism for establishing a harmonized institutional system.

3. Direction of Cooperation in TICAD V

3.1 Lessons

(1) Comprehensive corridor development considering the entire corridor

Obviously, trade promotion and economic growth can be achieved only by combining a wide range of policies for them, of which CBTI development constitutes only a part. CBTI development must be positioned in a comprehensive corridor development framework that takes into consideration industrial development, resource development, and trade promotion of the entire supranational area.

As mentioned above, Japan has undertaken a project at Mombasa Port in Kenya with a view to benefiting the entire North Corridor and stimulating the economy in the Mombasa region. In addition, regarding the Nacala Corridor in Mozambique, Japan has worked on comprehensive corridor development linked to agricultural and resource development with the cooperation of governments and private sectors, aiming to improve the economic performance of the entire corridor and deliver benefits to poverty groups. The approach aiming for synergy effects by programming multiple issues will serve as a useful reference for future projects.

(2) Importance of a three-way approach involving infrastructure development, institutional development, and human resource development

To improve CBTI, key requirements are not only the development of conventional infrastructure such as ports, roads, and railroads, but also assistance in development systems and appropriate operation of

17. Based on subparagraphs (4) and (5) of Article 8 in EAC law

regional agreements and domestic regulations, as well as human resources development of cross border officials (customs, immigration, quarantine, cross border police, etc.) and the private sector (customs clearance agencies, transportation companies, etc.) are important. As for customs, as implemented in Japan's technical assistance projects, an approach designed to improve capacity in accordance with the international standard by cooperating with the international agency, the World Custom Organization (WCO), seems to be effective.

(3) Cooperation with Regional Economic Communities (RECs)

When improving the systems (regional agreements, customs system standardization, harmonization of traffic laws, bond system, etc.) noted in (2) above, a legal framework covering multiple countries needs to be introduced. In Africa, RECs have already been established in regions with social and economic connections, and institutional improvement activities are being carried out in each region. Therefore, focusing on CBTI in cooperation with RECs will deliver benefits to business more effectively and efficiently.

3.2 Direction of future cooperation

The population of Arica is expected to continue increasing. It is important to facilitate trade by developing CBTI in order to develop industry and thus contribute to employment creation and regional development and also to satisfy the demands of the expanding market. Future efforts should target comprehensive corridor development by intensively allocating resources to corridors with high development potential in order to promote a shift from resource-dependent economies to a versatile and advanced regional industrial structure. As specific assistance measures for CBTI, it will be effective to form a cooperation structure in order to enhance port functions which are bottleneck in the physical distribution system, to develop the transport infrastructure to promote industrial and agricultural development using regional resources, and to assist in facilitating cross border formalities.

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Chapter 9:
Toward Universal Health Coverage in Africa -Achieving MDGs with equity, and beyond

Ikuo Takizawa

1. Health in Africa: Steady Improvement

The African continent, particularly Sub-Saharan Africa (SSA), continues to be the focus of global health discourse today. Approximately, 1/5 of global tuberculosis deaths, 1/2 of child and maternal deaths, 2/3 of deaths due to AIDS-related causes and 90% of malaria deaths are concentrated in SSA, which counts for only slightly more than 10% of the global population (Table 1).

Table 1. Disease burdens (Share of Sub-Saharan Africa in global health issues)

	Under 5 Deaths 2011 [a] (thousands)	Maternal Deaths 2010 [b] (thousands)	Deaths from AIDS 2010 [c] (thousands)	Deaths from Tuberculosis 2011 [d] (thousands)	Deaths from Malaria 2010 [e] (thousands)
World	6,914	287	1,800	990	660
SSA	3,370 *	162 *	1,200 *	220 **	596 **
Share of SSA	48.7%	56.4%	66.7%	22.2%	90.3%

* Sub-Saharan Africa, ** WHO African Regional Office member states

Sources a: Childinfo. [http://www.childinfo.org/mortality_ufmrcountrydata.php](accessed on Nov 10, 2012)
b: WHO, UNICEF, UNFPA, The World Bank. Trends in maternal mortality: 1990 to 2010. Geneva; WHO: 2012.
c: WHO, UNAIDS, UNICEF. Global HIV/AIDS response: epidemic update and health sector progress towards universal access: progress report 2011. Geneva; WHO: 2011.
d: WHO. Global tuberculosis report 2012. Geneva; WHO: 2012.
e: WHO. World malaria report 2013. Geneva; WHO: 2012.

Howev er, many African countries have witnessed an accelerated reduction of maternal and child mortality in the last decade. According

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to the latest estimates by UN agencies, the average annual rate of reduction (AARR) in under-five mortality, for which 4.4% or more is required to achieve MDG 4 (reduction of child mortality by 2/3 between 1990 and 2015), increased from 1.5% (1990 – 2000) to 3.1% (2000 – 2011) in SSA. The AARR for maternal mortality, for which 5.5% or more is required to achieve MDG 5 (reduction of maternal mortality by 3/4 between 1990 and 2015), increased from 1.4% (1990 – 2000) to 3.9% (2000 – 2010). As a result, there are significant reductions in the number of deaths both of children and mothers. The number of children who die before the age of five in SSA decreased from 3.8 million in 1990 to 3.3 million in 2011 despite the increase in the number of births. The annual number of mothers who die of pregnancy-related complications in SSA decreased from 192,000 in 1990 to 162,000 in 2010 (Table 2).

Table 2. Accelerated progress (Changes in child and maternal mortality in SSA)

	Before	Recent
AARR in under five mortality [a']	1.5% (1990-2000)	3.1% (2000-2011)
AARR in maternal mortality [b']	1.4% (1990-2000)	3.9% (2000-2010)
Number of under five deaths [a]	3.8 mil. (1990)	3.3 mil. (2011)
Number of maternal deaths [b]	192,000 (1990)	162,000 (2010)

Sources a: Childinfo. [http://www.childinfo.org/mortality_ufmrcountrydata.php] (accessed on Nov. 10, 2012).
a': Author's calculation using data from the same source as a.
b: WHO, UNICEF, UNFPA, The World Bank. Trends in maternal mortality: 1990 to 2010. Geneva; WHO: 2012.
b': Author's calculation using data from the same source as b.

Progress was also made in infectious disease control. The number of new HIV cases in SSA has continued to decline since the mid-1990s. The annual number of deaths due to AIDS-related causes in SSA peaked at 1.7 million in 2005 and has been declining ever since, even though a better chance of survival increased the number of people living with HIV from 20.5 million in 2001 to 22.9 million in 2010. The number of malaria cases in the WHO Africa region stood at 174 million in 2010, down from the peak of 191 million in 2005. The number of malaria deaths peaked at 748 thousand in 2004 and has been declining ever since.

The steady progress in health improvements was founded on the bold policy initiatives of African countries to strengthen the health systems to ensure physical and financial access to essential health services. Rapid expansion of high impact health interventions fueled by an increase in development assistance also contributed, as is described in a later section. For example, the Community-based Health Planning and Service program in Ghana, Health Extension Program in Ethiopia, and Health Surveillance Assistant in Malawi are good examples of country initiatives in improving physical access to essential health services of the underserved population. Cases such as the Mutuelles de Santé (Community-based Health Insurance Scheme) in Rwanda and the National Health Insurance Scheme in Ghana are gaining international attention as examples of publicly organized financial protection schemes which achieved high population coverage in low income settings in SSA. Performance-based financing is being introduced in many countries as a strategy to increase service coverage and quality, triggered by success stories from Rwanda and Burundi.

It is generally recognized that improvement in health will increase the academic performance of children and productivity of adults. There are some studies which indicate linkage between an increase in life expectancy with an increase in GDP. Improvement in health will reduce the cost of medical expenditures, therefore minimizing the risk of impoverishment due to high expenses. Health is the foundation for human security. The TICAD V process, in principle, needs to be built on those achievements in the past decade and should promote the continuation and further expansion of many good works which have already been started in Africa.

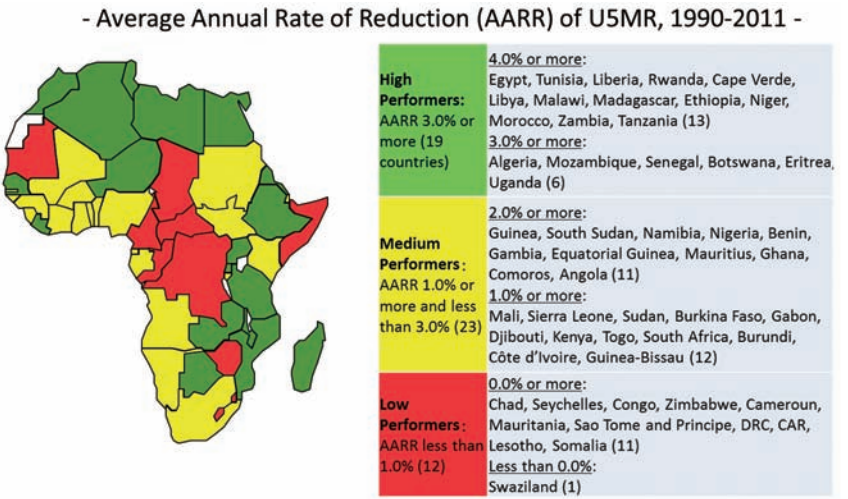
2. Health in Africa: Remaining/Emerging Challenges

Even though there is a clear indication of a steady improvement in health in Africa, there is a large disparity in the pace of progress. Many countries in SSA continue to struggle in ensuring physical access to essential health services to the population. Ensuring financial protection especially for the poor is the common challenge for both SSA and North African countries.

As for MDG 4, only about 1/4 of the countries in Africa (13 out of 54),

including all five countries in North Africa, are likely to achieve the target (Figure 1). While AARRs of those 13 countries for 1990 – 2011 exceeds 4.0%, about 2/3 of the countries (35 out of 54) fall short of 3.0% and can be classified as medium or low performers.

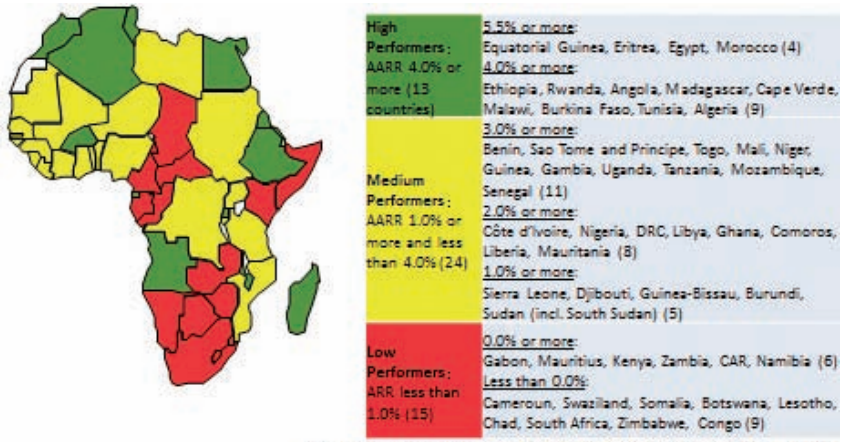
Figure 1. Progress toward MDG 4



The prospect for the achievement of MDG 5 is more challenging. There are only four countries which exceed AARR of 5.5% and 3/4 of the countries (39 out of 52 for which internationally comparable data is available) do not even reach 4.0% (Figure 2).[1]

1. Taking into consideration the situation, it is quite relevant to keep health-related MDGs even beyond the target year of 2015, at least for the countries in SSA, in order to maintain the current momentum.

Figure 2. Progress toward MDG 5

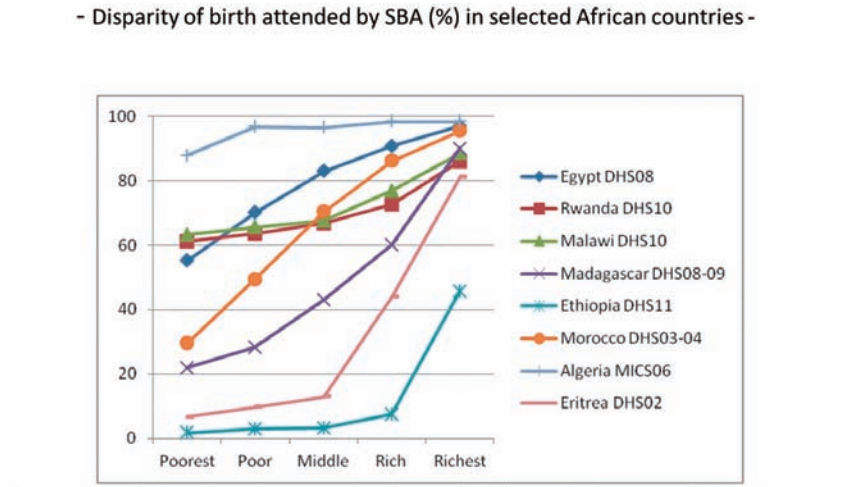


Source: Compiled by the author, using data from ChildInfo [http://www.childinfo.org/maternal_mortality_indicators.php] (accessed on Nov 10, 2012)

Increased disparity in health status and health service utilization within countries is emerging as another equity challenge. According to UNICEF, in SSA, 76% of births in urban areas are attended by skilled birth attendants (SBAs) compared to only 40% in rural areas. Disparity among different income groups is also significant, with 85% of the births among the richest 1/5 of the population attended by SBAs, compared to only 27% for the poorest 1/5. According to available data, health disparity among different income groups tends to be larger among the countries with low service coverage, even though a relatively large disparity can be found even in some countries with high service coverage.

Figure 3 compares both inter- and intra-country disparity in use of essential health services, measured in proportion of births attended by SBAs, according to income groups. These are the countries identified as high performers for both child and maternal mortality reduction in the preceding analysis. The figure reveals a classic pattern of unequal health care use by income level. When the country is in an early stage of development, service use is low and disproportionately concentrated in the richest segment of the population (like in Ethiopia and Eritrea). As average service use increases, an increase in the middle and poorer segments of the population is observed (like in Madagascar, Morocco and Egypt); however, the disparity in the poorest segment persists (like in Algeria).

Figure 3. Disparity by economic status

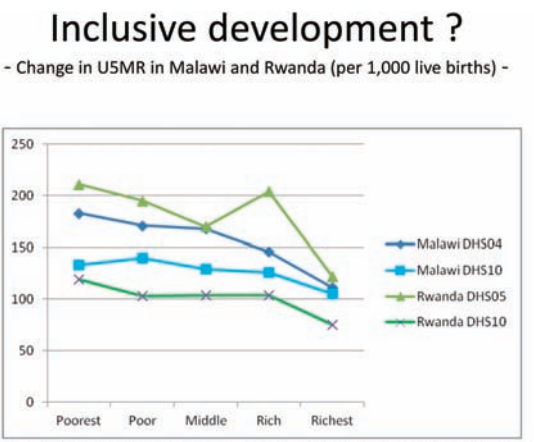


Source: Compiled by the author, using data from ChildInfo and the latest available DHS reports.

It is striking to note the significance of disparity in utilization of essential health services by income level in these countries. In fact, the level of service use for the richest segment is almost the same regardless of the national average. Explicit targeting and strong political commitment is needed to address such inequality to realize truly inclusive development (Box 1).

Box 1: Inclusive development in the making? Cases for Rwanda and Malawi

The two countries in Figure 3, Rwanda and Malawi, show a different and clearly more equitable pattern in utilization of essential health services. Even though they might have an advantage in physical access due to high population density, both governments made a strong commitment to improve the delivery of essential services. At the same time, both countries adopted measures to remove financial barriers for the poor and needy either by insurance or fee exemption.



Source: Compiled by the author, using the data from respective DHS reports.

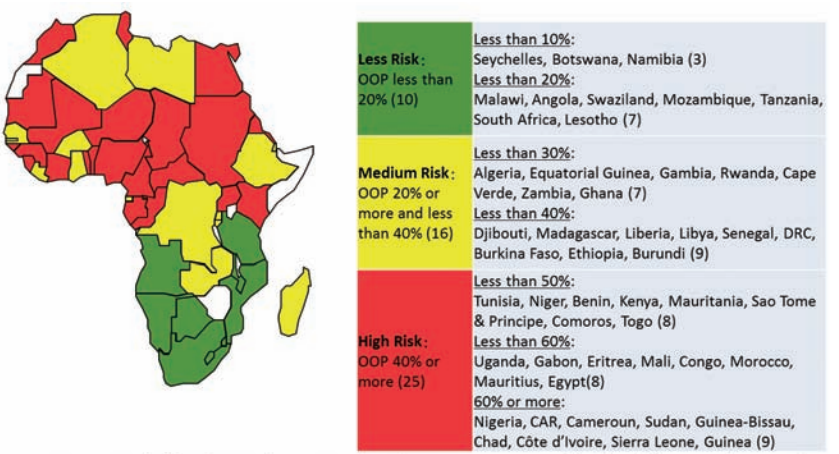
The figure above compares the changes over time in the under-five mortality rate (U5MR) by income groups for those two countries, using a series of Demographic and Health Survey (DHS) data. In both countries, the poorer segments of the population are benefiting proportionately more in terms of child mortality reduction, which means that the income disparity in U5MR is reducing over time. Similar patterns are observed in other countries like Ghana, Zambia and Tanzania. Even though further analysis is needed on diverse country experiences and causal relations with the choice of health policies, efforts to ensure physical and financial access to essential health services by the poor may be a policy instrument which can effectively realize inclusive development, one of the core goals for TICAD V.

Health financing is also emerging as a major development challenge. The Task Force on Innovative International Financing for Health Systems suggested that a health expenditure of 44 US dollars per capita on average is required in order to achieve adequate population coverage

with essential health services in low and middle income countries for the achievement of health-related MDGs. While 11 countries in SSA spent more than 150 US dollars per capita on health in 2009, seven countries spent less than 20 US dollars per capita.

According to the WHO, the risk of impoverishment due to high medical bills significantly increases when the proportion of out-of-pocket payment (OOP) to total health expenditure (THE) exceeds 20%. In the 25 African countries out of 51 countries for which internationally comparable data is available, OOP occupies 40% or more of THE (Figure 4). Without proper intervention, there is a risk that the proportion of OOP in THE increases as economic development continues in Africa. It is important to note that a high proportion of OOP and the risk of impoverishment due to high medical bills are serious problems even in some of the North African countries such as Egypt, Morocco and Tunisia, where physical access to essential health services is less of a problem. The risk of impoverishment due to high medical bills, together with the lack of other social safety nets, could be a threat to social stability in those countries.

Figure 4. Financial risk



Source: Compiled by the author using data from WHO. WHO global health expenditure atlas. WHO, Geneva).

A recent study confirmed that there is a large disparity among low and middle income countries in terms of essential health service coverage,

not only in Africa. It is also suggested that broader health coverage generally leads to improved overall population health, particularly for the poor. Considering the achievements so far and the remaining and emerging challenges, it is increasingly necessary to focus on health system issues especially equality in access and financial protection, which, together, call for concerted efforts toward universal health coverage (UHC). It is expected that action toward UHC will further accelerate the progress toward health-related MDGs, more inclusively benefiting the poor and the socially disadvantaged. It is essential for most of the countries in SSA to address physical, financial and sociocultural barriers simultaneously. The absolute lack of human resources for health, one of the major issues brought up in TICAD IV, continues to constrain efforts toward UHC, even though countries are taking initiatives to improve the situation as sited in Section 1. The focus in North African countries should be given to the expansion of financial protection and better targeting of the poor.

In addition, there is increasing concern that non-communicable diseases (NCDs) and injuries are on the rise both in North African countries with advanced demographic and epidemiological transitions and the low income countries in SSA. These transitions also call for more resilient health systems with better financial protection. Transformation or re-organization of health systems and the active participation of communities will be needed to provide promotional/preventive services and long-term/rehabilitative care which requires a significant degree of self-management by patients.

3. Development Assistance for Health in Africa

In response to the global commitment to MDGs and the series of initiatives which came out of the G8 Summits and other political arenas, development assistance for health (DAH), particularly for SSA, significantly increased in recent years. Participation of non-traditional actors such as the Bill and Melinda Gates Foundation and the establishment of large-scale global health funding mechanisms such as GAVI and GFATM, together with the increase in bilateral commitment including emerging donors, contributed to the increase. According to estimates by the Institute for Health Metrics and Evaluation, DAH for SSA increased from 1.1 billion US dollars in 2000 to 8.1 billion US dollars

in 2010 in real terms. It is most likely that the rate of increase slowed down toward the end of the TICAD IV period.

The increase in DAH made a significant contribution in expanding the coverage of essential health services, which in turn contributed to the steady reduction of maternal and child mortality, and mortality and morbidity from major infectious diseases. Increased DAH contributed especially to expanding coverage of essential interventions related to focused health programs which address specific health conditions.[2] Coverage of such interventions as long-lasting nets for malaria prevention, artemisinin-based combination therapy for malaria treatment, anti-retroviral therapy for HIV-infected people, HIV counseling and testing, immunizations for children, together with other essential life-saving interventions, expanded remarkably in SSA supported by focused DAH.

The Government of Japan (GOJ) also significantly increased DAH to Africa based on the commitment made at TICAD IV. The total amount of grant aid and technical assistance provided for Africa since the Japanese fiscal year (JFY) 2008 amounted to 47 billion yen as of the end of JFY2011, surpassing the commitment of 43 billion yen. The GOJ through JICA supported the training of 203,671 health personnel by the end of JFY2010, against a commitment of 100,000, and improved 3,935 health facilities by the end of JFY2011, against a commitment of 1,000.[3]

JICA focused its assistance on the most challenging regions in Ghana (Upper West), Kenya (Nyanza), and Senegal (Tambacounda and Kedougou). What was originally started as a pilot scheme was scaled up to benefit the whole of Tanzania (regional health and hospital management). The scaling up of geographically focused assistance is also being undertaken in Kenya and Senegal. Regional hospital networks were upgraded through combined capital and technical support in Uganda. Information systems to monitor human resources for health were introduced in Tanzania and South Sudan that cover the entire nation for the first time in those countries. Regional networks for health systems management were strengthened through the partnership with the African Health Leadership and Management Network

2. It is estimated that 50% of global DAH is allocated to MDG6 (control of infectious diseases). Taskforce on Innovative International Financing for Health Systems, op cit.

3. Data provided by JICA (as of Nov. 2012)

(AHLMN), a network of higher training and research institutions in Africa with a focus on health systems management. A network in HRH management was established for Francophone countries. Assistance was also provided to improve the management of focused programs like HIV and AIDS control in Kenya, Tanzania and Zambia, and tuberculosis control in Kenya and Sudan, in collaboration with funding support coming from GFATM and other sources (Box 2).

Box 2: Expanding service coverage through better management and coordinated investment: JICA's experiences

In Ghana, JICA partnered with the Ghana Health Service (GHS) in the scaling-up of Community-based Health Planning and Service (CHPS) in the Upper West Region, one of the most remote and disadvantaged areas in the country. CHPS was promoted by the government as a means to deliver essential health services to under-served communities; however, the expansion was slow due to multiple constraints. JICA provided technical assistance to the regional health office of GHS and other relevant stakeholders for strengthening capacity in program management and community mobilization, while supporting CHPS facilities and health centers and referral hospitals through the provision of medical equipment at the same time. This support was provided in alignment with government policy, support from other partners, and contributed to the accelerated expansion of CHPS coverage in the region.

In Tanzania, JICA worked with the National AIDS Control Programme (NACP) for quality improvement of HIV- and AIDS-related services. JICA's technical assistance facilitated the standardization of HIV testing and counseling and STI care and treatment services, involving all the major partners working in the area. The products were adopted by NACP as national standards and disseminated nationwide using grants from GFATM and by other collaborating partners. The project now assists the strengthening of the M&E framework through a combination of comprehensive supportive supervision and clinical mentoring, which cut across HIV- and AIDS-related services and programs. A similar approach was promoted in Madagascar.

Despite the steady expansion of essential life-saving interventions and improvement of health status, resources are not enough to deliver those interventions to all the people in need, particularly the poor. As African countries expand their health services to geographically and socioeconomically hard-to-reach population groups, the unit cost of service delivery is likely to increase, creating an additional burden on the

health systems. The progression of demographic and epidemiological transitions and the increase in NCDs and injuries can be another threat to the already over-stretched health systems of many African countries.

However, a further increase in DAH seems very challenging considering the current global economic situation, at least for the near future. While efforts to strengthen global solidarity to save lives and ensure access by all to essential health services in Africa should be continued, a paradigm shift is also needed in the TICAD V process. Firstly, DAH should be allocated more strategically and catalytically in a way to increase the allocation of domestic resources for health by African countries. As many countries in Africa are now experiencing stable economic growth and are able to benefit from a demographic bonus, health systems need to be strengthened with a long-term vision to establish functional and sustainable social protection mechanisms. Secondly, DAH should be provided in a way to improve the management of health systems and programs. There is growing attention globally regarding improving the productivity and efficiency of health sectors through better management, reflecting the difficult economic situation and escalation of medical expenses. A growing body of evidence is being produced that improvement in management can actually increase the outputs and improve the quality of health services (Box 3). Proper management of the pooled fund may become another area of development concern. Thirdly, DAH should be provided in a manner to encourage private investment in the health sector. The private sector is already a vital partner in the delivery of health services in many African countries. As economic growth continues, the prospect for regarding the health sector as an industry, i.e., source of income, innovation and employment, will increase. Even though the role of the public sector and government regulation is essential, particularly on the health financing side in order to achieve pro-poor health systems, an environment should be created to attract more investment from the private sector in service delivery and technological innovations.

Box 3: Improving service outputs through better management at the health facility level and beyond

JICA is working in partnership with Sri Lanka in applying management methodologies developed in Japanese manufacturing industries, i.e., 5S (participatory work environment improvement) – *kaizen* (continuous quality improvement) – TQM (total quality management), to improve hospital management in over 15 countries in Africa. One of the early pilot hospitals, Mbeya Referral Hospital in Tanzania, succeeded in reducing patient waiting times, reducing excessive supply stock, and increasing hospital income through better processing of insurance claims, through the implementation of self-motivated *kaizen* activities. In addition to the documentation of performance improvements through *kaizen* activities in various departments, the impact of the approach on health professional satisfaction and motivation is under evaluation.

JICA supported the management improvement of Nyanza Province in Kenya, working with local partners such as the Great Lakes University of Kisumu. The pilot districts demonstrated a significant increase in the utilization of essential health services, even though a rigorous assessment is needed to quantify the effect of project intervention. The positive changes in management practice were highly appreciated by the national government and efforts are now being made to scale-up the support to benefit the entire country in collaboration with other partners. In Tanzania, JICA-supported managerial capacity development of Regional Health Management Teams (RHMTs) was instrumental in triggering the regular allocation of funds to the RHMTs from budgetary support provided by other development partners.

Taking into consideration the situation, it is quite relevant that the TICAD V process and its Plan of Action continue to focus on the achievements of health-related MDGs since most of the countries in SSA are unlikely to achieve those by 2015, even with the accelerated progress in the past decade. However, increased attention should be paid to the more equitable distribution of the progress to address the remaining and emerging disparities in utilization of essential health services.

UHC can be a unifying theme for the TICAD V process. It has a strong pro-poor focus by calling for equitable access to health services and better financial protection, a challenge common to countries in both North Africa and SSA. Achievement of UHC requires strong political

leadership and effective and efficient mobilization of domestic resources for health including the partnership with the private sector. It requires a coordinated effort of both national governments and development partners. By focusing on UHC, new development partners such as BRICS can be brought on board for coordinated DAH to Africa. As these are the countries which recently achieved UHC (e.g., Brazil and China) or which are currently in the process of achieving UHC (e.g., India and South Africa), their experiences are full of vital lessons for the African countries in question.

There are many challenges with UHC as a development agenda. Firstly, even though it has a universality as mentioned before, UHC needs to be promoted in accordance with the evolving capacity and resource constraints of individual countries. In accordance with the definition by the WHO, UHC should be regarded as a direction, rather than a definite goal.[4] There exists a large disparity among African countries in terms of their position toward UHC. Strategies tailored to the demographic, epidemiological, historical, political and economic context of each country should be deployed. In many countries in SSA, physical, financial and sociocultural barriers need to be addressed first, or simultaneously at least, with financial protection. In North African countries, financial access and better targeting of the poor should be prioritized.

Another challenge with UHC is measurement. Even though UHC is also attracting attention in the post-MDG discussion, there is no consensus yet on how to measure the progress toward UHC. Measures for UHC should probably be selected from health status indicators (i.e., MDG-like indicators), health service coverage indicators (e.g., proportion of births attended by SBAs and immunization coverage), and the indicators for financial protection (e.g., incidence of impoverishing health expenditure, proportion of OOP to THE) to capture its multiple dimensions.

UHC also faces a challenge because of its 'narrow' focus on healthcare rather than health itself. It is widely recognized that health is not produced by healthcare alone. Interventions regarding the social determinants of health are needed to address the root causes of ill health.

4. It is difficult to meet the entire health care needs of the population at an affordable cost even in developed countries. UHC is an endless endeavor.

Improvement in water and sanitation alone can have a significant impact on people's health particularly in the African context. It is important to make sure that those issues are adequately addressed in the discourse of the relevant sectors.

4. Japan's Actions in TICAD V Process

Japan's role in promoting UHC in Africa can be significant. Japan celebrated its 50th anniversary of the achievement of UHC in the form of universal health insurance in 2011. Japan's experience with UHC and its implications were published in a series of scientific papers for the benefit of a global audience. Japan played a major role in the global policy process to bring health systems strengthening onto development agendas through the G8 Toyako summit in 2008. There is a strong political leadership to promote UHC in the global health discourse and through the TICAD V process.

Financial capacity in increasing pooled funding and its population coverage is a key to progress toward UHC. Efforts to increase overall funding are needed. Japanese DAH is expected to play a catalytic role in the mobilization of domestic resources for UHC in Africa, depending on the evolving capacity of individual countries. However, an increase in funding alone will not be sufficient. Japanese DAH should also be provided in a way to regain a 'can do' attitude among political and technocratic leaders in Africa, which will be the moral foundation for the progress toward UHC.[5] UHC is a long-term endeavor which requires continuous fine tuning of complex elements. Country experiences, including the one of Japan, commonly pointed out a critical importance of the roles of national political and technocratic leaders in the entire

5. It was Professor Francis Omaswa, founding Executive Director of the Global Health Workforce Alliance (GHWA) and former Director General for Health Services of the Ministry of Health, Uganda, who pointed out the loss of the 'can do' attitude among political and technocratic leaders as a cause for slow progress in health development in Africa. He says, "many political and technocratic leaders lost the confidence and the 'can do' attitude that was prevalent just before and after independence." And then he maintains "the answer lies in growing a critical mass of individuals and institutions in each and every country that are active change agents, who are in the regular habit of using good evidence to support policy development by their governments and at the same time are able to hold their governments to account," and "the answer also lies in growing the capacity of ministries of health to act as good stewards of health systems." Omaswa F. Reclaiming the 'can do' attitude in the delivery of health services in Africa. Africa Health 2010; July: 7.

process. Building on the achievements and outcomes in the TICAD IV process, JICA can contribute to the capacity development of African leaders and financial mobilization for UHC through the following assistances:

(1) Capacity development for health systems management through regional networking and country-focused assistance

JICA can provide assistance for the capacity development of African countries in health systems management, through the creation of a regional knowledge base and through the strengthening of country institutions, organizations and individuals.

JICA can contribute to creation of a regional knowledge base for UHC through, its ongoing partnership with AHLMN. AMREF as a host organization of AHLMN and JICA, in collaboration with the Government of Kenya, is now offering regional training on health systems management. The program has the potential to serve as a platform for knowledge sharing and informed policy choices for HSS and UHC. Opportunities exist to work with other development partners through Harmonization for Health in Africa (HHA) and other networks with similar objectives to broaden the impact.[6]

Improving health systems management at a country level can promote UHC through strategic planning, better targeting and more effective, efficient and accountable use of resources. Better health systems management can improve the performance of focused programs. Improving management can encourage decision making and problem solving at all levels of health systems, which cultivates professional satisfaction and motivation. JICA can extend the management assistance provided for national ministries of health and local health offices in countries like Kenya, Senegal and Tanzania to wider geographical areas or to other countries. In Kenya, for example, discussion among the relevant stakeholders is ongoing to scale up the management assistance provided to one province to the entire country, in line with the progress of decentralization under the new constitution. JICA can also support management improvement at the service delivery level, through the continued application of the 5S-*kaizen*-TQM approach in hospitals and other health facilities. These assistances are expected to contribute to

6. Other networks that have focused on UHC include the Joint Learning Network sponsored by the Rockefeller Foundation and SHIELD based in the University of Cape Town.

sustainable improvement in health systems performance when combined with financing interventions to incentivize better performance (i.e., performance/results-based financing) which are being tried and introduced in many countries in Africa.

(2) Capacity development for management of focused health programs targeting MNCH, infectious diseases and other emerging health needs

JICA can support countries with focused health programs, such as MNCH, major infectious disease control and other emerging health needs. Efforts should be made to produce synergistic effects with large-scale funding for focused programs coming from other development partners.

Despite the accelerated expansion of essential interventions for MNCH and infectious disease control in Africa, gaps in service use will remain. In addition to the financial contributions by GOJ to the global funding mechanisms such as GFATM and GAVI, JICA can support the strengthening of the program management capacity of the national and local institutions to deliver better services. Assistance such as the strengthening of country-led donor coordination mechanisms, standardization and harmonization of various technical guidelines and tools, integration and unification of M&E frameworks, conducting implementation research and impact evaluations, and the strengthening of laboratory capacity and external quality control mechanisms (for tuberculosis and other infectious disease control) can be provided as part of the efforts to improve program management.

(3) Facilitate mobilizing financial resources for UHC

In combination with the assistance to strengthen the capacity for both health systems management and focused programs management, JICA can provide assistance to mobilize financial resources for UHC in accordance with the evolving capacity of individual countries.

It is essential that the African countries take leadership roles and make political decisions to mobilize more domestic resources for health in order to move toward UHC. Sound government financing, either through a general budget and/or insurance schemes, is indispensable in order to maintain health systems accountable to the health needs of the poor and their financial protection. However, many African countries will continue to face fiscal constraints even with sustained economic

growth at least for the near future. There has been a remarkable increase in DAH to Africa, in particular to SSA. However, the major part of the funds is allocated to focused interventions such as HIV and AIDS, malaria, and other infectious disease control. Even though there are efforts to increase DAH allocation to the health systems strengthening, such as the establishment of a joint funding platform by GAVI, GFATM and the World Bank, the progress is slow.

JICA can provide financial assistance to eligible African countries through a best mix of grant and loan facilities in accordance with the evolving capacity of individual countries. Such assistance should be provided catalytically to facilitate government initiatives to increase domestic financing for health and expand pooled funding. It should be provided in a way to promote better management practices in government officials and health service providers. It should be catalytic to promote investment and innovations from the private sector. Combination with the support for management improvement, and coordination with support from other development partners is essential.

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Chapter 10: Challenges in Educational Development in Africa and JICA's Approach

Kazuro Shibuya

Introduction

This chapter looks at the challenges that Africa[1] faces in education, and discusses JICA's policies toward its development. Section 1 discusses the current and overall situation of education in Africa (Sections 1.1 and 1.2). The chapter will then discuss specific challenges for countries at different educational developmental stages because, obviously, countries at different developmental stages must have different developmental strategies depending on their respective prioritized goals (Section 1.3). As a precursor to later discussions, Section 1.4 will have a brief look at future challenges toward 2015 and beyond.

Section 2 discusses JICA's approach toward educational development in Africa. In its efforts to contribute to education in Africa, JICA has conceived a few development models based on its policy focus and its comparative advantage built on Japan' experience in education and human resources. Such development models will be intensively discussed in this paper while JICA can provide various and wide-range support for educational development in Africa
Finally, combining the discussions in previous sections, Section 3 will attempt to suggest some policy options for consideration by African leaders and their partners participating at TICAD V.

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1. Since sub-Saharan Africa (SSA) is faced with very serious challenges, much of the discussion in this chapter will largely be on SSA. The challenges of North African countries, however, will be dealt with as appropriate.

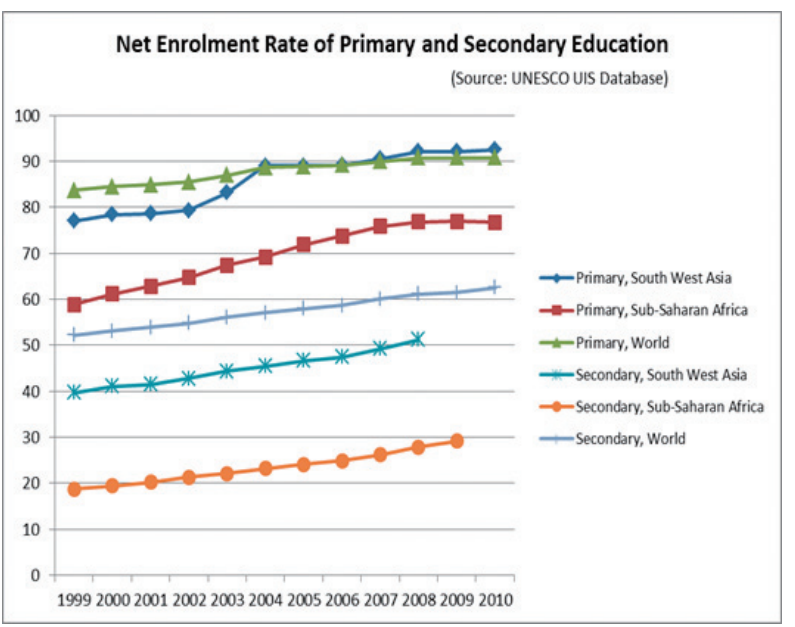
1. Current State of Education Development in Africa and Challenges Faced

This section has an overview of education development in Africa: basic education and post-basic education.

1.1 Current state of basic education in Africa and remaining challenges

Overall, there has been a substantial advancement in access to primary education in Africa. Since the World Conference on EFA (Education for All), in Jomtien, Thailand, in 1990, which called for universal access to primary education as a fundamental human right, many African countries have introduced various policies to achieve universal primary education with support from international aid agencies and NGOs. As a result, the net enrollment rate in primary education, one of indicators measuring achievement of the second MDG, improved from 58% (1999) to 77% (2010) and, consequently, the net enrollment rate in secondary education also increased from 19% (1999) to 29% (2009) (Refer to Figure 1).

Figure 1. Changes in the enrollment rate in primary education and secondary education



Source: UNESCO USI Data 2010

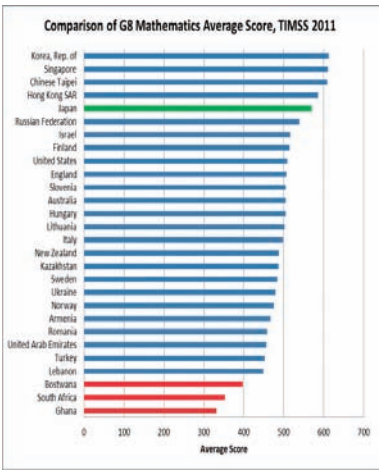
Also, there has been an advancement with regard to elimination of gender disparities in primary and secondary education, i.e., Goal 3 of the MDGs; the male-female ratio of the gross enrollment ratio at the primary level improved from 100:85 (1999) to 100:93 (2010) in Sub-Sahara Africa. This seems to have been achieved thanks to efforts to improve educational access for the females through the construction of schools in remote areas and the provision of scholarships, as emphasized in MDGs and EFA (UN, 2012). Thus, there has been a massive improvement in enrollment in basic education.

However, even with such improvements in basic education enrollment, the fact remains that many African countries lag far behind the world average (NET primary: 91%, NET Secondary:82%) and that of South West Asia (NET Primary: 93%, NET Secondary: 75%); in addition, large disparities persist between urban and rural areas and among different income groups within countries. (GPE report 2012) More attention needs to be paid to these remaining challenges.

In contrast to rapid quantitative expansion, the quality of education, as represented by the learning achievement of children, remains low. An illustration of this can be found in the performance of some African countries in TIMSS,[2] which measures the achievement in science and mathematics of fourth and eighth grade children. In the 2011 test, participants from Africa, namely Botswana, Ghana and South Africa, are placed lowest among participating countries, as shown in the figure on the below.

2. Trends in International Mathematics and Science Study

Figure 2. Poor quality of basic education in Africa



SACMEQ	Academic Performance in the 6th Grade			
	Literacy		Mathmatics	
	2000	2007	2000	2007
Malawi	428.9	433.5	432.9	447
Zambia	440	434.4	435.2	435.2
Lesotho	451.2	457.9	447.2	476.9
Mozambique	516.7	476	530	483.8
Uganda	482.4	478.7	506.3	481.9
South Africa	492.3	494.9	486.1	494.8
Namibia	448.8	496.9	430.9	471
Zimbabwe	504.7	507.7	N.A	519.8
Zanzibar	478.2	533.9	478.1	486.2
Botswana	521.1	534.6	512.9	520.5
Kenya	546.5	543.1	563.3	557
Swaziland	529.6	549.4	516.5	540.8
Mauritius	536.4	573.5	584.6	623.3
Seychelles	582	575.1	554.3	550.7
Tanzania	545.9	577.8	522.4	552.7
SACMEQ	500	511.8	500	509.5

(Left: TIMSS; Right: SACMEQ)

As one can see by looking at the SAQMEC data,[3] in which two of the three countries listed in the TIMSS score (Botswana and South Africa) are on a par with other countries, one has to assume that the learning achievement of children in most African countries remains low by international standard. And in particular, among various aspects of learning achievements, the low level of basic literacy and numeracy in early grades at the primary education level is a major concern. In Kenya, for example, a survey (UWEZO, 2011) found that the level of basic literacy and numeracy of about 50% of fourth graders is only equivalent to what the Kenyan curriculum requires of the second graders. It has also been reported that the learning achievement of sixth graders in Africa, on average, is only equivalent to that of second graders in OECD countries (GPE, 2012). Such general insufficiency in basic literacy and numeracy at lower grades is reported to hinder children's learning over subsequent years, resulting in the deteriorating general cost-effectiveness of educational investment in Africa (Brookings Institution 2011). Why, in Africa, does the quality of education remain low, or why, in some countries, is it decreasing, despite various inputs made by governments and their development partners for the quantitative expansion of education? To understand this, one has to look back at the policies introduced toward the achievement of EFA, along with their policy intentions and consequences. After the introduction of the MDGs

3. Southern and Eastern Africa Consortium for Monitoring Educational Quality

and the World Conference on EFA, Dakar, Senegal, both in 2000, universal primary education aiming at 100% enrollment and completion became the top priority for education policy in many countries; the governments were subsequently requested to work out their educational sector plans to clarify specific courses of action for the realization of these goals.

However, mostly African countries could not provide the quality learning environment (schools, teachers, teaching and learning materials etc.) to cope with the rapid expansion of access in basic education. This may have led to the deterioration of the quality of education during that era. This was observed even in those countries that participated in the EFA/Fast Track Initiative (FTI).[4] The FTI was established in 2002 as a multi-donor fund for the purpose of providing financial and technical support for the planning process of these sector plans and to fill in the financing gap between the education sector resource requirement and the domestically available education budget. "The indicative framework" which FTI presented was referred to in the process of sector plan formulation by respective countries. They were benchmark figures such as the following: "Education share of budget defined as public recurrent spending on education as % of total public recurrent discretionary spending is approximately 20%," "Primary education share of education budget is approximately 50%," "Recurrent spending on items other than teacher remuneration as % of total recurrent spending on primary education is 33%," "Average annual salary of primary school teachers divided by GDP per capita is 3.5",[5] "Pupil–teacher ratio in publicly-financed primary schools is 40 to 1," and an "Percentage of repeaters among primary school pupils is less than 10%."

However, many of the sector plans thus formulated did not necessarily turn out to be realistic in the context of each country; they tended to be over-ambitious given the insufficient capacities of understaffed education administration both at central and local levels, and the low capabilities of and insufficient incentives for teachers/staff on the ground. Thus, many problems arose such as delays in executing education budgets and in the supply of educational materials to schools.

4. Of the 45 countries involved in the FTI's support for educational sector planning and application for necessary funds, 28 of these countries are in Africa. Therefore, more than half of the countries within Africa are participating in the FTI. EFA/FTI has turned to be the Global Partnership for Education since 2011.

5. In Bruns et al. (2003), sample data for this indicator ranges from 0.6 to 9.6.

Apart from these constraints, the shortage of additional financing made available was also among obstacles that prevented the expected progress. As a result, adequate facilities and materials were not made available to schools and students, both of whose number increased rapidly as a result of the free primary education policies. All this resulted in a deterioration of the learning environment (Cambridge Education, et al. 2009).

This hasty application of the indicative framework of FTI to the education sector plans without deliberate consideration of the country context could have been one factor that inadvertently brought the deterioration of the quality of teachers. This happened because many countries quickly increased the number of teachers to live up to the indicative pupil-teacher ratio and other indicators of the FTI: teacher salaries were lowered, more teachers were employed on a term-contract basis on lower salaries, teachers' training periods were shortened, and enrollment requirements for teacher training programs were lowered in order to rapidly increase the number of licensed teachers (Aidan 2010, TISSA 2007). It is not only in the FTI participating countries but other non-FTI participating African countries as well that the deterioration of the quality of teachers occurred. Thus, it is worthwhile to further examine what education policies has been introduced and what were their consequences in such non-FTI participating countries.

It is also reported that the sudden increase of teachers with lesser qualifications has resulted in the deterioration of the social status and reputation that teachers used to enjoy among community residents and parents (Felix 2005). It appears that teachers' dissatisfaction with their salaries and benefits have actually lowered their motivation, thus resulting in poor service delivery typically indicated by a high absentee rate and limited teaching time. These problems were actually predicted; as early as 2003 in the World Bank report (Bruns et al. 2003), which served as a theoretical background paper for the FTI's indicative framework.

These developments, resulting in the deterioration in the learning environment (lack of school facilities, textbooks, and teaching materials), the poor quality of teachers and their services, are behind the poor learning performance of children, even with increased access.
In addition to these policies, many countries have attempted to promote

the decentralization of their educational management aiming to improve the efficiency of administration and finance in education; it was also expected that decentralization would enhance the accountability of education to parents and community residents, thereby improving the quality of service delivery. As part of the policy, governments established what are called "school management committees" mainly comprising headteachers/teachers, parents, local community members and local government officers (local government or local branch of Ministry of Education), with the expectation of increased local participation in education and hence increased efficiency in school management.

Oftentimes, however, the school management committees have not been functioning as expected due to the government's inability to provide sufficient budget allocation, clear delineation of the functions and mandates of the committees, and the insufficient ability of the school committee members. As such, and for other reasons as well, many schools supported by the school management committees ended up with inadequate facilities and teaching staff, failing to provide the education needed by children and their parents, who eventually lost interest in supporting such poorly performing schools. Thus, not receiving appropriate support from either the government or from the community, the quality of education at such schools eroded.

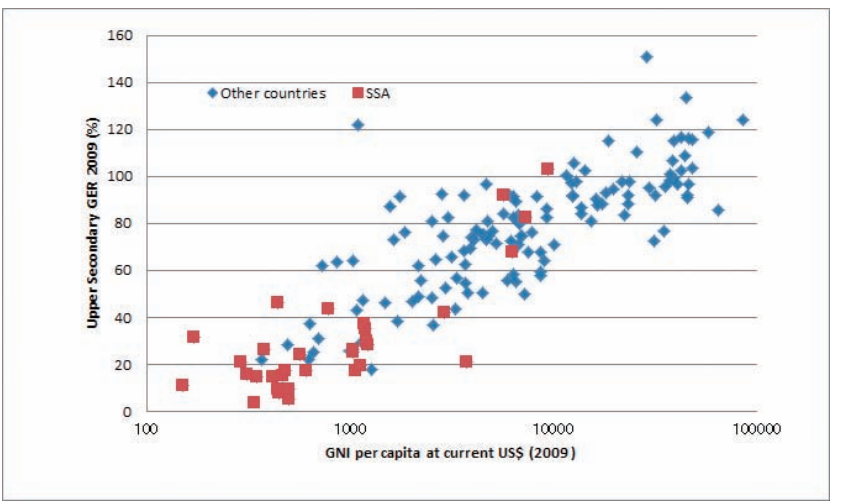
It is as a result of these inadequate policy developments that Africa's current level of educational quality remains sub-optimal. Many indicators point to the need for further efforts: a high dropout rate (30%), high repetition rate (15%), and low completion rate in primary education (67%) (compared to the world average of 2.5% (2010), 9.1% (2009) and 91% (2010), respectively). Continuous efforts to solve these problems are needed.

1.2 Current state of post-basic education in Africa and remaining changes

We now turn to post-basic education (upper secondary and higher education).

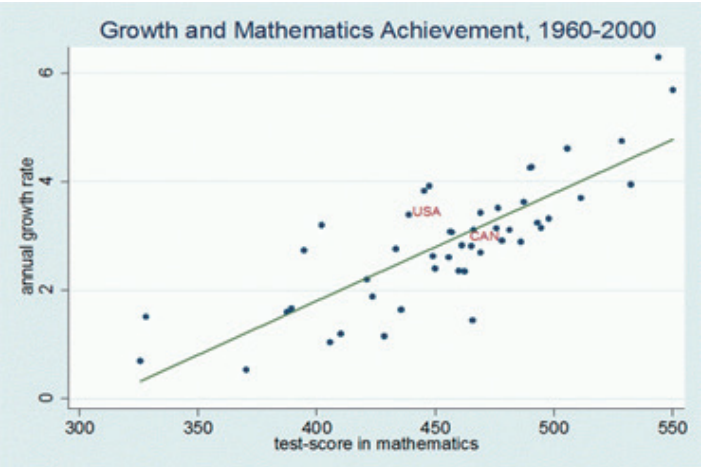
In recent years, African countries have experienced rapid economic growth; however, this has not solved how to make best use of the youth in Africa for its industrial development. The youth in Africa still has higher share of the unemployment than the adults. In addition, the large majority of the youth are underemployed and occupied in low productivity household enterprises (AfDB 2011).

Figure 3. Enrollment rate in upper secondary education and its relevance to economic development



Source: Yoshida (2012)

Figure 4. Relationship between quality of upper secondary education and economic growth



Source: Hanushek 2007

Under these circumstances, the challenges in post-basic education in Africa lie in improving the current net secondary education enrollment rate of 29% (2009), enhancing the quality of education, and making secondary education (or post-basic education) including skills development more relevant and responsive to the needs of the society so as to produce more qualified human resources to support much-needed industrialization. Such efforts for the improvement in the supply of skilled labor must proceed in tandem with efforts in industrial development and labor policies. Africa also needs to cultivate top-level human resources who will move on to higher education and go on to play leading roles in industry. Thus, in a number of ways, post-basic education must be enhanced both in terms of quality and quantity to build up human capital to meet the changing and increasing needs of Africa.

Figure 3 represents the relationship between the enrollment rate in upper secondary education and economic growth (GNI per capita). This infers a correlation whereby countries with higher GNI per capita have a higher enrollment rate in upper secondary education. In addition, the quality of education, namely, the extent to which students absorb the content of the education they receive, is largely related to the economic development of each country. Hanushek asserts that there is a

correlation between the learning achievement in math (level of 15 year olds) and economic growth (annual growth rate of GDP) as indicated in Figure 4; and that in addition to the quantity of education (number of schooling years), the quality of education (attained learning achievement) is also an important element in economic development (Hanushek and Wößmann, 2007).

Let us now turn to higher education. In terms of the higher education enrollment rate, Africa, with an average rate of only 6%, lags far behind other regions, let alone North America and Western Europe with a 70%. With the recent progress of the globalization of higher education, the cross-border movement of students has become easier. In Africa, it has been reported that approximately 5.9% of the students receiving higher education study abroad (Table1). Compared to other regions, the African continent has a relatively higher percentage of students who study abroad.

Table 1. Number of students who study abroad in other regions (2010)

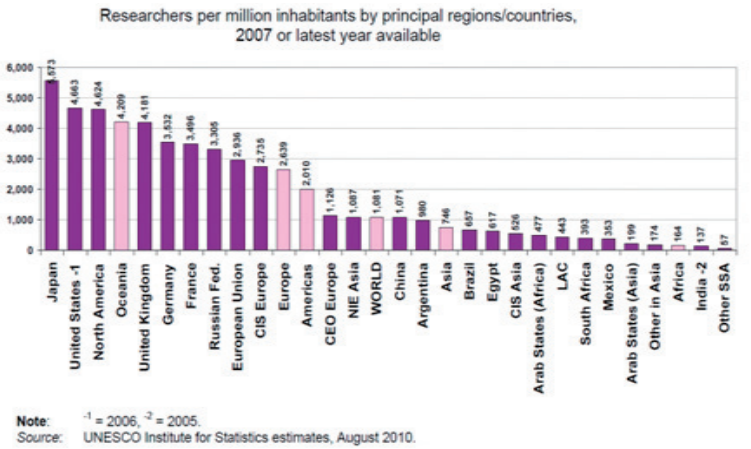
	2010			
	Inbound		Outbound	
Region	The number of students who are from foreign countries	The % of studenst within all university students	The number of students who study abroad	The % of of students who study abroad within all university students
Africa	59,801	1.81	193,871	5.87
Arab	61,983	0.95	177,372	2.72
Central and Eastern Europe	168,015	0.91	298,093	1.56
Central Asia	33,958	1.8	72,570	3.85
East Asia	379,919	0.98	700,999	1.8
Latin America, Caribe	36,536	0.25	145,639	1
North America, Western Europe	1,704,735	5.19	486,601	1.48
South Asia, West Asia	10,303	0.07	194,231	1.48
Total	2,455,250	1.86	2,455,250	1.86

Source: UNESCO UIS data (2011)

These low enrollment rates, as well as the relatively high mobility of students, can at least in part be accounted for by the insufficiency in higher educational institutions within the African continent, in terms of

both quality and quantity; they are not sufficient to meet the region's needs, thereby causing a brain drain of scarce and competent human resources as they seek opportunities of higher education in other regions and not coming back after their study. As a result, there is a severe shortage in the number of researchers in Africa, which in turn undermines the ability to produce new knowledge and promote innovation, particularly in science and technology (Figure 5).

Figure 5. Number of researchers per 1 million people (2007)



Source: UNESCO 2010

1.3 Diverse stages of educational development in African countries

So far, we have looked at the 54 countries in Africa collectively, but obviously, the stages of educational development vary across countries. To put this diversity in perspective, I would like to propose a categorization of the countries into four groups, by the levels of achievement on three scales: the net enrollment rate in primary education, the primary education completion rate, and the net enrollment rate in secondary education. However, please note that this categorization is intended to have a quick overview of African countries from the criteria of three leading indicators related to the access (the net enrollment in primary and secondary education) and the quality of the education system (primary completion rate). This may not be an ultimate way of classification of African countries at different educational development stages nor excludes the importance of secondary and higher education as well as that of the quality enhancement of teaching and learning in each Zone. Each country could

select its prioritized areas depending on the country context, and the education sector plan which discussed and agreed between the government and the local education group of development partners.

Figure 6. African countries as categorized by major outcome indicators

Source: Created by the author based on UNESCO 2007

Zone 1 consists of countries in which the primary education net enrollment rate is less than 70%. These are countries in which **quantitative expansion of primary education enrollment could be still a high priority**. This category includes many countries with a low GDP per capita.[6]

Zone 2 consists of countries in which the primary education net enrollment rate is 70% or higher and, at the same time, the primary education completion rate is less than 70%. For these countries, **improving the completion rate by improving the quality of education could be the main challenge**. This zone includes countries in southeast Africa, such as Malawi, Ethiopia, and Mozambique.

Policy measures to be adopted for countries in Zones 1 and 2 must take into account the vast difference in income levels among them. Also, the efficiency of the countries' educational administration and finance must

6. French-speaking countries, such as Niger, Burkina Faso and Chad, happen to fall into this category; some argue that this is in part due to the educational systems in these countries where instruction at schools is done only in French starting in the first grade; it is argued that this system seems to be creating a language barrier for children resulting in low enrollment and completion rates in these countries (K. Robert 2009).

be looked at; countries at similar income levels and all with a fairly reasonable level of public expenditure in education can sometimes display considerably different achievement results in the primary enrollment rate.

Zones 1 and 2 also include post-conflict countries such as the Democratic Republic of the Congo and South Sudan; policy measures in these countries must be designed and implemented with careful attention being paid to the history and other social, cultural and economic backgrounds.

Zone 3 includes countries with a primary education completion rate of 70% or higher, but in which the net enrollment rate in secondary education is less than 60%. This zone represents countries in which **improving the enrollment rate in secondary education could be made a priority**, and includes countries that are more socially and economically stable than those in Zones 1 and 2, such as Kenya, Tanzania, Uganda and Ghana.

Zone 4 includes countries in which most people have completed secondary education, and in which enrollment in **higher education has been achieved to a certain extent;** this zone includes the Maghreb countries in northern Africa, South Africa and Namibia. In these countries, industries are diversified and economic structures have been developed to some extent; the enrollment rates in primary and secondary education have been improved to some extent, and the focus has shifted to enhancing higher education.

In summary, countries in different categories have different development challenges, and even among the countries that are categorized as being at similar developmental levels, specific challenges differ from country to country. African governments and their development partners must be flexible in devising development/support measures taking into consideration the stages of educational development and their local context in each country.

1.4 Future global agenda for educational development in Africa

One of the main issues in debates on educational development toward the MDG target year of 2015 and beyond is how to achieve "Learning for All," a concept that calls for the assurance of the quality of learning not

limited to the primary education level, but at all levels from pre-primary up to post basic education. This would be a concept that goes beyond the much used interpretation of "Education for All" concept, which is mainly aimed at universal primary education. More specifically, there are three main arguments about "Learning for All" : (1) providing education for children in rural areas, female students, disabled children, and ethnic minorities without disparity, encouraging out-of-school children to attend school and enhancing the quality of learning; (2) making early child development (ECD) interventions as well as early grade learning at lower primary school grades (including ensuring the learning achievement of children in early-grade literacy and numeracy); and (3) improving education linked to the employment and the cultivation of human resources (human resources and researchers who are engaged in science and technology).

Africa needs to pursue these agendas while continuing its steady efforts to address the challenges that we saw earlier. Specifically, efforts must continue for the improvement in the completion rate in primary education and the resultant increase in the enrollment into secondary education, which, in itself, needs to be expanded with the construction of schools and enhancement both in the quantity and quality of teachers. For the mainstreaming of Learning for All in Africa, various development partners have been already actively working.

In their support toward achieving Learning for All, many development partners seem to place strong emphasis on policy making by mobilizing budget support, including lending, with policy recommendations. One example is an initiative by the World Bank. As part of its new strategy (Education Strategy 2020), the World Bank is starting an initiative including the construction of a policy benchmarking database called SABER (the Systems Approach for Better Education Results). The idea behind the initiative is the emphasis on the importance of systematic support in informed policy making that is supported by the analysis and understanding of what policies are needed to produce the expected policy outcomes (such as improvement in enrollment rate, completion rate, and learning achievement) using inputs (such as schools, training of teachers, etc.). Another example of a policy support instrument is what is called results-based financing that development partners like the World Bank and DfID of the UK are promoting. This funding mechanism requires the achievement of pre-determined policy goals by the recipient

developing countries as a prerequisite for the disbursement of funds.

2. JICA-supported Projects and their Comparative Advantage

Over the years, Japan has been undertaking extensive international cooperation in education. The following sections will introduce three of JICA's approaches, which are currently being actively pursued with encouraging outcomes, especially in the African context. The first two are specific models of educational development: the first one having to do with school-based management (Section 2.1) and the second one with the improvement of the quality of education through teacher training (Section 2.2). Following that, Section 2.3 will introduce JICA's attempt to link the experiences on the ground and policy making at the central level.

2.1 Improvement of school management for a better educational environment

At the center of measures for improving access to education has been the construction of more schools. However, recently, in addition to the physical aspect of access, the significance of educational management has been highlighted as a key area of intervention. Educational management includes, at the central level, formulating a policy framework, securing appropriate budget allocation, improving administrative and fiscal capacities (budget preparation and execution), and information systems development such as EMIS (Education Management Information Systems). At the local level, interventions include transfer of authority over personnel and budgetary issues to local educational administrative bodies as part of decentralization policies, improving administrative and fiscal capacities (budget preparation and execution), and improvement of school management.

Among these, one approach that is receiving increasing attention in recent years is school-based management (SBM); SBM basically aims at enhancing the efficiency and quality of school management by holding individual schools more accountable through facilitating parents/community members' participation in school management. As a vehicle to encourage participatory school management, the school management committee is set up, comprising of pupils' parents, community members as well as school principals, teachers and local education administrators. Originating in World Bank projects in Latin America – projects with encouraging outcomes – this SBM has come to be widely practiced in

many parts of the world, including Africa.[7]

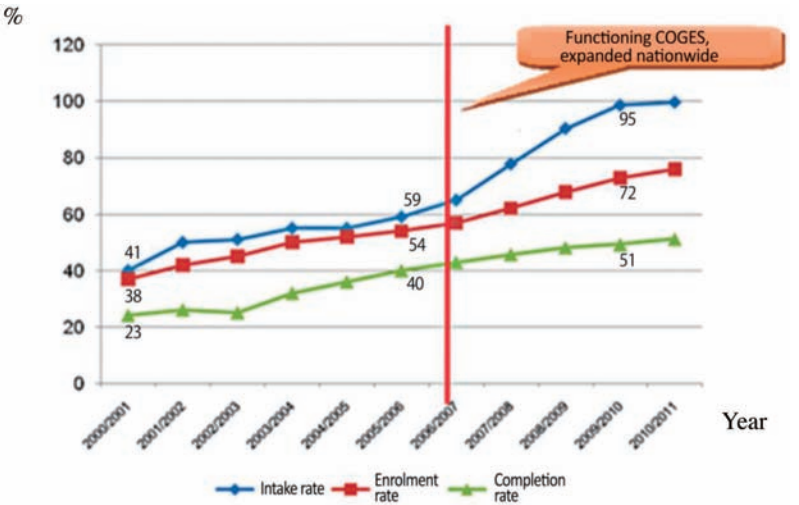
In fact, school management committees have been established in many countries in Africa. Oftentimes, however, such committees are not properly functioning for various reasons: sometimes the committee members could not fully understand their mandates and responsibilities due to the lack of the government's efforts to provide necessary guidance and support in the management of the committees; or the local educational administration did not get involved as they should; and at other times, school management committees did not have the capability to fulfill their expected functions owing to lack of proper training opportunities.

In order to help correct such situations, JICA has been trying to introduce the SBM in Africa with special emphasis on making the school management committees functional. The "School for All" projects implemented in four French-speaking countries in west Africa (Niger, Mali, Burkina Faso and Senegal) are based on the idea that if school management committees are organized and operated in such a way that they appropriately accommodate the pressing needs of pupils' parents and community members, they can serve to positively change the mindset of the people toward education and contribute to the improvement of the educational environment, including the resultant improvement in enrollment rates. (For a more detailed description of the projects, refer to Box 1).

In Niger, the number of school management committees (COGES in French acronym) based on the model generated by the support from JICA has been expanded, and is currently increasing across the nation. As the extensive development of functioning COGES, the primary education enrollment rate and completion rate have been improved (Figure 7).

7. So far, only a few attempts have been made to evaluate the impact of school-based management (SBM) in Africa (e.g., an Extra Teacher Program (a program in which schools are authorized to employ contract teachers directly) in Kenya) (Patrinos et al. 2011). More work needs to be done to collect evidence as to what kind of approach leads to what kind of impact in SBM, as SBM can take a variety of forms depending on the levels and width of mandates given to school management committees and / or school principals.

Figure 7. Acceleration of access to schools after the extensive establishment of functioning COGES



Source: Created by JICA based on educational statistics of the government of Niger

Box 1. "School for All" Project in Niger

In its support for the government of Niger, JICA started the "School for All" project in 2004 to promote effective SBM and to improve the educational environment. Prior to the Project, the government of Niger enacted legislation in 2003 that the school management committees be established at each school. However, the school management committees had not been functioning and not responding to potential demand from parent and community members. The project started with an analysis of the reasons behind the sub-optimal functions of the school management committees existing at that time. The project team spent several months conducting school surveys on 140 schools in target districts as well as awareness surveys of pupils' parents and community members as well as local administrators involved in education. They also tried to learn from the experiences from the preceding projects by other donors. These surveys revealed that the fundamental reason of the then dysfunctional school management committees was weak support and sense of participation from parents and community members; they were not led to foster a sense of ownership toward the school management committees, whose leading members as well as the scope of activities were decided in a top-down, opaque manner.

Thus, based on the discussions between the Nigerien and Japanese project members, it was agreed to incorporate into the project the following activities to make school management committees more functional:
(1) Introduction of the system of democratic ballot-type election of leaders to make the selection process more transparent and democratic; this was deemed necessary to make sure that competent leaders with full support from the community are elected;
(2) Implementation of awareness- and motivation-enhancing activities; this was done, for example, by organizing seminars on the necessity of participating in decision making through attending community assembly meetings; and by encouraging parents and community members to work out school action plans and making contributions to their implementation (either through monetary contributions or otherwise), stressing that all the project activities are just to supplement their own initiatives;
(3) Nigerien-led project management and implementation; this was stressed as critically important not only in view of the strengthening of Nigeriens' capacity, but also, and more importantly, to allow the Nigerien side to nurture the sense of true ownership of the whole activity as an endeavor they have to shoulder. Practically, the project made sure that major project activities, such as the organization of seminars and monitoring, were led and/or conducted by the Nigerien project members and administrators without depending on expatriate experts;.
(4) Transparent information sharing; documents and information such as school action plans prepared by different school management committees were made open for transparent information sharing and mutual learning.

This cooperation expanded in scale and advanced in status over time; it started, in 2004, with approximately 130 targeted primary schools in a pilot province and then expanded the coverage to 2,800 schools in two provinces in 2007. In that year, the model for the school management committees developed by this project was officially approved as a government policy and was subsequently expanded on a national scale using World Bank funds. As of August 2012, school management committees have been established in all of the approximately 14,000 primary schools in eight provinces throughout the country, and of these committees, nearly 90% have formulated school action plans and mobilized funds of 155,000 F CFA per committee (2 billion F CFA nationwide) (source: JICA-supported School for All project in Niger). They are contributing to the improvement of school environments by mobilizing funds and local labor, which are used for school facility improvement, and the purchase of textbooks and teaching materials.

Trials to improve the quality of education or the conducive conditions that are necessary for quality improvement have also taken place. Over 60% of the committees are also involved in the organization of extra and nighttime classes to allow pupils to have additional learning time, resulting in an increase of 200 hours of learning time on average. This achievement can be significant in view of the fact in Niger where, while regulations demand 960 hours of instruction per year, many schools had ended up satisfying only 50 to 60% of that requirement.

2.2 Strengthening teacher education for improving quality of students' learning

The second approach that JICA has been promoting in Africa is the improvement of the quality of education, attempted through enhancement of in-service teacher training (INSET).

As has been repeatedly pointed out throughout this chapter, improving the quality of education in Africa is as important as its quantitative expansion, as the poor quality of education (or learning by children) is one of the major factors causing high dropout and repetition rates in primary and secondary education in Africa.

The quality of an education system can be affected by many factors: the curriculum (objectives, content, sequence, etc.), quality and availability of textbooks and teaching materials, and the amount of learning time. And equally, or perhaps even more important, is the quality of teachers, which is considered as having a major impact on the quality of teaching and students' learning outcome. The quality of teachers depends on a number of factors: first, for securing the basic quality of teachers, there must be a clear definition and standardization of what is required of teachers in the first place, according to which qualified candidates must be recruited and trained before they start working. Second, in school and classrooms, teachers must be guided appropriately by the leadership from the school's principals, monitored for their performance and, when necessary, assisted and mentored. They must be appropriately motivated and incentivized in terms of salaries and benefits, and also must be given opportunities to improve their teaching skills.

JICA's approach has to do with the last approach listed above, i.e., the support for teachers in maintaining and upgrading their knowledge and teaching skills through the development of in-service teacher training

systems. JICA's flagship project in improving the teachers' quality is the SMASE project, which is short for the "Strengthening of Mathematics and Science Education." The project is premised on two conceptual thrusts.

The first is the idea that science and math education in Africa must be upgraded by introducing a student-centered approach to the lessons in the classrooms. In science and math classrooms in Africa, typically, teachers rarely undertake experiments or use teaching materials; instead, they write on blackboards and talk "at" their students, while the students simply listen and take notes. This way of conducting classes, often called "Chalk & Talk," is common. Taught this way, students tend to develop a passive attitude in class without any willingness to engage with other students or think on their own. This passive learning attitude of students has often led to low achievements in knowledge acquisition in or understanding of the subjects taught. Based on this observation JICA has recognized the need to transform the teaching style of teachers in such a way that students are encouraged to participate in group activities, create hypotheses, do experiments, and to think on their own; here the teacher's role is to support the students to learn.

The second premise of the project is the idea that INSET could be an effective opportunity through which teachers can be motivated to brush up their knowledge and skills. One advantage of INSET programs is that training participants – teachers – can apply what they learn in training to their classes, easily, and immediately (For more details, see Box 2). The need for the strengthening of math and science education was judged as of particular importance because they are generally believed to be difficult subjects to learn, and in fact students perform poorly in these subjects, as demonstrated by the low pass rate in national exams.

Finally, collaboration with other development partners are taking place under the education sector plans in each country. For instance, in Ethiopia, JICA-supported in-service teacher training for science and mathematics teachers project is in well-coordinated partnership with the GEQIP program, which is a comprehensive quality improvement program of the Ethiopian government using pool-fund financed by the World Bank and other development partners. While JICA provides technical expertise for the INSET implementation and monitoring system as well as the training content in pilot areas, the GEQIP program

covers other non-pilot areas supporting the expenses of the INSET implementation and its monitoring.

Box 2. Approaches toward the improvement of the quality of education in science and math education (SMASE)[8]

JICA's development model for the improvement of the quality of science and math education (SMASE) focuses on the development of INSET programs and systems.
The exercise is premised on three key components. The first is the education principle commonly called "ASEI-PDSI."[9] Developed originally in Kenya, ASEI-PDSI is an educational paradigm that has guided the project's activities to transform the traditional teacher-centered teaching method into a more student-centered, activity-oriented teaching/learning method. The second component was in-service teacher training known as the cascade method; this is a method whereby knowledge and teaching skills can be conveyed, through multiple-layer training programs, from the master trainers at the center to individual teachers on the ground in a relatively short period of time. And thirdly, the project placed strong emphasis on ownership by the recipient governments; the project made sure that its activities were implemented within the existing institutional framework and budget of the government, without excessively relying on funding from external sources.

Guided by these concepts and management principle, the activities that originated in Kenya have been expanded to other African countries, while flexibly adapting its project contents to the circumstances in each country (as of November 2012, SMASE projects are implemented in 13 countries).

Whenever a SMASE project gets started in a country, the project activities would start with a thorough check and analysis of the actual situation, needs of teachers and issues in schools through visits to schools/classrooms and baseline surveys on children's learning achievements. Based on these analyses, the project team would then proceed to plan and implement teachers' training programs with a number of trials and errors. The ultimate goal is to create sustainable in-service teacher-training programs that would be planned, operated, and monitored by local professionals.

8. For details of the project, see, Ogwel et al (2008), and Ishihara (2012).

9. ASEI-PDSI is explained as a guiding principle of the SMASE projects that "involves providing meaningful teaching Activities focused on Student learning mainly Experimental/practical work and Improvising resources when necessary. The PDSI approach embraces orderly steps of executing learning activity by first Planning for the activity, then Doing it while Seeing, observing with intent to evaluate and then finally Improvising on the process." (Ogwel et al. 2008)

Over the years, the SMASE projects have increased the variety of the kinds of training programs to meet various and/or changing needs of different schools and teachers and countries. One was a system of post-training follow-up school visits, introduced not only to verify the usefulness of the contents of the training programs but also to help the ex-training participants to best apply their newly learned knowledge and skills in their class. Also introduced were school-based teacher training programs (lesson study) and regional training programs to complement the main cascade training. JICA has supported the establishment of cascade teacher training programs in Kenya, Malawi, Nigeria, and many other countries. Content-wise, the projects have been supporting the introduction of various materials such as reference books for teachers and workbooks for students in addition to ASEI-PSDI training programs.

Thus, SMASE projects have been instrumental in supporting African governments in developing a wide range of alternatives for the upgrading of science and math teachers. Overall, these activities can be said to have contributed, at the macro level, to the establishment of a country's system of continuous professional development and, at the micro level, to the development of capabilities of a countless number of teachers who have been enabled to guide their pupils with their newly acquired teaching methods and skills.

Looking back at what JICA has been doing, it appears that one of JICA's comparative advantages in international cooperation in education may reside in its ample body of experiences and practical knowhow that it can offer for use and consideration by governments and the international community for policy formulation.[10] The importance of science and math education is widely shared among the governments and their partners.[11] Capitalizing on its experience in this field, JICA is prepared to further strengthen its cooperation for the development of science and math education in Africa. It is prepared to strengthen its contribution both in practice on the ground and for national-level policy formulation, fully utilizing the already established network for

10. In a report on mathematics and science education in the East African Community (EAC) countries (World Bank, 2011), JICA is referred to as an agency that enhances teachers' pedagogical capabilities.

11. The World Bank and African Development Bank regard mathematics and science education as being essential to sustainable economic growth that utilizes science and technology.

mathematics and science education in Africa (SMASE-Africa[12]), now covering 34 countries.

2.3 JICA's approaches that link policy and practice

Different actors in international cooperation have different comparative advantages and business domains. Some primarily work on the ground implementing specific projects and programs, and others concentrate on advocacy and policy making. While not many seem to be involved in both, JICA is one of such development partners trying to cover both domains of support for policy making and practice on the ground. Over the years, JICA has developed its cooperation strategy comprising three components: (1) model and content building, (2) capacity development of stakeholders, and, (3) support for informed policy making.

The first component, model and content building, refers to the activities through which models of educational development and educational contents are developed, tested on the ground and proven for their effectiveness. The typical examples of the first component are the functional school management committee, the in-service teacher training, and the teaching methods for student-centered lessons; these have been proven to yield maximum benefits on the ground in different local contexts. The second component, capacity development of stakeholders, refers to the activities geared to the capacity development of educational administrative officers, national and local trainers, principals, teachers, and school management committees, and many others, who are both developers as well as users of the above-mentioned models and contents. And the third component, support for informed policy making, refers to the activities leading to policy making and systems development on a larger scale needed to scale up and institutionalize the good practices on the ground.

Obviously, education policies are introduced, for example, to determine a certain course of action to achieve a certain pre-determined outcome, such as improving the quality of learning and the primary education completion rate. Oftentimes in Africa, however, policies such as sector development plans tend to be disconnected with the reality on the ground, in terms of the goals, objectives, and available resources without

12. SMASE-Africa is working as a network of 34 countries in Africa to share knowledge and experience and conduct south-south cooperation for science and mathematics education among the member countries.

taking into account stakeholders' capacity. As a result, many policies end up facing problematic outcomes.

To narrow this gap between policy and practice, it is imperative to understand the reality on the ground and rigorously analyze the causes and contexts of the issues. Then it is critical to identify the potential gaps between what the policymakers' understand/believe/envision and what is actually happening or will likely happen on the ground after the adoption of the policy. For this gap-filling, careful surveys and research must be conducted, and to supplement them, additional information obtained through the implementation of actual projects could be enormously useful. As a development partner with hands-on experience of project implementation, JICA could be in the position to transform an ample body of tacit and non-tacit knowledge of the reality on the ground to best practices and knowledge which could help the policymakers to make informed decisions. This is the notion which JICA should pay more serious attention to in terms of the global policy dialogues among international community as well as local education groups in each country.

There are already several cases where national level policies have been formulated, supported or substantiated by knowledge accumulated on the ground: in Niger and Mali, for example, the JICA-supported model of school management committees was tested on the ground and came to be proven effective and applicable in the context of the two countries; the models were subsequently adopted as a national policy and have been expanded nationwide.

Concurrently, efforts are underway to distill these experiences further into the formulation of policy frameworks. As part of such effort, JICA is collaborating with the World Bank's SABER furnishing the latter with the information on the ground related to SBM, indicating the gap between policies and practices, and presenting evidence on a workable model at the school level. These exercises could lead to the development of various policy tools, such as a set of indicators with which to measure the real impacts or interim outcomes of various actions, including systems reform by the government; if developed, these indicators could be used as disbursement indicators in result-based financing.

3.Towards TICAD V and beyond

The preparatory process for the TICAD V is in progress. While the challenges are enormous and varied across countries and regions, the conference must come up with clear, prioritized policy messages focused on a set of agendas according to which African governments and their partners can make concerted efforts toward their achievement. In the author's view, the outcome document of the conference, Yokohama Action Plan, must highlight the following as the two pillars of the policy message: (1) scaling up of quality basic education, and (2) strengthening education that contributes to sustainable growth.

The first pillar, **scaling up of quality basic education**, demands full enrollment in basic education as well as the improvement in the completion rate in basic education, particularly primary education; this goal is to be achieved through the improvement of the quality of basic education, the increase in secondary education enrollment with expanded school facilities, and the provision of quality secondary education so that students can acquire advanced knowledge and practical skills for higher education or employment. The policy message should also pay due consideration to equity in terms of urban-rural, gender, and income disparities.

The second pillar, **strengthening education that contributes to sustainable growth**, demands that quality secondary education, and particularly that in mathematics and science, be expanded on the top of solid basic education. Added to this, higher education must also be expanded to foster, particularly, human resources in science and engineering. Technical and vocational education must also be strengthened to provide opportunities to learn skills leading to higher employability of the working-age population.

JICA is prepared to contribute to the concerted efforts of the African governments and the international community, and take measures as shown below, which are combinations of the business models shown above and other models and/or modes of cooperation that JICA has at its disposal.

For the first pillar: **scaling up of quality basic education**

◆ **Enhancing support for "School for All" Project**

JICA will continue to expand the model developed in the "School for All" project. Here, with the project model, functional school management committees accompanied by strong parent/community participation, transparent election of its representatives, and mutual learning among school management committees , and continuous monitoring by local education administrators, JICA could proceed its expansion in the following manner:, (1) scaling up from the pilot activities to a nationwide operation, and (2) further improving the quality of learning (i.e., securing extra learning time, introducing supplementary teaching materials to ensure basic numeracy) in countries where the project is already implemented. And, of course, the expansion of the model can entail (3) starting projects in new partner countries. JICA is of the view that the models developed in the School for All projects have been proven effective in bringing benefits for those who are in rural and disadvantaged areas, thus can contribute to the policy message to be agreed on in TICAD V.

◆ **Construction of school facilities and teacher training institutions**

JICA will continue its support of the construction of schools, while fully taking into account the demand/supply of qualified teachers, and the need for reducing urban-rural, income, and gender disparities. For example, providing girls' toilets in schools is very important to reduce gender disparity in education. In addition, JICA will continue its support for constructing teacher training institutions to help produce more qualified teachers. JICA is also prepared to contribute more to the policy making processes through various dialogue channels to offer recommendations on the allocation plan of qualified teachers and continuous capacity development of teachers.

For the second pillar: **strengthening education that contributes to sustainable growth**

◆ **Strengthening teacher training (particularly in science and mathematics)**

JICA will further reinforce its support for teacher training based on the achievements thus far. In so doing, JICA will continue targeting, in particular, mathematics and science subjects, as these are

important subjects for developing human resources for realizing sustainable growth, and yet are difficult for students to master. Toward the same goal, JICA will, in particular, make further use of its already-established network for strengthening mathematics and science education in Africa, namely SMASE-Africa, currently covering 34 countries. Using its various models and menus, JICA will support the capacity building of teachers in its partner countries. A big advantage of SMASE-Africa is that it is a network that enables South-South knowledge exchange and co-creation among participating countries, with the help of which JICA could partner with those partner countries that otherwise are not within easy reach.

◆ TICAD human development framework

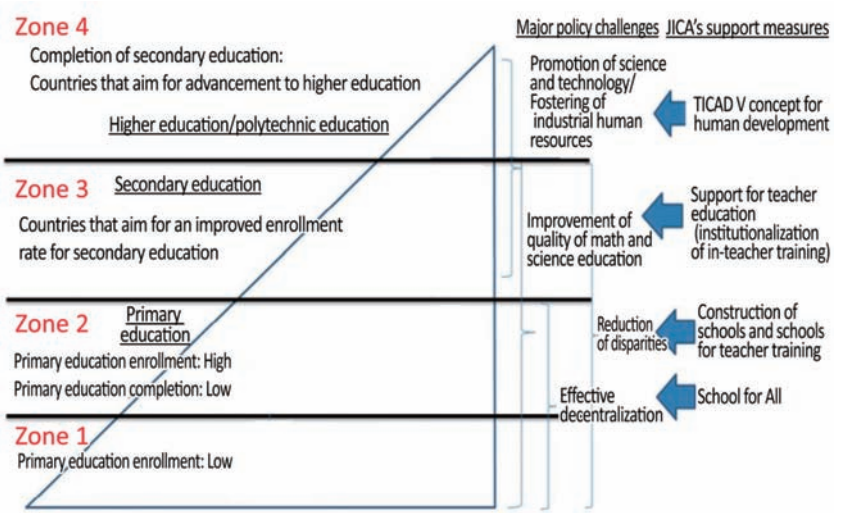
JICA will support sustainable growth in Africa by reinforcing cooperation in science and technology. Typical examples of support for the promotion of higher education include those for the Jomo Kenyatta University of Agriculture and Technology (JKUAT) and the Egypt-Japan University of Science and Technology (E-JUST). Backed by a consortium of Japanese universities, the projects would support the upgrading of higher education in these institutions to benefit not only the students of the two countries but also many aspiring students in the whole of the African continent. In addition, JICA will continue to maintain the provision of scholarships.

For enhancing vocational training, JICA will continue its support for related institutions, such as the ones that JICA has supported in Senegal and Uganda, which are establishing regional centers of excellence (COEs). Such COEs would play active roles in promoting intra-region study programs by receiving students from other African countries.

Differentiated approaches are needed for countries facing different challenges. As illustrated in Figure 6 in Section 1.3, African countries could be grouped into four groups. Subsequently, earlier in this section, the two important policy messages that TICAD V is likely to come up with, has been identified:(1) quality of basic, especially primary, education, and (2) the need to intensify human resources development for sustainable growth. Finally, four major approaches/interventions for educational development in Africa that JICA could intensify in the coming years have been highlighted. Needless to say,

all these approaches and interventions should be put into practice in harmony with the sector development framework of the country and in consistent with the budgetary (government) and financing (overall) framework. For instance, producing more teachers without an effective deployment plan or a resource back-up will not improve the situations. Figure 8 shows how JICA's approaches/interventions could correspond to major policy challenges in each Zone. This does not mean to limit area and types of JICA's support for each Zone. Specific areas and types of support could be discussed and agreed upon through policy dialogues at each country.

Figure 8. JICA's support corresponding to stages in education development in Africa



Source: Created by author

For partner countries belonging to zones 1 and 2, the first two of JICA's approaches are to be vigorously pursued. For these countries, the major challenges are to improve the primary education enrollment rate and improve the primary education completion rate. Thus, the **construction of primary schools and teacher training institutions** will contribute to the improvement of such indicators. This approach will be pursued with particular consideration for various social disparities. **The "School for All" Project** will also be intensified vis-à-vis these countries. The activities under this approach can improve, in addition to the improvement of enrollment in primary education, both the completion

rate as well as the quality of primary education. Countries in zones 1 and 2 also have to address the challenges in the secondary education level, to which **strengthening teacher training** must be stressed, and in particular, in science and math that can serve as a foundation for the students' logical thinking abilities and general learning capabilities.

For countries in Zone 3, improving the enrollment rate in secondary education is a challenge, and for these countries, JICA could pursue, among others, support through the **construction of school facilities and teacher training institutions**, especially for secondary schools and teacher training institutions; more secondary schools are needed to accommodate an increasing number of pupils who are to complete primary education; and teacher training institutions for supplying qualified teachers to meet increasing demands. For countries in Zone 3, strengthening **teacher training (particularly in science and mathematics)** is important, since knowledge on science and math is a basic need for human resources for further professional training, employment and eventually for the country's sustained growth. And finally, countries in this stage of development need to nurture human resources competent in science and technology, who will lead the country's industrialization; hence, support for higher education and technical/vocational education will be provided through **the TICAD V human development framework**.

Zone 4 consists of countries that are already beyond the issues of enrollment or completion rates up to secondary education, with a significant portion of students advancing to higher or vocational education. An issue for these countries is how to develop highly qualified human resources, particularly in science and technology, by developing a system of quality higher education. For these countries, support through **the TICAD V human development framework** would be the main vehicle of cooperation.

In sum, JICA could furthermore commit to work in partnership under the education sector program in each country, and contribute to global policy dialogues as well as those in local education group with proactive and concrete actions and solutions, which could link between policy and practice.

Concluding Remarks

This chapter started with an overview of the current challenges in educational development in Africa (Section 1), and then looked at some of JICA's established models of development in education (Section 2). Combining these, the paper argued for a possible policy direction that JICA could employ in line with the policy message that would be agreed on at the TICAD V meeting (Section 3). As I see it, JICA has been active in program implementation on the ground, and also, recently, increasingly keen to contribute to policy debate at the country and international levels. Capitalizing on its comparative advantage that can link policy and practice, JICA has a lot to contribute to educational development in Africa. The challenges ahead of us are still enormous, and JICA should continue providing support for the realization of sustainable growth in Africa in partnership with a broad range of actors both from Japan and abroad.

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