



Fisheries in Nigeria

Report to the Ministry of Agriculture, Nigerian Government

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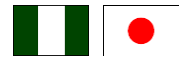
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1. Facts of Fishery and Aquaculture in Nigeria

1.1 Global Fish Production

Overall total production of fish from capture and aquaculture fisheries in Nigeria is about 800,000 metric tons (hereafter MTs) in 2010 from the data of FAO Fishery Statistic as shown in Fig. 1.1-1¹.



Fig. 1.1-1 Total fish production in 1950 to 2010.

1.2 Capture and Aquaculture Production

In 2010, the capture fisheries production is 600,000 MTs and aquaculture is 200,000 MTs as shown in Figs 1.2-1¹ and 1.2-2¹, respectively. Overall production of fish from capture fisheries increased from 1995 to 2006 and slightly decreased in 2007 due to problems of piracy and militant groups in the marine waters. Aquaculture production increased geometrically from the year 2000 due to the increased awareness in fish farming especially in the area of catfish tilapia production using flow through and water re-circulatory culture systems.

However, basic data may not be available to judge if the resources are exploited sustainable and scientifically. At least the coastal prawn fisheries are under the heavy pressure of fishing activities. Also it is not clear whether fisheries legislation and regulations sufficiently address the specific aims of sustainable use of fisheries resources.

Urgent attention to aquaculture policy could facilitate making aquaculture production more sanitary, healthy, and sustainable and would be in harmony with Nigeria's demands for ecosystem and environment management.

¹ FAO Country Profile, Fishery Production Statistics, Nigeria.

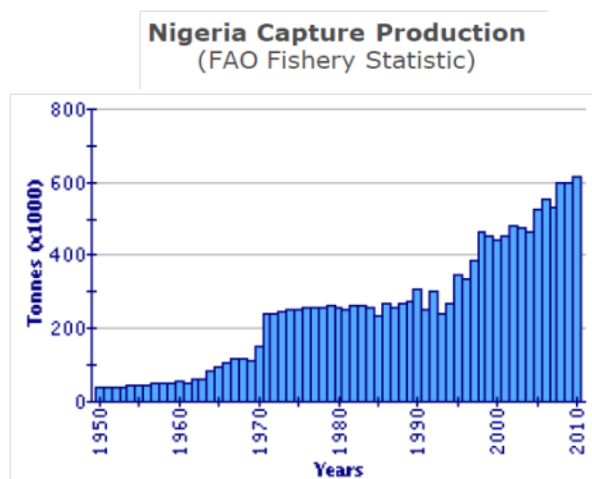


Fig. 1.2-1 Capture fish production.

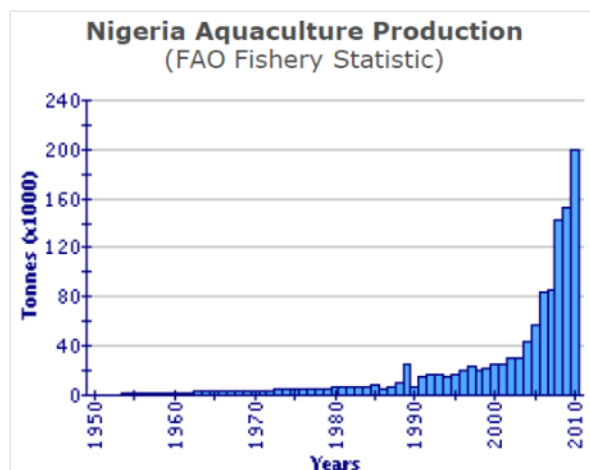


Fig. 1.2-2 Aquaculture fish production.

1.3 Fish Importation

Nigeria's fish supplies come from four major sources (in order of importance, namely):

- Importation,
- Inland, estuaries, and coastal artisanal fishery,
- Industrial trawl fishery, and
- Aquaculture.

Nigeria's total fish supply was 1,160,000 MTs in 2004. The major sources are imports (56%); coastal, brackish-water and inland fishery (37.6%); industrial trawl fishery (2.6%); and aquaculture (3.8%).

Total domestic fish production in 2007 stands at an estimated 600,000 MTs while importation is estimated at over 700,000 MTs as shown in Fig. 1.3-1². Nigeria has to import about 700,000 MTs of fish valued at about US \$500 million annually.

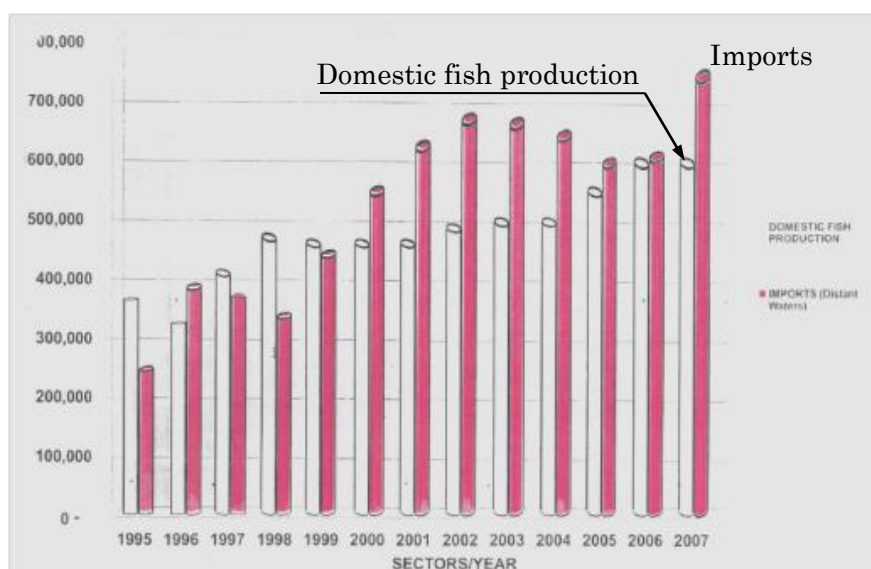


Fig. 1.3-1 Nigeria fish supply by sectors (1995 - 2007).

² Fishery Statistics of Nigeria, 4th edition, 1995-2007, Ministry of Agriculture, Nigeria Gov..



Nigerians are high fish consumers with a total current consumption of about 1.2 million t/yr, out of which about 60 % is imported. This makes Nigeria the highest importer of fish and fishery products in Africa. The composition of the imports is largely mackerels, sardinella, cod, haddock, hakes, herrings and croakers caught off the coasts of the Eastern Central Atlantic countries of Senegal and Mauritania and from the North Sea. The exporting countries are Norway, Spain, the Netherlands, Russia, Denmark, the Irish Republic and, to some extent, USA.

1.4 Fish Supply-demand Projection

Nigeria's demand for fish in 2010 was projected at 1.89 million MTs in Table 1.4-1³. However, actual production was 800,000 MTs as shown in Fig. 1.1-1. The fish supply gap deficit was over 1 million MTs. Considering that the population growth rate of Nigeria is 3 %, the fish supply gap deficit is expected to continuously increase. Current global average annual consumption is about 16.0 kg/yr although it is 13.5 kg/yr in Table 1.4-1. If the Nigeria targets the amount, the total demand will be 20% more than the forecasted demand. The gap will be some 2 million MTs.

Table 1.4-1 Fish supply-demand projection (2000-2015).

Year	Projected population (million)	Per capita fish consumption (kg)	Projected fish demand (t)	Projected domestic fish production (t)	Fish supply gap deficit (t)
2000	114.4	13.5	1,430,000	467,098	962,902
2001	117.6	13.5	1,470,000	480,164	989,836
2002	121.0	13.5	1,512,500	507,928	1,004,572
2003	124.4	13.5	1,555,000	522,627	1,032,373
2004	128.0	13.5	1,600,000	536,918	1,063,082
2005	131.5	13.5	1,643,750	552,433	1,091,317
2006	135.3	13.5	1,691,250	567,949	1,123,301
2007	139.1	13.5	1,738,750	583,872	1,154,878
2008	143.0	13.5	1,787,500	600,613	1,186,887
2009	147.1	13.5	1,838,750	617,353	1,221,397
2010	151.2	13.5	1,890,000	634,560	1,255,440
2011	155.5	13.5	1,943,750	652,606	1,292,143
2012	160.0	13.5	2,000,000	671,492	1,328,508
2013	164.4	13.5	2,055,000	689,958	1,365,042
2014	169.1	13.5	2,113,750	709,683	1,404,067
2015	174.0	13.5	2,175,000	730,248	1,444,752

1.5 Market Issues

Traders and retailers do not use proper storage facilities, do not change the water sufficiently, and often leave the fish in the sun for long periods - all leading to product loss and lower quality, which translate to lower revenues. Traders indicate that limited finance constrains the ability to develop and invest in business operation or expansion. The

³ Aquaculture Transformation Action Plan, Federal Ministry of Agriculture & Rural Development, September 9, 2011.

fundamental infrastructure is far from being adequate and high-quality. The urban markets, where farmed fish is primarily sold, will be continued to grow annually through population growth and high demand of fish protein.

1.6 Infrastructure

Most of the infrastructure of fisheries production, landing, and distribution including food chains, refrigeration and cold storages merit close scrutiny.

2. Nigeria's Expectations of Japan concerning Fisheries in Nigeria; based on meeting with Ms. Areola Foluke, acting director of Ministry of Agriculture on August 22, 2013

- *rehabilitation of fishing terminals,*
- *management of the fishery terminals,*
- *development of marine culture,*
- *development of fish feed mills,*
- *development of integrate fish farm estate,*
- *upgrade of fisheries laboratories toward international standardization,*
- *development of artisanal fisheries landing sites, monitoring control and surveillance controls,*
- *development of bloodstock banks/ gene banks for commercially important fish species,*
- *tuna exploitation and development of canning industry,*
- *shrimp aquaculture development, and*
- *fish capacity building.*



Ms. Areola Foluke, the acting director of Ministry of Agriculture and Naoki Nakazawa, August 22, 2013, Ministry of Agriculture, Abuja, Nigeria.

All of those areas are fundamentally important for the immediate and long term cooperation projects that should be assisted by Government of Japan. However, prioritization of the areas of cooperation is critical for project planning and implementation in view of the following;

- i. Short term vs. long term views for the development and improvement,
- ii. Software vs. hardware projects,
- iii. Institutional projects and hardware setting up,
- iv. Expert and high level training vs. working and private sector cooperation, and
- v. Basic infrastructure vs. high technology projects.



3. Recommendations

The key policy implication on the most pressing issues are:

- i. The sustainable management of both fisheries and aquacultures through science based formulation of national policies. In order to do so capacity building of human resources is most pressing. These should be the interdependency of hardware and software consolidation.
- ii. To establish the fisheries high schools or training center to provide practical skills.
- iii. To establish the college/graduate schools to provide the professional levels of education and skill training for advanced management, science, administration officers course. It should provide post-graduate degree.
- iv. Building and equipment for the institutions/schools, and enforcement vessels and aircraft should be provided by ODA by Donor Nations including Japan.
- v. Assistance in collaboration with the international organizations and the advanced governments to formulate the national policy to sustainability and climate change.
- vi. To introduce the safe, healthy and accountable products for the domestic consumption and international trade. The introduction of guidelines for the sanitary and photo-sanitary regulations for fitting the consumer standards in the Market nations is the key to sustainable international trade.
- vii. The infrastructure is of the vital importance for the orderly developments for the industries. Such infrastructure may include among others the landing facility, storages, the paved transportation to carry the products for exports, water supply, sledges and electricity and the equipment and material for construction of the processing plants, freezers, refrigerator and packing mechanics.
- viii. A fund should be available at low interest rate and longer term loan. To facilitate the creating and establishing such loans, funds should be provided by either governments or international development banks.
- ix. Cold chain distribution system
The transport, holding, and distribution of frozen fish in Nigeria is very primitive, usually not refrigerated, and temperature control even in cold storages and at sales points is quite inadequate if available at all. This leads to low quality and considerable losses. This is why imported frozen fish must be packed very well in strong cartons, usually with two straps on each box. Distribution network within the country has to be examined and appropriate systems fitting to Nigeria should be structured.
- x. Water quality monitoring/management
A major problem facing Nigeria and its fisheries potential, both internal aquaculture, in particular, but perhaps also offshore, is very severe, geographically quite extensive pollution from oil production, oil spills, and oil transport. The American

Gulf of Mexico BP disaster and the devastating effects of use of oil dispersants both on the human population and on fisheries resources is a case in point. Similarly, the negative effects of this pollution on health of the human population in Nigeria must be staggering and offers ample opportunity for international assistance and attention. Again this applies directly to aquaculture and to other fisheries.

4. Structure of JICA Project Set-up

4.1 ODA and JICA

Official Development Assistance (ODA) of Japan is broadly divided into bilateral aid, in which assistance is given directly to developing countries, and multilateral aid, which is provided through international organizations. The Japan International Cooperation Agency (JICA) provides bilateral aid in the form of Technical Cooperation, Japanese ODA Loans and Grant Aid as shown in Fig. 4.1-1⁴.

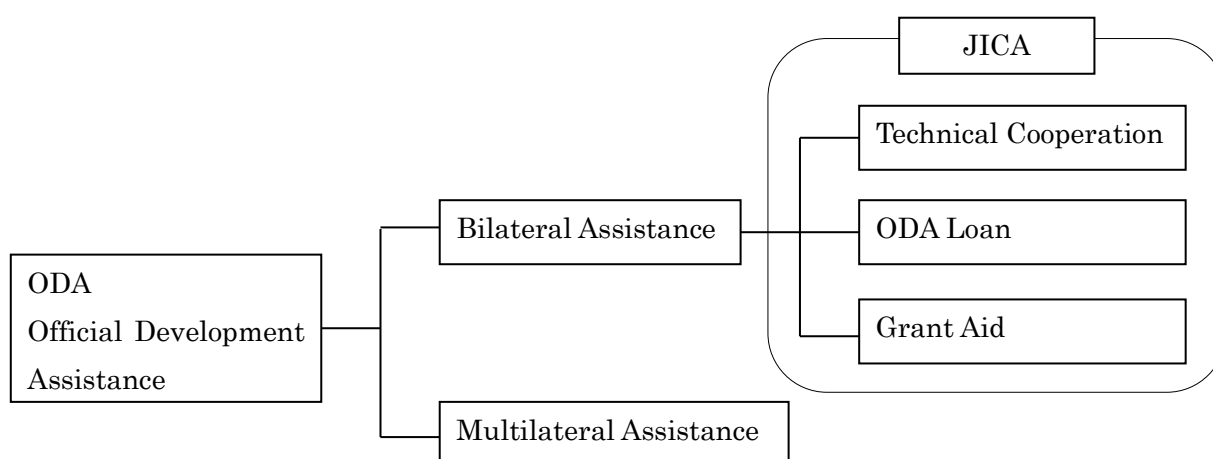


Fig. 4.1-1 ODA and JICA's Role.

4.2 Structure of JICA Project Set-up

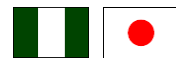
The JICA project set-up structure is described below and summarized in Fig.4.2-1.

i) Project Finding

The first steps will be to discuss areas of urgency and of vital importance for the Government and people of Nigeria concerning fisheries with due consideration to the overall situation of the fisheries of Nigeria.

Therefore, initially the specific project and research activity must be identified by the relevant authority of Nigeria and fisheries experts in Japan. Based on this the project drafts will be formulated and recommendations will be made the projects to ultimately be adopted and implemented by the Government of Japan and JICA.

⁴ JICA official homepage



ii) Request/Judgment

The Government of Nigeria must submit the project proposal to the Embassy of Japan in Nigeria where they will consider whether they proceed and submit it to the Japan Government in Tokyo. The Government of Japan will examine whether it is appropriate as a project of cooperation extended by the Government in consideration of the context substance, feasibility and overall potential benefit to the Nigeria.

iii) Prior Evaluation

Particular five points are taken into account;

- appropriateness,
- effectiveness,
- efficiency,
- impact, and
- future independence stemming from the project.

However, some political and bilateral cooperation is considered as one of the key factors for adoption in the areas of fisheries. That is the extent of cooperation between two nations in the areas of fisheries particularly international fora.

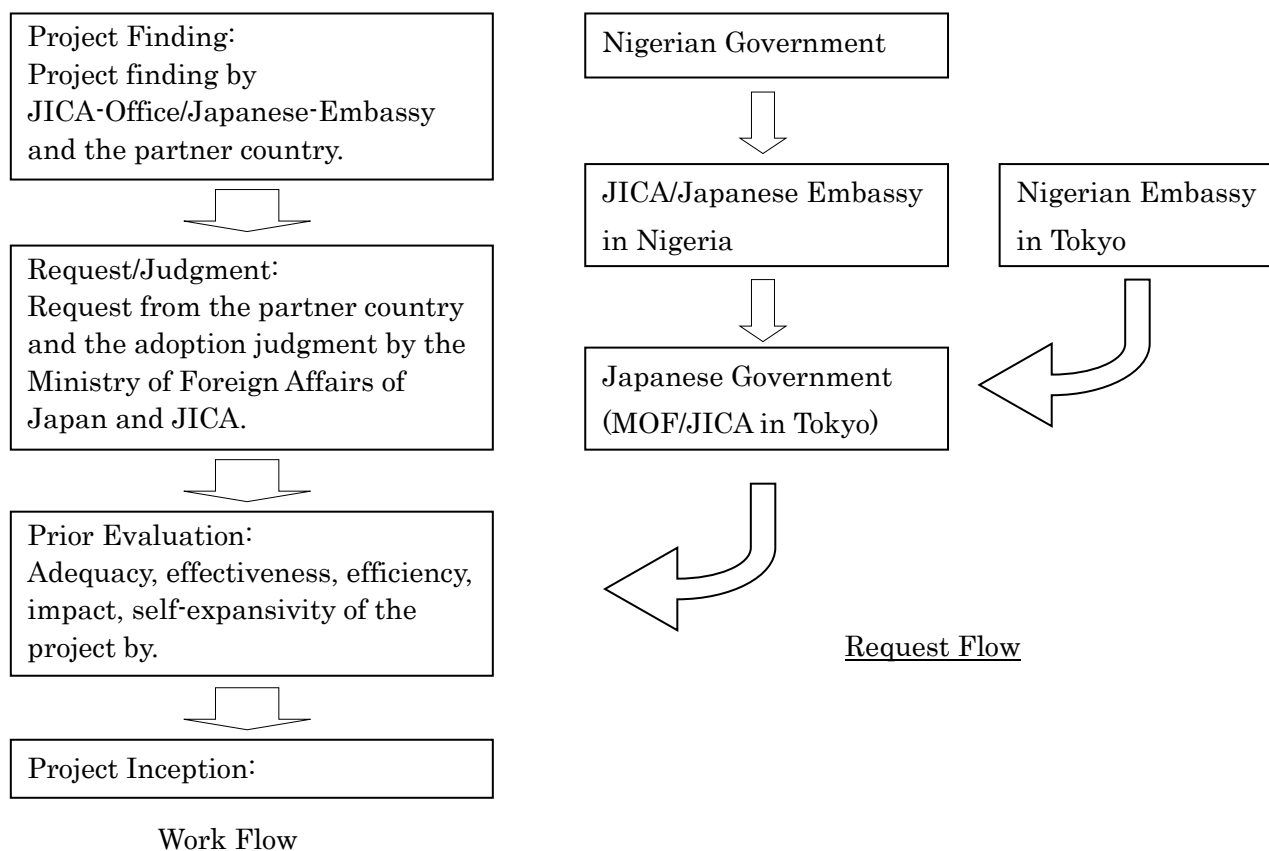


Fig.4.2-1 Structure of JICA project set-up.



4.3 JICA's Activities in Nigeria

A major power and the third ranking in GDP, Nigeria is home to the largest population on the African continent (160 million people) and holds plenty of natural resources: oil and natural gas. Nigeria is also the largest country of exporting petroleum in Africa. There are large income disparities within the country, and the lack of development of social infrastructure prevents of improving living conditions and promoting business investment. Effectively combining the schemes of technical cooperation, ODA loans and grant aid, JICA will support Nigeria on: 1) realizing human security and achieving the MDGs, and 2) providing basic infrastructure for sustainable economic growth that is balanced.

from the JICA website, October 25, 2013⁴

Table 4.3-1 JICA's Activities in Nigeria

Area/Year	Projects
Abuja Nasarawa Niger 2011.9-2015.9	(P)Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States
Abuja, Kano, Kaduna, Niger, Kwara, Anambra, Cross River 2010.11-2014.10	(P)Project on Activation of Women Development Centres(WDCs) to Improve Women's Livelihood Phase 2
Lagos 2010.2-2014.1	(P)Project for Improving Maternal, New Born and Child Health in Lagos State
Kaduna 2010.3-2013.11	(P)Project for enhancing the function of the National Water Resources Institute
Nation wide 2011.7-2013.10	(D)Project for Review and Update of Nigeria National Water Resources Master Plan
Abja, States of Kaduna, Niger and Plateau 2009.8-2013.5	(P)Strengthening of Mathematics and Science Education in Nijeria Project Phase II
Nation wide 2012.3/2013.3	(G)The Project for Infectious Diseases Prevention for Children
Katsina 2012.9	(G)The Project for Introduction of Clean Energy by Solar Electricity Generation System
Bauchi 2012.2	(G)The Project for Improvement of Rural Water Supply
Niger 2011.5	(G)The Project for Emergency Repair and Overhaul Works for the Jebba Hydro Power Station
Bauchi,Katsina 2010.3	(G)The Project for Water Supply in Bauchi and Katsina States

(P)Technical Cooperation, (D)Development Study /Technical Cooperation for Development Planning, (L)Loan, (G)Grant Aid.



Annex

Country Assistance Policy for the Federal Republic of Nigeria⁴

From the Ministry of Foreign Affairs Japan Website

December, 2012

1. Relevance of Assistance

Nigeria's population is approximately 158 million, which is the largest in Africa (1 out of approximately 6.5 Africans are Nigerian), and it is the second largest economy in the Sub-Saharan region (nominal GDP is approximately 240 billion US dollars. This is approximately 6.8 times larger than that of Kenya (the third largest economy in the Sub-Saharan region) and about 10 times larger than that of Côte d'Ivoire (the second largest economy in West Africa)); thus, it is an influential country. Nigeria often leads the discussions in African Union (AU) or in Economic Community of West African States (ECOWAS). Particularly in ECOWAS, Nigeria has recently shown strong diplomatic presence in the region. For example, Nigeria actively took part in conflict resolution and reconciliation process in countries such as Guinea-Bissau and Mali. Since Nigeria's influence in both economic and diplomatic spheres is strong, Japanese support to Nigeria will not only contribute to the economic growth of Nigeria or reinforce Japan-Nigeria relationship but also have a positive effect on regional growth and stability. Also, Japanese ties with the entire African continent will consequently be strengthened.

Nigeria's oil production is the largest in Africa (approximately 2.14 million barrels per day (2010)). Its natural gas reserves are also the largest in Africa. Crude oil and LNG are Nigeria's major exports to Japan. As it is important for Japan to secure stable access to natural resources by having a variety of import channels, maintaining a stable relationship with Nigeria is important for Japan.

In addition, the Nigerian market is enormous and its potential in the field of trade and investment is large for Japanese private companies.

2. Basic Assistance Policy: Sustainable economic and social development

Nigeria launched its political strategy "Vision 20: 2020" and has been pursuing the vision of placing Nigeria among the 20 largest economies in the world by 2020. To be in line with this policy, Japan will support Nigeria's sustainable economic and social development. Japanese support is targeted at connecting Nigeria's growth to the development of its society and improving industrial infrastructure, which forms the basis of the sustainable growth.



3. Priority Areas

(1) Improvement of core infrastructure

Japan started to consider a resumption of loan extension to Nigeria in 2009. Japan will effectively combine this loan aid scheme and technical assistance, with a focus in areas where Japanese technology can be utilized. Japan will also provide support to building core infrastructure, which will provide a basis for Nigeria's economic growth. Power supply shortages have been one of the major obstacles towards achieving further economic growth and greater investment inflows. Therefore, especially in this sector and in line with the Government of Nigeria's privatization policy, Japan will contribute to the reinforcement of power supply and its stable distribution. Transportation and other sectors are also our focus. In these areas, Japan will consider providing aid to improve infrastructure, which in turn leads to the sustainable economic growth of Nigeria.

(2) Further social development especially in the urban areas

In the Federal Capital Territory and Lagos peripheral areas, Japan will provide its support mainly towards the improvement in the quality of social services. In these areas, inadequate water supply infrastructure and insufficiency of appropriate medical care services especially in maternal, newborn and child health sector have been posing problems for people's daily lives. To address these problems, the Japanese Government will improve water supply and medical care service provision through constructing new facilities and promoting transfer of technical skills and knowledge. Improvement of living and business environment is also expected as a result of this support.

4. Points to be considered

(1) Security concern

Security concern is one of the major issues especially in the rural areas. In the north, the Islamic fundamentalist group "Boko Haram" has been actively conducting terrorism acts and in the South, the risk of atrocious crimes targeting expatriates is high. Therefore, for the time being, Japan will implement its development assistance projects in the urban areas such as Abuja and Lagos where the security risk is comparatively low. As for the ongoing projects, Japan will deliberately implement them while taking extra care concerning the security risks.

(2) Development assistance including poverty reduction support in the rural areas

Nigeria's economy has been rapidly growing, but at the same time, Nigeria has more than 100million poor people (the largest in Africa) in the country. This represents 60% of the total population, most of them residing in rural areas.



In order for Nigeria to achieve robust development, challenges in the rural areas such as poverty alleviation, provision of better health and medical care services including polio eradication in the Northern areasⁱ need to be addressed. The agricultural sector possesses huge potential for Nigeria's economic growth, as about 40% of Nigeria's GDP comes from this sectorⁱⁱ, therefore rural development is also one of our focus areas. However, the general security situation in the rural areas has worsened and at the moment, it is difficult for the Government of Japan to actively develop and implement projects in those areas with high security risk.

Hence, in this policy document, provision of support to the rural areas is not stipulated as the major focus of our assistance. However the Government of Japan is ready to consider providing support to the rural areas, after giving due consideration to the importance and necessity of such support, in cases where the security risk is relatively low or where the Government of Japan cooperates with other development agencies and therefore Japanese development workers are not necessarily required to be engaged.

(3) Consideration to the federal system, focusing areas

Since Nigeria adopts a federal system, each state's power is relatively strong and whenever a developmental plan is made or development projects are implemented, the state government is always involved. Therefore, when the Government of Japan chooses a target area to implement a project, the capacity and the system of the state government concerned, as well as how the project is prioritized in its developmental plan and the extent of budget allocation will all be taken into account.

(4) Promotion of public-private partnership

Nigeria's population is extremely large and the size of the market is also large. Also, Nigeria has rich natural resources. In view of these factors, there are many Japanese private companies seeking opportunities to enter the market or engage in some project. Considering these needs, within its overall strategy, the Government of Japan will explore the possibilities of projects which are structured to improve the investment environment or to promote Japanese public private partnership.

Attachment: Japanese ODA Rolling Plan for the Federal Republic of Nigeria

ⁱ Nigeria is one of the three countries where polio remains endemic (other two countries are Pakistan and Afghanistan).

ⁱⁱ Nigeria is a pilot country of "Coalition for African Rice Development: CARD).