

THE DEMOCRATIC REPUBLIC OF THE CONGO
KINSHASA PROVINCIAL GOVERNMENT

**THE DEVELOPMENT STUDY
FOR
URBAN REHABILITATION PLAN OF KINSHASA
IN
THE DEMOCRATIC REPUBLIC OF THE CONGO**

FINAL REPORT

SUMMARY

MARCH 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

Eight - Japan Engineering Consultants Inc.

Oriental Consultants Co., Ltd.

The following foreign exchange rate is applied in the study

1 US dollar = 792FC = 95.37 JP Yen, or 1 FC = 0.12 JP Yen (June 2009)

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PREFACE

In response to a request from the Government of the Democratic Republic of the Congo, the Government of Japan decided to conduct a study on “The Development Study for Urban Rehabilitation Plan of Kinshasa in the Democratic Republic of the Congo” and entrusted to the study to the Japan International Cooperation Agency (JICA).

JICA dispatched a study team headed by Mr. Yasushi OWAKI of Eight-Japan Engineering Consultants Inc. and consist of Eight-Japan Engineering Consultants Inc. and Oriental Consultants Co., Ltd. to the Democratic Republic of the Congo, between February, 2008 and March, 2010.

The Study Team held discussions with the officials concerned of the Government of the Democratic Republic of the Congo and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Democratic Republic of the Congo for their close cooperation extended to the study.

March 2010

Kiyofumi KONISHI
Director General
Economic Infrastructure Department
Japan International Cooperation Agency

Mr. Kiyofumi KONISHI
Director General
Economic Infrastructure Department
Japan International Cooperation Agency

March 2010

Dear Sir,

LETTER OF TRANSMITTAL

We are pleased to submit to you the Final Report of “The Development Study for Urban Rehabilitation Plan of Kinshasa in the Democratic Republic of the Congo”.

This study was conducted by Eight-Japan Engineering Consultants Inc. and Oriental Consultants Co., Ltd. under a contract to JICA, during the period from February 2008 to March 2010.

We wish to take this opportunity to express our sincere gratitude to the officials concerned of JICA, Ministry of Foreign Affairs of Japan, Kinshasa Provincial Government and Ministry of Plan, Budget, Public Works and Infrastructures, JICA Democratic Republic of Congo Office and Embassy of Japan in the Democratic Republic of the Congo for their cooperation assistance throughout the Study.

Finally, we hope this report will contribute to further promotion of the project.

Very truly yours,

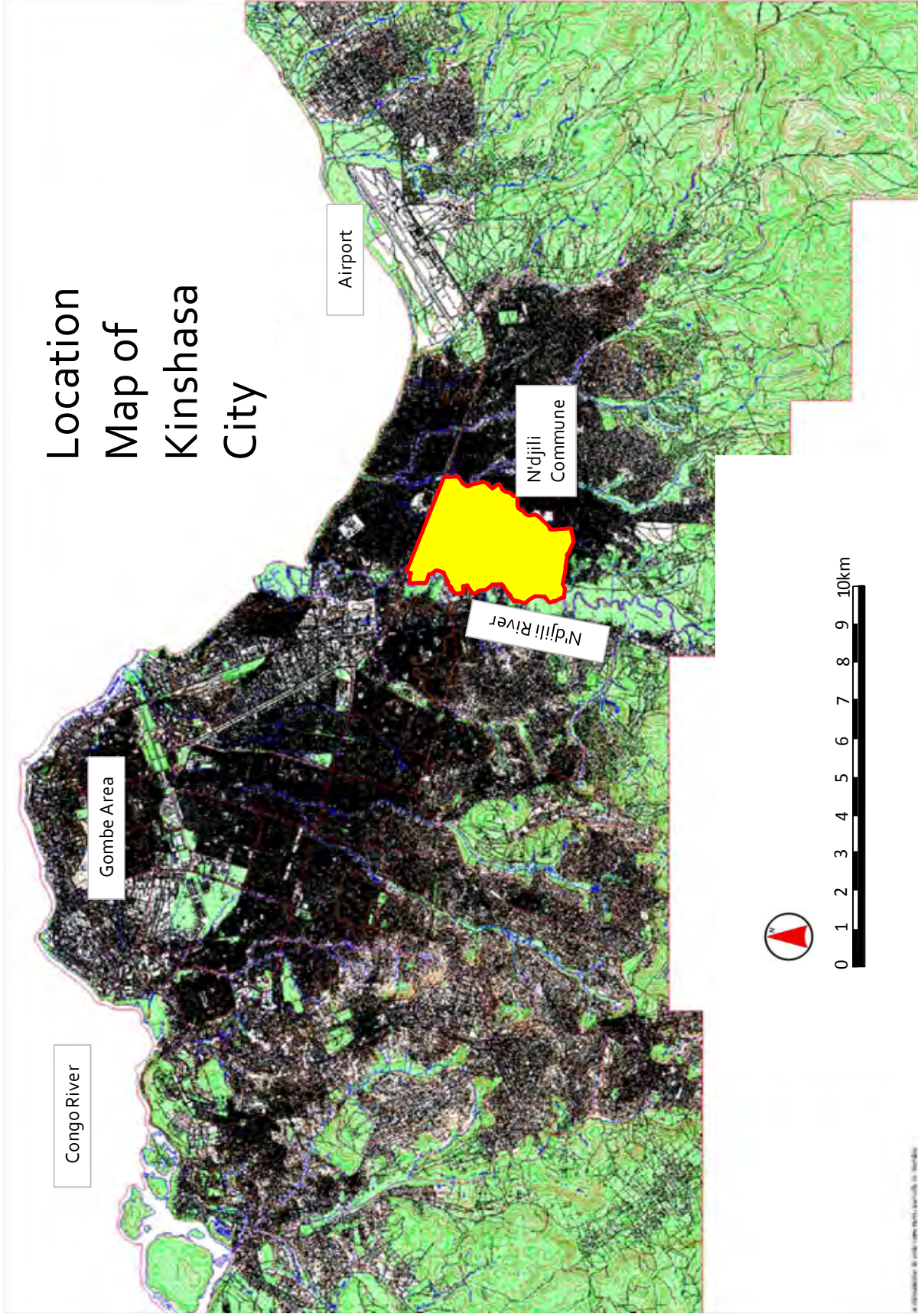
Yasushi OWAKI
Team Leader
The Development Study for Urban Rehabilitation Plan of
Kinshasa in the Democratic Republic of the Congo
The Consortium of Eight-Japan Engineering Consultants
Inc. and Oriental Consultants Co., Ltd.

LOCATION MAP

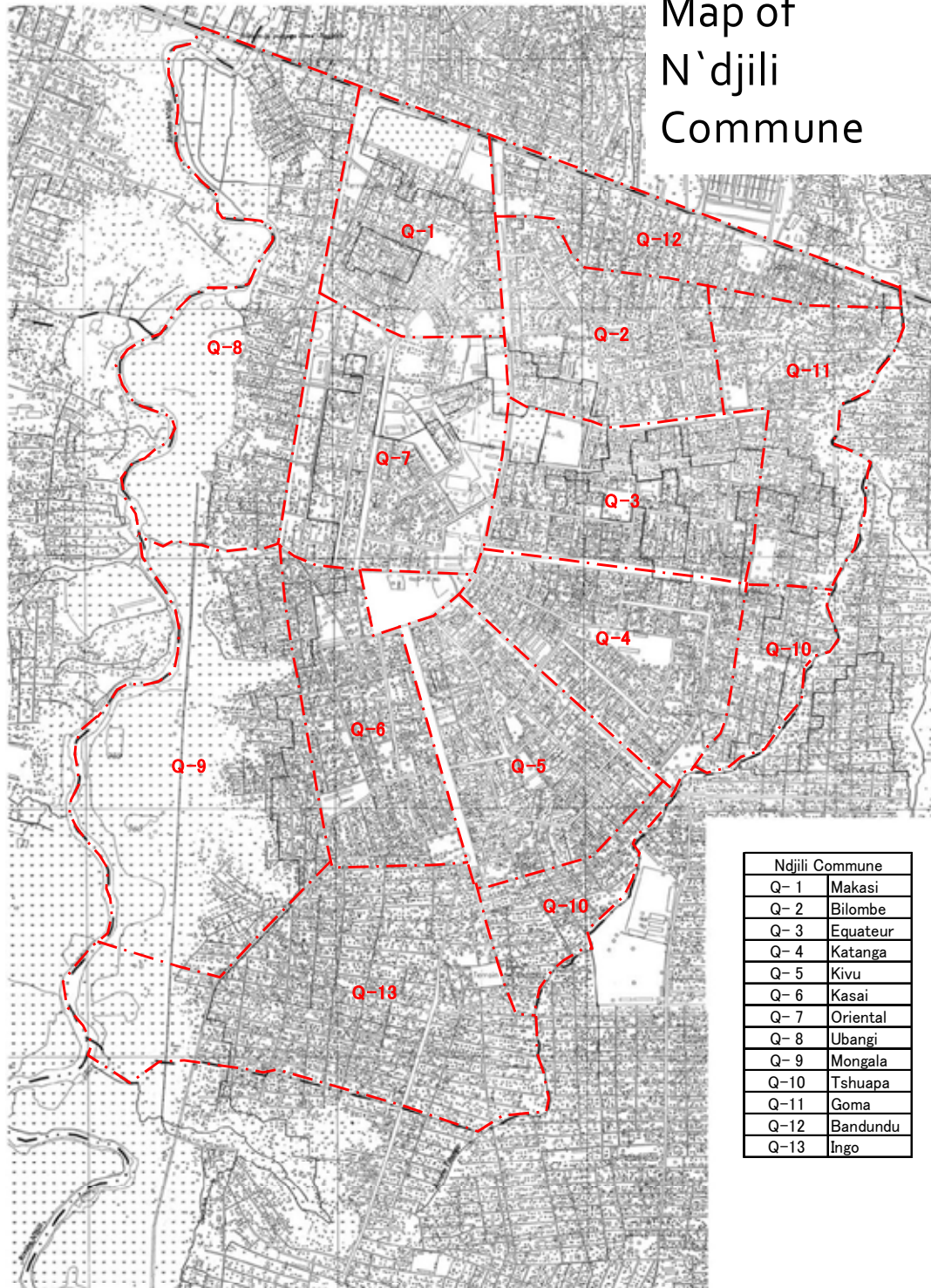
Democratic Republic of Congo



Location Map of Kinshasa City



Location Map of N'djili Commune



0.0 0.5 1.0 1.5 2.0km

Project Outline

| | |
|----------------------------|---|
| 1. Country | Democratic Republic of the Congo |
| 2. Name of Study | The Development Study for Urban Rehabilitation Plan of Kinshasa in the Democratic Republic of the Congo |
| 3. Counterpart Agency | Kinshasa Provincial Government, Ministry of Plan, Budget, Public Works and Infrastructure(Former Ministry of Reconstruction and Planning) |
| 4. Objectives of the Study | The objective of The Study is to recommend and demonstrate appropriate method and process for the formulation of urban rehabilitation plans in Kinshasa, by formulating an urban rehabilitation plan and adjustment process for pilot commune which is in this case N'djili commune experience. |

1. The Study Area

N'djili Commune as Pilot Commune

2. Scope of the Study

- (1) Review and Analysis on Present Situation of the Pilot Commune
- (2) Formulation of the Basic Policy for Development of the Commune
- (3) Proposing Urban Rehabilitation Plan
- (4) Implementation of Plot Project(s)
- (5) Evaluation of Pilot Project(s)
- (6) Finalization of Urban Rehabilitation Plan

3. Narrative Description

3.1 Development Vision for the Year 2018

Actions from N'djili

- Model commune for the development and reconstruction of Kinshasa
 - Commune of actions on people's own initiatives
- (Urban Infrastructure) Beautiful Urban Space
(Health and Sanitation) Healthy Town
(Education and Citizenship) Citizenship
(Industry and Employment) Made in N'djili
(Water and Energy) Access to Lifeline

3.2 Implementation Scheduled on 10Years Action Plan for each sector

3.2.1 Urban Infrastructure

1) Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project

- Improve Luemba Boulevard as a main street of N'djili.
- Rehabilitation of existing paved roads.
- Capacity Development for Provincial Urban Planning Sections of the Province.
- Improvement of N'djili Junction to mitigate traffic congestion.
- Installation of Sidewalk and Traffic safety facilities/Pedestrian crossings, Traffic sign, Humps, etc.
- Rehabilitation of Community Roads using LBT (Application of "Do-Nou" Technology).
- Rehabilitation of urban core zone (Q7).
- Clean-up Gutters Together with the Sanitation Brigade
- Planting flowers and tree along streets

2) Development Concept of the Development Phase (Middle-term Period; 2014-2018) Project

- Enhancement of Public Transportation.
- Improvement of living environment/conditions of the commune
- Improvement of Tertiary Roads.
- Improvement of bus route network, bus terminal, bus stops
- Development of Community Core Zone.

3) Development Concept for the Sustainable Development (After 2018)

- Development of integrated road network plan.

3.2.2 Health and Sanitation

1) Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project

- Rehabilitation and construction of health centers.
- Construction of maternal and child health care centre including surgical unit
- Establishment of Health Information System (HIS) on epidemiological deceases and reproductive health
- Health & Sanitation education in Schools and Streets
- Rehabilitation and Construction of Public Toilet
- Establishment of solid waste disposal systems in the Province
- Formulate sanitation and hygiene management plan
- Establish solid waste management system in the Commune
- Sensitization on sanitation and hygiene issues
- Clean-up solid waste and promoting recycling

3.2.3 Education and Citizenship

1) Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project

- Rehabilitation of security fence for primary and secondary schools
- Rehabilitation of toilet for primary and secondary schools
- Rehabilitation of classrooms
- Strengthening Capacity of the Commune Administration
- Civic Education
- Non-formal education for out-of-school children

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|--|
| <p>2) Development Concept of the Development Phase (Middle-term Period; 2014-2018) Project</p> <ul style="list-style-type: none"> ● Supply Equipment for Primary and Secondary Schools ● Sports and Culture Promotion in the Commune & Schools <p>3.2.4 Industry and Employment</p> <p>1) Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project</p> <ul style="list-style-type: none"> ● TOT of N'djili masters at ITI ● Rehabilitation of markets, storages ● Establish and operate farmers' market at SECOMAF ● Establishment of Industry Support Systems ● Establish N'djili industry association <p>3.2.5 Water and Lifeline</p> <p>1) Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project</p> <ul style="list-style-type: none"> ● Rehabilitation and upgrading of RESIDESO water supply network and SNEL Power line <p>2) Development Concept of the Long-term Project (After 2018)</p> <ul style="list-style-type: none"> ● Technical Assistance Project for Management of the Distribution Network <p>3.3 Implementation of the deferent type of the pilot projects</p> <p>(1) Civic Education Project</p> <p>(2) Clean-up Campaign Project</p> <p>(3) Road Rehabilitation Project by Do-Nou Technology</p> <p>(4) Rehabilitation of Blv. Luemba</p> <p>3.4 Methodology for Urban Rehabilitation Plan in Kinshasa</p> <p>To formulate the urban rehabilitation plan, this plan reviews existing data and development plans and specifies medium to long term (10year) range development policy together with Action Plan. Consecutive stages of this study are following;</p> <ul style="list-style-type: none"> ● Stage 1: Compile existing data of Kinshasa Province and N' djili commune, ● Stage 2: Prioritize community demands by dialogue and participatory approach. ● Stage 3: Indicate development policy and address Action Plan for the commune, ● Stage 4: Examine Pilot Projects to provide feedback on the Plan. ● Stage 5: Evaluate Pilot Projects and review The Study for improvement the Plan. ● Stage 6: Implement Projects of Action Plan. |
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| <p>4. Conclusion and Recommendations</p> <p>4.1 Conclusion</p> <p>(1) Identified necessary actions for stakeholders</p> <p>(2) Activate community organization</p> <p>(3) Compile current data and analyze conditions in Kinshasa province</p> <p>(4) Compile current data and analyze conditions in the pilot commune</p> <p>(5) Forecast future demand and indicate development policies in the pilot commune</p> <p>(6) Formulate an Action Plan in the pilot commune</p> <p>(7) Implement Pilot Projects for the verification of the Action Plan</p> <p>(8) Verified applicability of the study as a model of urban rehabilitation planning</p> <p>4.2 Recommendation</p> <p>(1) Modification depending on community characteristics</p> <p>(2) Highlight capacity building through Civic Education</p> <p>(3) Support for decentralization</p> <p>(4) Support for community</p> <p>(5) Necessary for coordination of development actions among Province, Commune and CLD level.</p> |
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| 5. Report Structure | | | |
|----------------------------|----------|------|------|
| Name of Report | Language | | |
| | Eng. | Fre. | Jap. |
| 1. Summary | ✓ | ✓ | ✓ |
| 2. Volume I: Main Text | ✓ | ✓ | |
| 3. Volume II: Action Plan | ✓ | ✓ | |

1. INTRODUCTION

1.1 BACKGROUND

The emergency study is to be conducted in Kinshasa which is a capital of the Democratic Republic of the Congo for the purpose of the provision of the peace to all people in the DRC.

The Government of the DRC under President Joseph Kabila undertook a series of economic reforms in the country. The Government of Japan through its International Cooperation Agency (JICA) has financed The Study for urban rehabilitation plan in Kinshasa whereby Ndjili has been selected as pilot commune for The Study..

Ndjili is a commune of Tshangu District, in the city of Kinshasa, situated in the South of Masina commune which is separated by the Lumumba Boulevard. It is located in the Eastern part of Kinshasa town, in the plain, beyond Ndjili River. It has 13 popular quarters. The population in Ndjili Commune has been increasing due to the inflow from the rural areas. This influx of population has increased poverty, because of remarkable insufficient Basic social infrastructure services and lack of the economic infrastructure supporting economic activities.

1.2 OBJECTIVE OF THE STUDY

The objective of The Study is to recommend and demonstrate appropriate method and process for the formulation of urban rehabilitation plans in Kinshasa, by formulating an urban rehabilitation plan for pilot commune which is in this case N' djili commune.

1.3 SCOPE OF THE STUDY

Scope of work, agreed upon between Kinshasa Provincial Government and Japan International Cooperation Agency on 8th August, 2007, clarifies the Scope of The Study as follows;

- (1) Review and Analysis on Present Situation of the Pilot Commune
- (2) Formulation of the Basic Policy for Development of the Commune
- (3) Proposing Urban Rehabilitation Plan
- (4) Implementation of Plot Project(s)
- (5) Evaluation of Pilot Project(s)
- (6) Finalization of Urban Rehabilitation Plan

1.4 STUDY PROCEDURE

- (1) Definition of Objective end Methodology
 - (2) Review of Development Policies and Strategies
 - (3) Analysis of General Condition in Kinshasa Province
 - (4) Review and Analysis of Present Condition and Issues of N' djili Commune
-

- 1) Review and Analysis on Present Situation
- 2) Conducting of the Social Survey
- 3) Extraction of Existing Issues
- (5) Establishment of Basic Policy for the Rehabilitation of N'djili Commune
- (6) Formulation of Action Plan for Community Vitalization
 - 1) Institutional Improvement for Action
 - 2) Formulation of Land Use Plan
 - 3) Formulation of Sector Plan
- (7) Preparation of Project Profile and Establishment of Implementation Schedule
- (8) Implementation of Pilot Project
- (9) Finalization of Methodology for Urban Rehabilitation Plan in Kinshasa
- (10) Conclusion and Recommendation

1.5 STUDY ORGANIZATION

The Study is conducted under close cooperation with the Kinshasa Provincial Government and N'djili commune. Kinshasa Provincial Government is represented by the Ministry of Plan, Budget, Public Works and Infrastructures (formerly the Ministry of Reconstruction and Plan), and N'djili commune is represented by commune office.

2. REVIEWING OF EXISTING DEVELOPMENT POLICIES AND STRATEGIES

2.1 NATIONAL DEVELOPMENT PALN

The following three policies and strategies are articulated for the national development plan. In addition to the Poverty Reduction Strategy and Millennium Development Goals, national development strategy was established to achieve poverty reduction.

(1)Poverty reduction strategy paper (prsp)

The Congolese Government has set out an ambitious vision for the country's development. This vision is articulated in the PRSP, which was presented on July 2006. It emphasizes the need to break with past practices and to ensure a dramatic improvement of living conditions throughout the country, as a condition for sustained peace and eventual economic recovery.

(2)Millennium Development Goals (MDGs)

DRC's Human Development Index declined by more than 10 percent in the last ten years – and DRC now ranks 167 out of 177 rated countries. Progress made between independence and the early 1990s has largely vanished.

(3)Development Strategies

In demonstrating its commitment to achieve the MDGs and acknowledging the importance of

human capital in poverty reduction, the Government has devoted an entire pillar of the PRSP to developing the social sectors. Following development strategies prioritizing five sectors had been declared by the President.

- a) Rehabilitation of rural infrastructure including the road network
- b) Health and sanitation
- c) Education, training and human security
- d) Creation of employment opportunity and poverty alleviation
- e) Access to the water and electricity

2.2 DEVELOPMENT ASSISTANCE BY DONORS

In the fiscal year of 2003-2004, DRC received sum of US\$ 3,183 million Development Assistance by donors, defined as International Organization or Industrialized Countries. Particularly, as a background to the process of peace keeping and post conflict economic recovery in DRC, Development Assistance for DRC focuses on urgent rehabilitation program for Kinshasa and eastern provinces.

In addition, in order to assist more efficiency support and upgrade synergy effects, the donors set up its development policies and strategies under their development assistance frameworks and action plans.

(1)Development Assistance in Kinshasa City

International Organizations, such as WB, UNICEF, UNDP, UNHCR, UNEPA, UNESCO, support assistance of Health, Hygiene, Education and Community Development sectors in Kinshasa City. Bilateral Development Assistance disbursed those sectors as well through the collaboration with Belgium (CTB), UK (DFID), USA (USAID), and Germany (GTZ).

(2)Development Assistance in the N'djili Commune

In the N'djili Commune, Development Assistances are supported by CTB, China and UN-HABITAT. Assistance activities by each donor are as follows:

CTC: Rehabilitation projects of Cecomaf Road (L=2.2km)

China: Construction of the China-RDC Friendship Hospital (Y2007)

UN-HABITAT: Capacity development (Module 1: Local leadership, Module 2: Local economic governance, Module 3: Participation for communal development) project in N'djili commune and Masina commune.

3. GENERAL CONDITION OF KINSHASA PROVINCE

3.1 NATURAL CONDITIONS

Kinshasa is located in an alluvial plain of about 700 km upstream from the Atlantic Ocean of the

Congo River, with an altitude in the range of - 550 m to 300 m above sea level. The climate of the Democratic Republic of Congo consists of two seasons; the rainy season and the dry season. And the surface stratum of Kinshasa is comprised of sand and silt clay by river sediment.

3.2 ADMINISTRATIVE SYSTEM

At present, the DRC has 11 provinces within its own territory, including the Kinshasa Province, which is the sole province withholding a special status in the DRC. There are urban Divisions for the various Ministries. These have so far been functioned under the Authority of the Central Government. However, after the Decentralization Law was promulgated by the President of the Republic in July of 2008, some functions that were falling under the responsibility of the Central Government were shifted to Kinshasa's Provincial Government.

3.3 COMMUNITY ORGANIZATION

Generally, the community unit/entity in Kinshasa Province is classified on a commune basis. At present, Kinshasa Province manages a total of 24 communes. In the case of the N'djili commune, it is directed by the burgomaster, a representative of the commune, with 28 public departments. Moreover, the N'djili commune has 1 commune administration office and 23 administrative branch offices.

3.4 SOCIO-ECONOMIC CONDITIONS

(1)Population

According to the household survey conducted by the National Institute of the Statistics (INS) in 2004, total population of Kinshasa Province is 6,387,725, and 51.2% of the population is composed of women. The majority of the population consists of the younger generation and more than half (51.3%) of the individuals are below 20 years old, of which 97.9% is Congolese, and 71% of whom originated from Kinshasa or its surrounding provinces.

(2)Land Use

The following two plans are provided as a land-use master plan that concerns Kinshasa City and the N'djili commune now. These plans were determined in the 1960-70's. Therefore, the plan is not completely appropriate for the present urban situation.

The land use situation of Kinshasa City of today is shown as in the following figure.

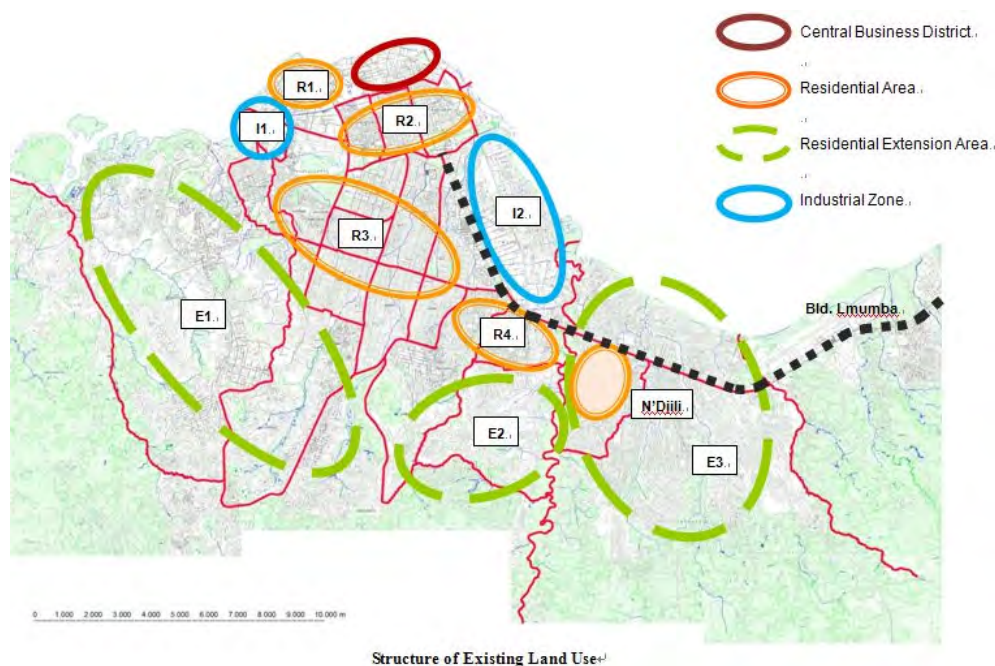


Fig. 1 Structure of Existing Land Use

3.5 SECTOR CONDITIONS

(1) Urban Infrastructure

Transport in Kinshasa is composed mainly of land transport including bus and railway. “Boulevard Lumumba” connects from downtown of Kinshasa province to N’djili Airport and “Boulevard Poids lourds,” a port area in the eastern part of downtown to the intersection of Limete in the suburbia. “Route de Matadi” from Kinshasa to Matadi, “Boulevard du 30 Juin,” “Avenue Pierre Mulele,” and “Avenue Kasavubu” are the central routes in Kinshasa, while “Boulevard Triomphal” and “Boulevard Sendwe” face the stadium and exist as Kinshasa’s main arterial road.

The bus operation system is managed by public corporations such as CITY TRAIN and RETRANS KIN, or by private companies and/or owner-drivers. There are three railway lines in Kinshasa, Gare Centrale-N’djili Airport, Gare Centrale-Kasangulu-Matadi (Bas Congo province), and Gare Centrale-Kitambo-Kinsuka. Trains are operated by ONATRA (Office National de TRAsport).

(2) Health and Sanitation

The FIVE-YEAR HEALTH PLAN was prepared through UNICEF and WHO in collaboration with BDOM, Salvation Army Church, Rotary Club and Kinshasa Health Inspection in 2007. The general objective is to improve the medical situation of the population for the Province of Kinshasa. Specific objectives are: 1.) To revitalize the health zones to correct the distortions, for recovering its function as preliminary unit of health and sanitation activities; 2.) To reorganize the intermediate level of Health and Sanitation sector; 3.) To rationalize the finances of the health sector; 4.) To reinforce the intra and intersector partnership; 5.) To develop human resources for health and 6.) To reinforce the

research of the system of health.

In the other hand, there is no sewerage system development plan or a sewer network system and treatment plant in Kinshasa. In contrast, Kinshasa's provincial government has a plan to promote the privatization of the solid waste collection service.

(3) Education and citizenship

Primary and secondary school are within jurisdiction of the Ministry of Education of Primary, Secondary and Professional (Ministère del Enseignement Primaire, Secondaire et Professionnel, MEPSP). The primary and secondary education systems of DRC consist of six years of primary education and six years of secondary education. In secondary education, the first two years is for basic compulsory subjects and the other four years is for specific subjects including vocational training subjects based on selected courses. According to the statistic data from MEPSP (2008), the number of students in primary school is 778,216 (10.8% in all of RDC), secondary school is 431,022 (14.8% in all of RDC). The school attendance rate is 57.8% for primary school and 37.4% for secondary school.

(4) industry and employment

After the conflict in 1991 and 1993, and recent armed conflicts that have hampered economic development of the city, there has been intensive development of activities in farming and within the chemical and steel construction industry sector. In spite of the fact, main economic activities are carried out within the informal sector.

Agricultural activities play an important role in supplying the products which meet the demand of the people in Kinshasa. After rehabilitation and irrigation improvements, the Pool of the Malebo area, with a surface of more or less than 50,000 ha ranging from Kingabwa to Nsele, presented a production potential of 30,000 tons of rice every two to three times per year which covers 50% of the demands of the town's capital and which also creates 1,000 extra jobs in the sector.

The labour force rate, according to a household survey, indicates it is 42.5% (47.4% with the inclusion of unemployed persons). Of the labour force, 49.7% are men while 35.7% are women. The unemployment rate within Kinshasa is only of 6.3% with the majority of those out of work consisting mostly of women. The unemployment rate is highest among people in the age range of 25-29 years.

(5) Water and Lifeline

The water supply's master plan of Kinshasa aims at the improvement of the water supply system in the Kinshasa province, which is formulated by the World Bank. The target year for the master plan is 2017. As of March 2009, 6 projects are completed or on-going in the water supply sector.

In regard to the plan of the electric facilities in the Democratic Republic of the Congo, it is thought that a plan regarding extension and rehabilitation is required for all the institutions of power

generation, power transmission, power distribution and electric supply. However, the implementation depends on the source of revenue and the assistance of a donor as well as the development projects of other sectors.

3.6 environment management system in congo

A basic environmental law has not been prepared in the DRC. The environmental quality standards on air, water, soil and noise have not been enacted. However, the Constitution of the DRC along with sectoral laws and decrees, establish the environmental management, issues and protection.

4. PRESENT CONDITIONS OF THE N'DJILI COMMUNE

4.1 NATURAL CONDITIONS

The N'djili commune is located in the eastern area of Kinshasa and the gross area is approximately 11.4 km². This commune is in the centre of Tshangu District. Annual average rainfall and temperature are about 1,400 mm and 25 degree Celsius.

As of 2007, the total population of the N'djili commune was estimated at 320,762. The population of people under 20 years old accounts for 51.9% of the total population. The N'djili commune is a highly populated area in the Kinshasa Province, and its population density is 397.9 person/ha.

4.2 ADMINISTRATION OF THE COMMUNES

The commune's administration office is located in Quarter 7. The Commune divided by 13 Quarters with Quarter leaders respectively. The organisation of the commune's administration is headed by the burgomaster and consists of 23 administrative offices.

A civil society can be defined as a web of associations, social norms and practices that comprise of activities of a society separate from its state and market institutions. Civil societies or civil-based organisations (CBOs) in N'djili have taken roles of grassroots development and advocacy, especially within the education and sanitation sectors.

And, there are a number of religious organisations such as churches. Churches seem to be the most reliable organisation within the population. Additionally, there are various types of associations in N'djili, such as youth clubs. At the Quarter level, each street has a street leader who has the responsibility of sharing information from a quarter leader with the residents along the street.

4.3 ECONOMY

N'djili extends to a wide variety of socio-economic activities both in the formal and informal sector. The primary sector represented by market-gardening activities of N'djili is well-known to consumers in Kinshasa through its history and its dynamics in the supply of Kinshasa. The second industry sector specifically occupied within N'djili is that of car repair shops, as all of Kinshasa recognizes the sharpness and dynamism of these activities.

4.4 LAND USE

For the examination of land use of the N'djili commune, nine large categories and 12 sub-categories were identified as follows:

- **Residential Areas:** Residential areas occupy about 60% of the entire commune area.
- **Administrative / Official Areas:** Administrative facilities do not exist except for some facilities which are located around the commune office in Quarter 7.
- **Commercial / Business Areas:** The area for the market, which is located at Quarters 2, 6, and 7, is not large enough, with a measurement of 0.1 square meters per population.
- **Educational Areas:** Referring to the land use ratio, there seems to be enough area secured for the educational facilities in the N'djili commune.
- **Health Centers:** Half of the health facility sites of Sino-Congolais Hospital are located in Quarter 7 and this hospital is not facilitated for civilian daily use.
- **Parks:** An equipped public park hardly exists within the N'djili commune, and public, unoccupied public land and green space are used for recreational purposes.
- **Agricultural Areas:** The mass of farmland is located in Quarters 8, 9 and 13 on the N'djili River's eastern shore.
- **Transport / Roads:** The roads of the N'djili commune occupy 10.9% of the entire commune which is not a high ratio.

4.5 SECTOR CONDITIONS

(1) Urban infrastructure

Boulevard Lumumba and Route CECOMAF are located in the eastern side of the commune; roads enclosing Quarters 7, 2^{eme} République and access road to Chinese-DRC hospital in Quarter 7 are paved with asphalt. Due to the road's depredation and potholes, the condition of the asphalt pavement is not satisfactory and all other roads are unpaved. Asphalt roads are relatively wide. Some roads with relatively wide widths are allocated and connected by the radial road in Quarter 7. For minibuses, the drivers mainly use the asphalt roads since their routes not definitive. 20 bus stops are found in the N'djili commune without any waiting facilities or institutions for people waiting for the minibuses.

(2) Urban Facility

There are 4 public Marches in Q-2, Q-5, Q-6 and Q-7 in the N'djili commune. The Marches of Q-6 and Q-7 are large scaled.

In addition, presently in the N'djili commune, there are only a few public toilets. Furthermore, they are poorly maintained and so generate dirty and unsanitary conditions.

(3) Health and Sanitation

The common diseases are malaria, diarrhoea, tuberculosis, measles, typhoid and sexually

transmitted diseases (STD) such as HIV/AIDS. Health zone of N'djili covers the same geographical area as the N'djili commune. The health zone is divided into 14 health areas which are the same as Quarter 1-12 and two health areas in Quarter 13 (Q13A and Q13B). In the Health zone of N'djili, there are two general hospitals; 110 health centers located in the 14 health areas.

Sanitary conditions of the N'djili commune are a serious problem. Only 20% of households have an indoor toilet. Littering is also another serious problem found on the streets and other public spaces of N'djili. According to a household survey, 14% of households dispose their rubbish on the streets or other places, while the remaining other households dispose their rubbish through waste collection men or by digging a hole within their household compound. In addition, more than 50% of households do not have a drainage system in their household. Thus, waste water tends to flow onto the street or streams directly.

And solid waste in the N'djili commune is left in open dumpsites of the N'djili Commune or its surrounding area because public services for solid waste collections or disposal are not provided in the N'djili commune.

(4) Education

There are 202 primary schools and secondary schools in the N'djili commune including one of the four institutes of Industrial Technology Institute (ITI) of Kinshasa. The number of students is 68,335 in primary school and 46,780 in secondary school. The enrolment rates of both primary and secondary school for boys are significantly high and almost twice that of the school age population. Problems in education are identified through a household survey and the CLD planning workshops and they include high school fees and poor conditions of the school facilities and equipment. Public education is basically free of charge. However, parents need to pay for some of the fees for the teachers to compensate for their low salaries.

(5) Citizenship

The roles and responsibilities of men and women in the household are slightly different. Men tend to supervise and protect the household. On the other hand, women tend to supervise their children or become housewives. On the other hand, 58.2% of women contribute to their household budget. Children, elders, widows, and disabled persons are defined as vulnerable groups in the N'djili commune. Due to poverty and difficult life circumstances, some people tend to neglect these vulnerable family members.

And according to the investigation of street children by The Study Team, a number of so-called bewitched children are seen in many Revival churches while street children in many instances spend their nights in the open and wander on the streets and roads within the town.

(6) Security

The security of the N'djili commune is a serious concern for the population (especially during

nighttime). There is high incidence of crimes that include robbery, rape, vandalism and other illegal activities. In August 2008, for instance, there were 75 cases of crimes which included two murder cases according to the statistics of the N'djili commune police.

(7) Industry and Employment

The N'djili commune's industry is mainly characterized by agricultural farming activities, automobile mechanics, mechanical engineering and related activities and small businesses.

In the aspect of household budget, 19.5% of households have income less than 25,000 FC per month. This means approximately 20% of the population live on less than 1.5 USD a day. On the other hand, 82% of household expenses tend to be used for food on average.

(8) Water and ELECTRIC POWER SUPPLY

According to a household survey, 97% of households have access to tap water from REGIDESO in their household compound or through their neighbours' compound. However, most of them are unsatisfied with the water quality due to the poor conditions of the piping system and unstable water supply.

Concerning energy resources, 80% of households have connection to electricity by SNEL. However, the connection is irregular and unstable.

5. BASIC POLICY FOR THE REHABILITATION OF N'DJILI COMMUNE

5.1 RELEVANT POLICIES FOR COMMUNITY DEVELOPMENT

Through the analysis of relevant policies described in Main Text 2.2, the fundamental direction of development planning is specified as follows;

Table 1 Major Policies from Relevant Plans and Programmes

| | |
|------------------------------------|--|
| Urban Infrastructure (Roads) | <ul style="list-style-type: none"> • Rehabilitation and construction of intercommoned roads and inter quarter roads • Make use of public buses to reduce the traffic jam |
| Health & Sanitation | <ul style="list-style-type: none"> • The development of Health Zones is the main line of the strategy to reinforce the Health System. • It aims at improving the functionality level of hospitals and health centres in order to provide quality health cares to the population. • Promoting community partnership in the implementation of health policy. • Evacuation of rubbish and other waste • Reactivate and reinforce Communal Improvement/ Cleaning up Brigades • Organizing Sanitary and Methodological Education Campaign |
| Education & Citizenship | <ul style="list-style-type: none"> • Increasing school attendance from 64.1% in 2006 to 80% in 2008, and 100% from now to 2015. • Annual rehabilitation of 10% of classrooms and equipping them with school furniture. • Train drop-out young children and send them to vocational training centers |
| Water & Energy | <ul style="list-style-type: none"> • Rehabilitation of existing infrastructures, thus facilitating access to a greater number, • To identify water needs and inventory |

5.2 DEVELOPMENT VISION AND BASIC CONCEPTS

Considering potentials and predominance in the commune, basic concept for the master plan which harnesses the potentials of the community development and enhances the people's self-reliance shall be established as follows.

Actions from N'djili

- *Model commune for the development and reconstruction of Kinshasa*
- *Commune of actions on people's own initiatives*

As the master plan is correspondent with the relevant plans of the government, the basic concept of the master plan is in line with the five pillars in the Provincial Government Program 2007-2011, KINSHASA City. Basic concepts categorized in the five pillars of the program are as follows.

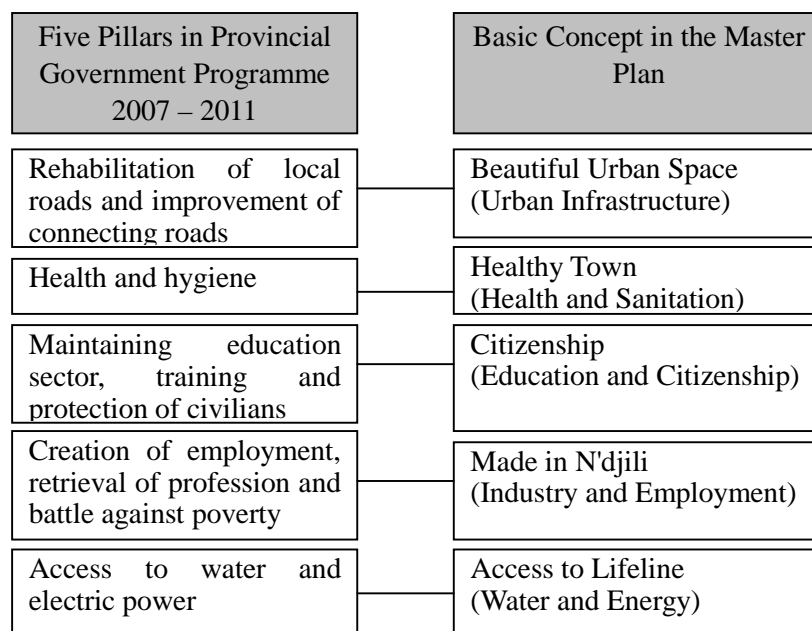


Fig. 2 Relationship of Basic Concepts and Five pillars of Kinshasa Province

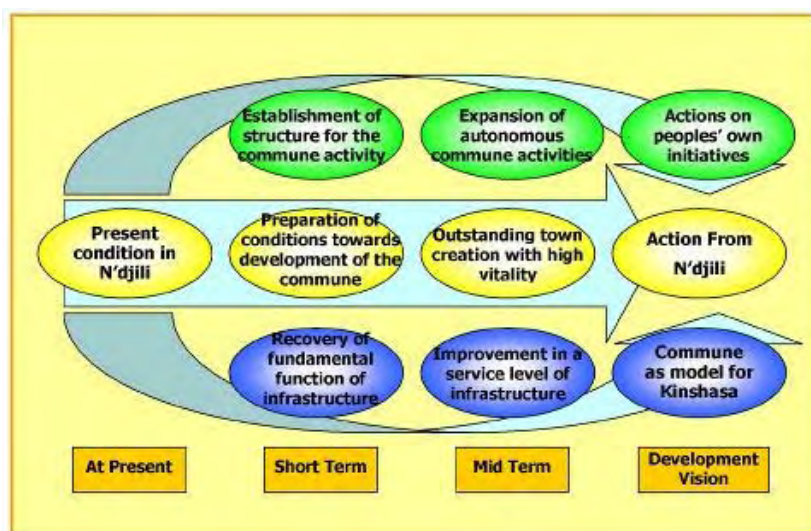


Fig. 3 Approach for the Development of N'djili Commune

6. ACTION PLAN FOR COMMUNITY VITALIZATION

6.1 INSTITUTIONAL ARRANGEMENT FOR ACTION

(1) Local Development Mechanism

A local development mechanism should have a significant initiative for commune development. Both government and donors, however, have limited financial capacity to solve various kinds of issues in commune level. Local level or grassroots development mechanism and initiatives are significantly important to tackle various miscellaneous issues in the community. In this regard, the

government and grassroots institutions should collaborate for planning, implementation, and evaluation of those community development activities. The CLDs can be a key coordinators and facilitators to mobilize the population in cooperation with churches, NGOs and associations.

(2) Realization of Action Plan and Securing Sustainability

Implementation of the development Action plan with sustainability requires the commitment of not only the government and donors but also the civil society and the population.

Through the Community Profile Survey, the JICA study team established the good relationship with the CLD members as well as the counterparts of N'djili commune office and the Provincial Ministry of Plan, Budget, Public Works and Infrastructures. The team involved these stakeholders in the process of data collection, planning workshops, and stakeholder meetings. It is necessary for the stakeholders especially the counterparts to participate in the planning activities working together with the JICA study team. It is necessary to examine actual capacity and constraints of the grassroots institutions, budget allocation of the government and donors through the planning process.

6.2 Establishment of Improvement policy for urban planning issues

(1) improvement policy for urban planning and land use issues

Corresponding to issues mentioned Action Plan Chapter 2 Present Conditions of the N'djili Commune, required activities for urban environmental improvement towards urban rehabilitation are shown in Table 2 as improvement policy.

Table 2 Improvement Policy for Urban Planning and Land Use Issues

| Urban environment | Urban planning | Legal affairs, Implementation of plan |
|--|---|---|
| A-1. Urban redevelopment, land readjustment - high utilization of land (advancement of reconstruction into multi-floor building) - restructuring of public space (road network, park et al.) - improvement of public space relating to redevelopment projects A-2. Construction and reconstruction of individual public facilities A-3. Voluntary prescription of construction rules in N'djili commune | B-1. Basic census survey for whole Kinshasa Province. B-2. Development policy making and preparation of Urban master plan for whole Kinshasa Province - political decision making - inter ministerial counsel - discussion and negotiation with every commune for future prospect B-3. Prescription of construction rules according to local condition and customs | C-1. Enhancement and complementing of legal system concerning urban planning, construction and land use C-2. Strengthening capability for observation and verification on construction activities - its entrustment to residents' association for example |

(2) Land Use Restructuring Policy

For examination on future land-use and environmental improvement project of urban spaces in N'djili commune, the following are enumerated as the content that should be considered in the reorganization policy.

About new Development Site: It is necessary to reorganize existing blocks in urban area to correspond to an overpopulated situation, and to promote their advanced use.

About Agricultural Land: The geological features of present agricultural site are considered not suitable for construction. So it should be preserved in the future land-use plan.

About the Land Use System: the possibility of establishing detailed land use system and regulations that are suited to the local lifestyle is quite low.

Development of Architectural Capacity: Since the Commune already suffers from overcrowding, the remodelling of existing building into multilayered structures is needed to secure enough floor space for residents.

Reorganization of Land Use: It is necessary to divide its land use for the long term into a residential, commercial and industrial land use.

(3) Urban Space Improvement Scheme

Correspondence to Wide Urban Area Function: It is necessary to work on the rehabilitation and the high standardization of Route Nsanda in consideration of the south to the by-pass road in the future for the future plan of N'djili commune.

Collaboration with the Vicinity Commune: It should be assumed the functional cooperation of district (5 communes) including N'djili commune is corresponding to the city development in the eastern part of Kinshasa of the future.

Reconstruction of Road Network in District: All traffic tends to concentrate to the central ring road that surrounds quartier 7. Hence in a mid-term frame, an existing road is proposed to be connected and an outer ring road constructed.

Upgrade of Land Use: It is necessary to attempt the construction of the multilayered buildings and introduction of communal facilities (road, park, and district facilities) by redeveloping the district.

Construction of Agricultural Road: The improvement of the district environment is planned to be attempted by rehabilitating agricultural roads and area environmental improvement around the road additionally.

6.3 URBAN INFRASTRUCTURE

(1) Main Problems, Action, Goal and Development Policies for Urban Infrastructure

Table 3 Policies and Actions for Urban Infrastructure

| Policy | Action |
|--|---|
| Establish adequate road and drainage maintenance system by community participation | <ul style="list-style-type: none"> • Improve Luemba Boulevard as a main street of N'djili. • Rehabilitation of existing paved roads. • Improvement of N'djili Junction to relief traffic congestion. • Rehabilitation of community roads by LBT. • Clean-up gutters together with the sanitation brigade |
| Ensure the sustainable urban growth with strong and stable economy | <ul style="list-style-type: none"> • Capacity Development for Provincial Urban Planning Sections of the Province. • Rehabilitation of urban core zone (Q7). • Development of Community Core Zone. • Planting flowers and tree along streets |
| Satisfy increasing traffic demand and ensure traffic safety and security | <ul style="list-style-type: none"> • Installation of Sidewalk and Traffic safety facilities/Pedestrian crossings, Traffic sign, Humps, etc. • Improvement of Tertiary Roads. |
| Enhance equal accessibility and promote public transport | <ul style="list-style-type: none"> • Improvement of bus route network, bus terminal, bus stops |
| Establish adequate road network system with accessibility (Long Term) | <ul style="list-style-type: none"> • Development of integrated road network plan. |

6.4 HEALTH AND SANITATION

Table 4 Policies and Actions for Health and Sanitation

| Policy | Action |
|---|--|
| Rehabilitation of the Health Centres, Development of Health Centre Maintenance System (Action by Provincial Government) | <ul style="list-style-type: none"> • Rehabilitation and construction of health centers as focal points of local health services • Construction of maternal and child health care centre including surgical unit • Establishment of health information system (HIS) • Establishment of appropriate deployment system of doctors and nurses in N'djili health zone. • Establishment of solid waste disposal systems in the Province |
| Establishment of Health & Sanitary Management Systems , Installment of Sanitation Facilities (Action by Commune) | <ul style="list-style-type: none"> • Rehabilitation and construction of public toilet. • Formulate sanitation and hygiene management plan. • Health & Sanitation education in the School • Establish solid waste management system |
| Sensitization, Promotion of Health & Sanitation Activities (Action by Residents) | <ul style="list-style-type: none"> • Sensitization on sanitation and hygiene issues. • Clean-up solid waste and promoting recycling |

6.5 EDUCATION AND CITIZENSHIP

Table 5 Policies and Actions for Education and Citizenship

| Policy | Action |
|---|---|
| Rehabilitation of Schools and Improvement of those Environment, Support School Facilities and Equipments. (Action by Province) | <ul style="list-style-type: none"> • Rehabilitation of security fence. • Rehabilitation of toilet for primary and secondary schools. • Rehabilitation of classrooms. • Supply equipment for primary and secondary schools |
| Empowerment of Civil Society Organization (Action by Commune) | <ul style="list-style-type: none"> • Strengthening Capacity of the Commune Administration |
| Action from Residents/community peoples (Action by Residents) | <ul style="list-style-type: none"> • Civic Education • Non-formal education for out-of-school children • Sports and culture promotion in the commune & schools |

6.6 INDUSTRY AND EMPLOYMENT

Table 6 Policies and Actions for Industry and Employment

| Policy | Action |
|---|--|
| Promotion of N'djili Industry, (Action by Provincial Government and Commune) | <ul style="list-style-type: none"> • TOT of N'djili masters at ITI • Rehabilitation of markets, storages • Establishment of Industry Support Systems. |
| Improvement of Agricultural Production (Action by Provincial Government and Commune) | <ul style="list-style-type: none"> • Establish and operate farmers' market at CECOMAF |
| Networking of Small Vendors (Action by Residents) | <ul style="list-style-type: none"> • Establish N'djili industry association |

6.7 WATER AND ELECTRIC POWER SUPPLY

Table 7 Policies and Actions for Water and Electric Power Supply

| Policy | Action |
|--|--|
| Distribution Network Management (Action by Provincial Government) | <ul style="list-style-type: none"> • Improvement of Water/Electric Power distribution network and water equipment. • Establishment of distribution network management system |

7. IMPLEMENTATION SCHEDULE ON ACTION PLAN

7.1 10 YEARS ACTION PLAN FOR EACH SECTORS

(1) Action plan for urban infrastructure

1)Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project

Following 9 projects are proposed at the Rehabilitation Phase. The order of project is depends on project intiaives, from Provincial Gorvernment, Commune Office, to residents with time logical sequences.

- Improve Luemba Boulevard as a main street of N'djili.
- Rehabilitation of existing paved roads.
- Capacity Development for Provincial Urban Planning Sections of the Province.
- Improvement of N'djili Junction to mitigate traffic congestion.
- Installation of Sidewalk and Traffic safety facilities/Pedestrian crossings, Traffic sign, Humps, etc.
- Rehabilitation of Community Roads using LBT (Application of "Do-Nou" Technology).
- Rehabilitation of urban core zone (Q7).
- Clean-up Gutters Together with the Sanitation Brigade
- Planting flowers and tree along streets

2)Development Concept of the Development Phase (Middle-term Period; 2014-2018) Project

Under the overall Development Concept, following 2 Development Concepts are set for urban infrastructure projects in the Rehabilitation Phase.

- Enhancement of Public Transportation.
- Improvement of living environment/conditions of the commune.

Consequently, following 3 urban Infrastructure Projects are proposed to implement at the Development Phase.

- Improvement of Tertiary Roads.
- Improvement of bus route network, bus terminal, bus stops
- Development of Community Core Zone.

3)Development Concept of the Long-Term Project (After 2019)

Successively, after completion of Development Phase Projects, following an urban Infrastructure Project is expected to implement to complement.

- Development of integrated road network plan.

(2) Action Plan for Health And Sanitation

1)Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project

In Health sector, following actions are recommended to execute urgently.

- Rehabilitation and construction of health centers.
- Construction of maternal and child health care centre including surgical unit
- Establishment of health information system (HIS) on epidemiological deceases and reproductive health
- Health & Sanitation education in Schools and Streets
- Rehabilitation and Construction of Public Toilet
- Establishment of solid waste disposal systems in the Province
- Formulate sanitation and hygiene management plan

- Establish solid waste management system in the Commune
- Sensitization on sanitation and hygiene issues
- Clean-up solid waste and promoting recycling

2)Development Concept of the Development Phase (Medium-Term Period; 2014-2018) Projects

Without a successive project since started from Rehabilitation Phase, there is no proposed implementation project newly starts at the Development Phase.

(3)Action Plan for Education and Citizenship

1)Development Concept of the Rehabilitation Phase (Short-term Period; 2009-2013) Project

Following a project is proposed at the Rehabilitation Phase.

- Rehabilitation of security fence for primary and secondary schools
- Rehabilitation of toilet for primary and secondary schools
- Rehabilitation of classrooms
- Strengthening Capacity of the Commune Administration
- Civic Education
- Non-formal education for out-of-school children

2)Development Concept of the Development Phase (Medium-Term Period; 2014-2018) Projects

Consecutive actions from Rehabilitation Phase, following projects are proposed at the Development Phase.

- Supply Equipment for Primary and Secondary Schools
- Sports and Culture Promotion in the Commune & Schools

(4)Action Plan for Industry and Employment

1)Development Concept of the Rehabilitation Phase (Short-term Period: 2009-2013) Project

Following 5 projects are proposed at the Rehabilitation Phase.

- TOT of N'djili masters at ITI
- Rehabilitation of markets, storages
- Establish and operate farmers' market at CECOMAF
- Establishment of Industry Support Systems
- Establish N'djili industry association

2)Development Concept of the Medium-term Project

Without successive projects since started from Rehabilitation Phase, there is no proposed implementation project newly starts at the Development Phase.

(5) Action Plan for Water and Electric Power Line

1) Development Concept of the Rehabilitation Phase (Short-term Period: 2009-2013) Project

Therefore, following a project is proposed at the Rehabilitation Phase.

- Rehabilitation and upgrading of RESIDESO water supply, SNEL electric power supply network

2) Development Concept of the Development Phase (Middle-term Period: 2014-2018) Project

Without successive projects since started from Rehabilitation Phase, there is no proposed implementation project newly starts at the Development Phase.

3) Development Concept of the Long-Term Project after Action Plan (After 2019)

Following a project is proposed at the Long Term Phase.

- Technical Assistance Project for Management of the Water supply, Electric power supply Distribution Network.

8. PILOT PROJECT

8.1 OBJECTIVES

To implement a variety of projects successfully, the Action Plan verifies the efficiency and effectiveness of Projects in advance. Projects of Action Plan include not only facilities/infrastructure improvement but also projects by community participatory approaches. Through the implementation of Pilot Project, participation of commune people is promoted. Pilot Projects also have the intention of gaining precious lessons by the process of trial and error in project activities. Lessons learned from the Pilot Projects would be applied in other projects at the implementation stage. The Study implemented 4 Pilot Projects during The Study period.

8.2 CIVIC EDUCATION

(1) Outline of the civic education project

Project Purpose: CLD members can facilitate participatory community development to the population using acquired attitude, knowledge and skills respect of law, human rights, and realizing internal good governance.

Overall Goal: CLDs are recognised in the community and can plan and implement various community development projects in N'djili commune towards MDGs in a participative responsible and transparent manner.

Outputs: 1) CLD members are capable of putting together needs for the community development of their communes, and are fully aware of human right through the training, 2) CLDs prepare action plans for community development in each quarter by a participatory approach

(2) Action planning

After the theoretical sessions, the trainees discussed with their neighbours at their quarter about concerning problems and needs of their community. In the result, infrastructure development and improvement of sanitation conditions were high priority issues. However, it was difficult for some of the issues to be solved without external resources such as school construction. The JICA Study Team facilitated the participants to consider using own resources to change their conditions. Then, the participants discussed priority action plans for N'djili commune and selected the three priority action plans as shown in the table below:

Table 8 Commune Action Plans from the Participants

| Priority | Action Plan |
|----------|---|
| 1 | Expansion of civic education |
| 2 | Clean-up gutters and solid waste management |
| 3 | Infrastructure development (gutters, public toilet, and drainage are high priority) |

Expansion of Civic Education was selected as the highest priority action, because the participants recognised that Civic Education was a foundation of community development and mentality change of the people.

8.3 CLEAN-UP CAMPAIGN

(1) Outline of the clean-up campaign project

Project Purpose: Foundation of sustainable grassroots actions for reducing solid wastes and maintenance gutters are established in each quarter.

Overall Goal: Solid wastes in the target streets, markets and gutters are cleaned regularly by the initiatives of CLDs

Outputs: 1) Committees are established in 13 quarters and 4 markets for a sustainable system of community based solid wastes management, 2) CLD members and community acquire knowledge about how to reduce solid wastes, 3) Markets, streets and gutters are cleaned up by community, 4) Community based Plastic Recycling organization is operating to recycle plastic wastes.

(2) Achievement

The project purpose is achieved. Through the clean-up of target markets, gutters and streets and the sensitisation by CLD initiative, a foundation of sustainable grassroots actions for reducing solid wastes and maintenance gutters was established in each quarter.

Achievement of the sensitisation programme is shown in the below table.

Table 9 Result of Sensitisation Programme

| Place | Number of sessions | Direct beneficiaries |
|--------------|--------------------|----------------------|
| Schools | 26 | 5,200 |
| Markets | 11 | 4,500 |
| Churches | 3 | 1,000 |
| Total | 40 | 10,700 |

8.4 ROAD REHABILITATION PROJECT BY DO-NOU TECHNOLOGY

(1) Outline of the road rehabilitation project by do-nou technology

Project Purpose: Foundation of sustainable grassroots actions to rehabilitate road by the participation of commune people with utilizing of Do -nou technology.

Overall Goal: Potholes and erosions of the unpaved roads in commune are rehabilitated by the commune people under the initiative of CLDs

Outputs: 1) Technology and knowledge are transferred to attendant people to rehabilitate road by themselves, 2) Attendants can diffuse the technology to other people and other communes, 3) Community based road maintenance activity become general, 4) Organization of commune and CLDs are strengthened

(2) Using Do-Nou Technology

The use of DO-NOU technology for the maintenance of unpaved roads in some Asian countries dates back to 2000s. This technology has been applied in the Philippines; it is being introduced in African countries such as Kenya, Cameroon, Tanzania, Uganda, etc.

(3) Implementation of Training

Training consists of classroom training and field training. The classroom training started on October the 26th 2009 for the members of CLD selected in the Commune of N'djili.

The field training was conducted on Tuesday October the 27th 2009, everyone from trainers to trainees met. After training on how to fill the bags with sand to transform them into Do-Nou, the 52 trainees were divided into 4 teams of 13 people each. Then, it was decided that two teams remain on the site to prepare the section intended to receive the Do-Nou bags for road improvement.

8.5 REHABILITATION OF LUEMBA BLVD.

(1) Outline of the rehabilitation of luemba blvd.

Project Purpose: 1) Urgent distribution of the peace divided to the beneficiaries, 2) To collect information on the business practice, design and cost estimation, the capacity of the local contractor for the confirmation of the possibilities for the execution of the new project, 3) Capacity development to provincial government and commune office

Overall Goal: 1) Rehabilitation of Blv. Luemba, 2) Provision of beautiful urban space, 3) Reduction of the flood area by the installation of the storm water drainage system, 4) Traffic safety by the provision of sidewalk with traffic safety measures Potholes and erosions of the unpaved roads in commune are rehabilitated by the commune people under the initiative of CLDs

Outputs: 1) Paved carriageway, 2) Provision of the sidewalk, 3) Provision of proper storm water drainage system to the existing outlet, 4) Minimum land acquisition and house compensations

(2) Design policy and standards

The following policy was established for the design and the implementation of the project;

- 1) To construct a symbolical avenue of N’ djili commune,
- 2) To secure the safety of pedestrians, cycles and vehicles,
- 3) To create a focus of prosperity of the commune.

The Study Team basically applied to use the DCR road design standards as the most appropriate standards for the Luembe Blvd.

(3) Implementation Plan

Before implementation of Pilot Project, the committee was set up between DRC side and Project team.

This project was implemented by AFRITEC on a contract basis with JICA DRC. AFRITEC was selected through the designated bidding.



Fig. 4 Final Work Schedule for the Rehabilitation of Blv. Luemba

8.6 OVERALL EVALUATION

(1) Overall Evaluation

The JICA Study Team evaluated each pilot project and projected the results and lessons learned to the Action Plan, especially in consideration of future implementation and institution arrangements.

Generally, most of the respondents were of the view that these pilot projects had positive impact on the commune. The evaluation result of each pilot project by the general public of N’djili is shown in the figure below.

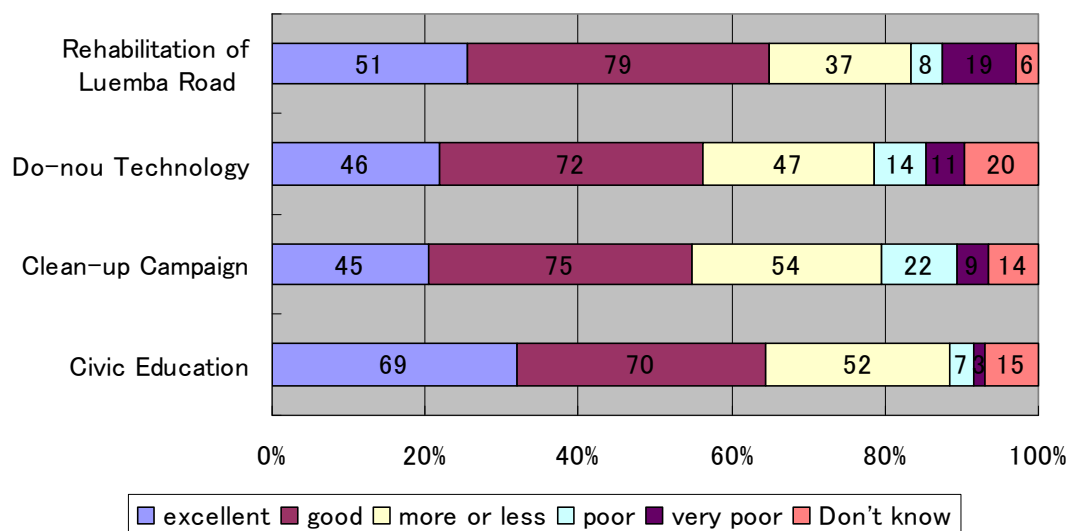


Fig. 5 Evaluation Result of the N’djili Population on the Pilot Projects

(2) Achievements

- 1) The participant's expansion and capacity development in the commune activity
- 2) Reinforcement of commune CLD organization
- 3) Expansion of independent activity
- 4) Formation of core of the commune

(3) Recommendation

- 1) Necessity of functional enhancement of commune administration
- 2) Necessity of continuous support for sustainable activity
- 3) Acknowledgment of action plan and maintenance of plan

9. SOCIO-ECONOMIC FRAMEWORK AND METHODOLOGY FOR URBAN REHABILITATION PLAN IN KINSHASA

9.1 SOCIO-ECONOMIC FRAMEWORK OF N’DJILI COMMUNE IN 2018

(1) Population Framework in 2018

Based on the latest demography as of 2008, The Study Team has made population projections of Kinshasa and The Study area of N’djili Commune taking into account past trends of mortality and fertility plus the effect of HIV/AIDS, at the target year of 2018. The population of Kinshasa Province and The Study area are projected as shown in the following table.

Table 10 Population Forecast in 2018

| 2007 | | | 2018 | | |
|----------|------------|-------------|-------------|------------|-------------|
| 2007 | Population | Density/km2 | Growth/year | Population | Density/km2 |
| DRC | 65,837,000 | 28 | 3.20% | 93,099,000 | 40 |
| Kinshasa | 6,387,725 | 719 | 2.35% | 8,054,229 | 907 |
| N'djili | 320,762 | 34,020 | 1.80% | 390,448 | 41,411 |

(2) Labour force and employment

Ratio of working age population to total population or the labour force coefficient (15-60 years old) is 54% in The Study area. The labour participation ratio including formal and informal is 67% according to the household survey conducted by the team for The Study area. Although the labour force coefficient will increase steadily as the generation affected by the civil war is replaced by the younger generation, it is assumed to be stable as 53.8% in 2018.

(3) Economic indicators

Updated data on gross regional domestic product (GRDP) for smaller administrative unit are not readily available in DRC. Hence, the annual growth rate of GRDP of Kinshasa which is forecasted as 4.7% in the Provincial Development Plan 2007-2011 has been applied in the projection. Based on the assumptions that the GRDP per capita of Kinshasa 2007 estimated in the development plan, US\$260 and the growth rate of 4.7% is applied, in conclusion, the economic structure of The Study area is roughly estimated in the following table.

Table 11 GRDP by industry in N'djili Commune in 2007

| Industry | Population | Structure | Coefficient | Modified | GRDP 2007 |
|--------------|------------|-----------|-------------|----------|--------------|
| Primary | 8,588 | 7.4% | 1.0 | 4.2% | \$3,537,496 |
| Secondary | 39,342 | 33.9% | 1.2 | 22.5% | \$18,735,878 |
| Tertiary | 68,122 | 58.7% | 2.2 | 73.3% | \$61,124,746 |
| Total (GRDP) | 116,052 | 100.0% | | 100.0% | \$83,398,120 |
| GRDP/capita | | | | | \$260 |

9.2 METHODOLOGY FOR URBAN REHABILITATION PLAN IN KINSHASA

(1) General -“Action from N’djili”-

To formulate the urban rehabilitation plan, this plan reviews existing data and development plans and specifies medium to long term (10year) range development policy together with Action Plan. Consecutive stages of this study are following;

- Stage 1: Compile existing data of Kinshasa Province and N'djili commune,
- Stage 2: Prioritize community demands by dialogue and participatory approach.
- Stage 3: Indicate development policy and address Action Plan for the commune,
- Stage 4: Examine Pilot Projects to provide feedback on the Plan.
- Stage 5: Evaluate Pilot Projects and review The Study for improvement the Plan.
- Stage 6: Implement Projects of Action Plan.

(2)Methodology

Stage 1: Analysis of Current Condition in Kinshasa and Commune

Stage 1 is the initial stage of the urban rehabilitation plan. To understand general conditions of commune, data compilation is an indispensable activity towards making an Action Plan.

Stage 2: Community Needs Survey

To signify priority of community development, Stage 2 involved collecting community opinion through several community surveys.

Stage 3: Basic Policy and Action Plan for Commune

After completion of data collection, analysis and community needs surveys, basic policy and Action Plan for commune had been addressed/ formulated. Stage 3 is making a Basic Policy and Action Plan for commune based on previous surveys' results.

Stage 4: Implementation of the Pilot Project

Stage 4 follows following steps of procedure:

- Step 1: Clarification of Objective for Pilot Project
- Step 2: Selection of Pilot Project
- Step 3: Establishment of Implementation Organization
- Step 4: Establishment of Implementation Plan
- Step 5: Acquisition of Budget

Stage 5: Evaluation of the Pilot Project and Reviews of The Study

Stage 6: Project Implementation of Action Plan

The project implementation for Action Plan includes 1) Selecting the priority project of the Action Plan, 2) Formation of Study Team, 3) Basic Design of the Project, 4) Discussion with the government to acquire budget, 5) Establishment of implementation organization for the project, 6) Detailed design of the project, 7) Implementation of the project and 8) Monitoring of the project.

10. CONCLUSION AND RECOMMENDATIONS

(1) Conclusion

- 1) Necessary actions were identified among the variety of stakeholders by participatory approach.
- 2) Organization of CLD was activated and played the significant role in the participatory approach.
- 3) The Study compiled current data and analyzed conditions in Kinshasa province that are of great use in other communes.
- 4) The Study compiled current data and analyzed conditions in the pilot commune. Data collection approach and basic contents of database are applicable for other communes.
- 5) The demand forecasting approach for making Socio-economic frameworks and indicated development policies in The Study are also applicable and valuable for other communes.
- 6) A variety of menu and indicated outlines of prioritized projects in The Study are valuable for making their Action Plans respectively for other communes.
- 7) Through the implementation process of the Pilot Projects, various lessons learned were scrutinized and verified. Pilot Projects motivates the community for participation of the planning.
- 8) Participatory approach and its methodology, defined as “N’djili Model”, are highly valuable for making urban rehabilitation plans that can be applied for other communes

(2) Recommendation

- 1) N’djili model can be utilized as a development guideline for other communes, but it requires some modification depending on community characteristics.
- 2) For sustainability in development actions, capacity building activities through Civic Education Campaign are of paramount importance at Government level, Commune level and Community level.
- 3) To encourage CLD activities, continuous necessary support is indispensable for sustainable impact on the residents and also better appropriateness of the development process.
- 4) To implement development projects, potential donors and international organization assistance and coordination activities for Kinshasa Provincial Government, N’djili Commune and CLD are highly expected.

**THE DEVELOPMENT STUDY FOR URBAN REHABILITATION PLAN
OF KINSHASA IN THE DEMOCRATIC REPUBLIC OF THE CONGO**

FINAL REPORT

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LIST OF ABBREVIATIONS

| Abreviation | English |
|-------------|---|
| ADF | African Development Fund |
| AfDB | African Development Bank |
| AIDS | Aquired Immune Deficiency Syndrome |
| AU | African Union |
| BAD | African Development Bank |
| BEAU | Design Office for Urban Developments |
| BM | World Bank |
| BTC | Belgian Technical Cooperation |
| CAF | Country Assistance Framework |
| CBO | Community Based Organization |
| CCD | Community Development Comission |
| CIDA | Canadian International Development Agency |
| CLD | Local Development Committee |
| CTB | Belgian Technical Cooperation |
| DAC | Development Assistance Committee |
| DFID | (British) Department for International Development |
| DID | Densely Inhabited District |
| DRC | Democratic Republic of the Congo |
| DVDA | Rural Access Roads Department |
| EC | European Committee |
| EIA | Environmental Impact Assessment |
| EMRR | Emergency Multisector Rehabilitation and Reconstruction |
| EU | European Union |
| FAO | Food and Agriculture Organization of the United Nations |
| FDI | Foreign Direct Investment |
| FNUAP | United Nations Fund for Population |
| FPR | Rwandan Patriotic Front |
| GDP | Gross Domestic Product |
| GEEC | Environmental Studies Group of Congo |

| Abreviation | English |
|-------------|--|
| GIS | Geographic Information Systems |
| HDI | Human Development Index |
| HIPC | The Heavily Indebted Poor Country |
| HIMO | Labour Based Technology |
| HIV | Human Immunodeficiency Virus |
| IDA | International Development Association |
| IDP | Internal displaced people |
| IEE | Initial Environmental Examination |
| IFAD | International Fund for Agricultural Development |
| IMF | International Monetary Fund |
| JICA | Japan International Cooperation Agency |
| JPY | Japanese Yen |
| LBT | Labour Based Technology |
| MONUC | (United Nations Mission in the Democratic Republic of Congo) |
| NGO | Non-Governmental Organizations |
| OUA | Organization of African Unity |
| OCDE | Organization for Economic Cooperation and Development |
| ODA | Official Development Assistance |
| OECD | Organization for Economic Cooperation and Development |
| ONATRA | National Office for Transport |
| ONG | Non-Governmental Organization |
| ONU | United Nations Organization |
| OR | Road Agency |
| OVD | Office for Road and Drainage |
| PHC | Primary Health Care |
| PNUD | United Nations for Development Programm |
| PRSP | Poverty Reduction Strategy Paper |
| PTA | Parent-Teacher Association |
| RDC | Democratic Republic of the Congo |
| | |
| | |

| Abreviation | English |
|-------------|---|
| REGIDESO | (Water works Authority) |
| SIDA | Aquired Immune Deficiency Syndrome |
| SIG | Geographic Information Systems |
| SNEL | (Electricity Authority) |
| SNHR | (Rural Hydrogic Bureau) |
| TOT | Training of Trainers |
| UA | African Union |
| UE | European Union |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNFPA | United Nations Population Fund |
| UNHCR | United Nations High Commissioner for Refugees |
| UNICEF | United Nations Children's Fund |
| UNIFEM | United Nations Development Fund for Women |
| UNOPS | United Nations Office for Project Services |
| USAID | US Agency for International Development |
| USD | United States Dollar |
| WB | World Bank |
| WFP | World Food Program |
| WG | Working Group |
| WHO | World Health Organization |
| WHP | Women and Health Programme |
| WIR | World Investment Report |
| WTP | Water Treatment Plant |

CHAPTER 1 : INTRODUCTION

1.1 BACKGROUND

The Government of the DRC under President Joseph Kabila undertook a series of economic reforms in the country. The Government of Japan through its International Cooperation Agency (JICA) has financed The Study for urban rehabilitation plan in Kinshasa whereby Ndjili has been selected as pilot commune for The Study.

Ndjili is a commune of Tshangu District, in the city of Kinshasa, situated in the South of Masina commune which is separated by the Lumumba Boulevard. It is located in the Eastern part of Kinshasa town, in the plain, beyond Ndjili River. It has 13 popular quarters. The population in Ndjili Commune has been increasing due to the inflow from the rural areas. This influx of population has increased poverty, because of remarkable insufficient Basic social infrastructure services and lack of the economic infrastructure supporting economic activities. Based on the above situation in N'djili commune, N'djili commune is selected as the pilot commune with the target of assisting the commune people solve their current issues. And the experiences acquired in N'djili commune will be projected onto other communes so as to establish the methodology for rehabilitation plan in Kinshasa.

The emergency study is to be conducted in Kinshasa which is a capital of the DRC for the purpose of the provision of the peace to all people in the DRC.

1.2 OBJECTIVE OF THE STUDY

The objective of The Study is to recommend and demonstrate appropriate method and process for the formulation of urban rehabilitation plans in Kinshasa, by formulating an urban rehabilitation plan for pilot commune which is in this case N'djili commune.

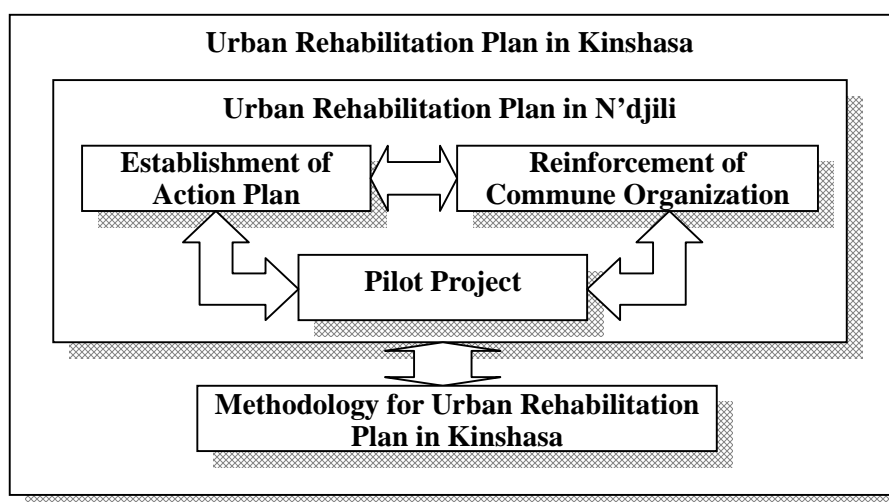


Fig. 1.1 Composition of Urban Rehabilitation Plan in Kinshasa

1.3 STUDY AREA

The Study Area covers Kinshasa Province as shown in the Location Map at the beginning of this Report.

1.4 SCOPE OF THE STUDY

Scope of work, agreed upon between Kinshasa Provincial Government and Japan International Cooperation Agency on 8th August, 2007, clarifies the Scope of The Study as follows;

(1) Review and Analysis on Present Situation of the Pilot Commune

- a) To review existing laws, regulations, policies and institutional arrangements related to commune development;
- b) To review past studies, development plans, projects and traffic surveys in the commune;
- c) To review other existing data and information related to the commune development (existing land use, existing infrastructures etc);
- d) To conduct social survey and other necessary survey(s);
- e) To make community profiles; and
- f) To conduct traffic survey.

(2) Formulation of the Basic Policy for Development of the Commune

- a) To formulate appropriate -framework for discussion of planning with participation of local communities; and
- b) To formulate the basic policy for development of the commune.

(3) Proposing Urban Rehabilitation Plan

- a) To set up future socio economic framework;
- b) To forecast a future demand for land use plan (housing area, commercial area, industrial area etc);
- c) To consider functional layout and formulate a zoning map;
- d) To propose infrastructure development projects;

- e) To make profiles for infrastructure development projects; and
- f) To propose urban rehabilitation plan of the communes.

(4) Implementation of Pilot Project(s)

- a) To select Pilot Project(s);
- b) To conduct designing and cost estimation for the Pilot Project(s);
- c) To prepare implementation plans for the Pilot Project(s);
- d) To prepare bidding documents for the Pilot Project(s);
- e) To conduct biddings and select contractors for the Pilot Project(s); and
- f) To implement the Pilot Project(s).

(5) Evaluation of Pilot Project(s)

- a) To evaluate and analyze the result of the Pilot Project(s);
- b) To summarize lessons learned during the implementation of Pilot Project(s); and
- c) To identify the problems and countermeasures for implementation of the urban rehabilitation plan.

(6) Finalization of Urban Rehabilitation Plan

- a) To finalize the urban rehabilitation plan with feedbacks from evaluation of Pilot Project(s); and
- b) To recommend effective method and process for the formulation of urban rehabilitation plans in Kinshasa.

1.5 STUDY VIEW (CHARACTERISTICS OF THE PLAN)

This study was compiled as an “Urban Rehabilitation Plan” with technical cooperation of JICA. The Rehabilitation Study can be defined as “Planning for urgent rehabilitation of social/economical infrastructure, such as road networks, lifelines or resident housing, including community services of medical treatment, hygiene and education that aim to restructure community society being recovering since post internal conflicts in DRC. Expected task for Urban Rehabilitation Plan is slight difference from conventional “Development Master Plan (M/P)” which integrates comprehensive planning for urban development policy and the strategy. While prior to M/P stage, Urban Rehabilitation Plan relatively focuses on basic infrastructure rehabilitation works and captioned social service improvement. It also has clear intention to present participatory approach for the community autonomy.

Moreover, it is necessary to identify the local resource (local networks, human resources, and available budgets) then should be specify prioritize projects. Therefore, Urban Rehabilitation Plan should give weigh to urgent sector and the region rather than long term conceptual planning to encourage community initiatives for actions. Finally, throughout the verification of Pilot Projects, the study is requested to propose a model of community participation approach for Kinshasa government.

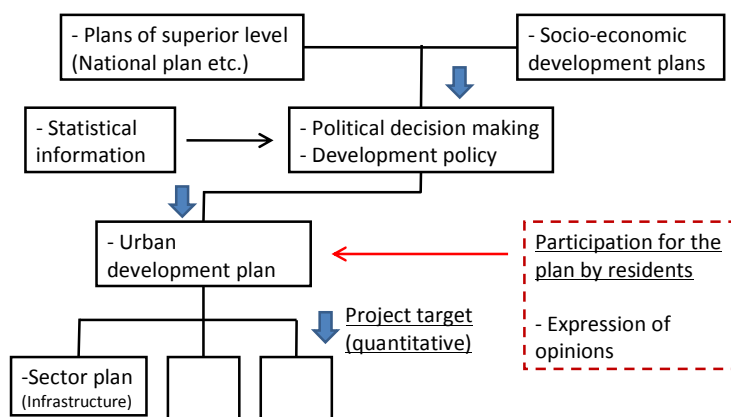


Fig. 1.2 Development Master Plan (for grown society)

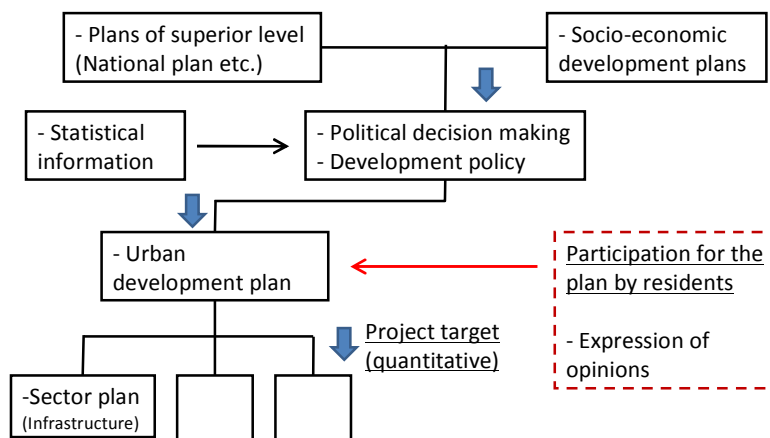


Fig. 1.3 Urban Rehabilitation Plan (for developing society)

1.6 STUDY PROCEDURE

In order to achieve the objectives by carrying out the work items described above, The Study is conducted under the following procedure.

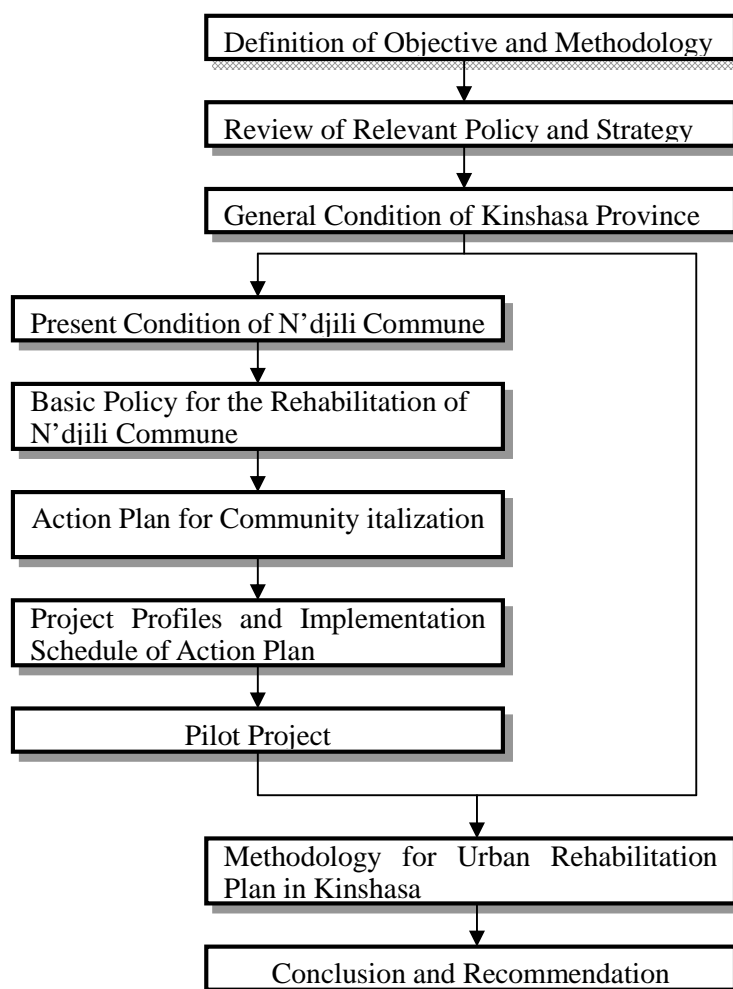


Fig. 1.4 General Flowchart of The Study

1.7 METHODOLOGY

(1) Definition of Objective and Methodology

Based on the view described in 1.5, objective of the study and methodology for the study are clarified.

(2) Review of Development Policies and Strategies

Relevant development policies and strategy of the National Government, Kinshasa Provincial Government and the pilot commune are to be reviewed to provide a base for the establishment of development principle of the pilot commune.

(3) Analysis of General Condition in Kinshasa Province

In order to clarify characteristics of the pilot commune in the socioeconomic and infrastructure aspects, present conditions of Kinshasa Province are grasped in the following items;

Natural condition, Socio economic condition, Land use, Administrative system, Road, Health and Sanitation, Education and Citizenship, Industry and Employment, Access to water and Lifeline

(4) Review and Analysis of Present Condition and Issues of N'djili Commune

1) Review and Analysis on Present Situation

The following survey and analysis for Ndili Commune will be conducted in this Study;

Natural condition, Landuse pattern, Infrastructures, Industry, Socio-economic situation, Existing development policy and Programme, Activities of other donors and NGO, Social environmental consideration regulation act, etc.

2) Conducting of the Social Survey

Social survey for 13 quarter of Ndjili Commune as pilot commune will be conducted. Community profile will be prepared in this Study.

3) Extraction of Existing Issues

As the consequence of the analysis on present condition in N'djili commune, issues in various fields observed at present or anticipated in near future are clarified.

(5) Establishment of Basic Policy for the Rehabilitation of N'djili Commune

Future vision up to the target year and the target for the short term and medium term will be established. The basic policy for the development of the N'djili Commune will be formulated.

(6) Formulation of Action Plan for Community Vitalization

1) Institutional Improvement for Action

2) Formulation of Land Use Plan

3) Formulation of Sector Plan

(7) Preparation of Profile for Development Projects and Establishment of Implementation Schedule

1) The project profile for development project will be prepared for several emergency projects.

2) Implementation schedule of Action Plan for 10 years (from 2009 to 2018) will be established

(8) Implementation of Pilot Project

Pilot project shall be selected from the project files in consideration of the lessons learned by effectiveness, urgency, size of the project, beneficiary and implementation period, and implemented.

(9) Finalization of Methodology for Urban Rehabilitation Plan in Kinshasa

Urban rehabilitation plan for the Commune will be finalized in consideration of the problems and countermeasures in the pilot project. Based on the lessons learned in pilot commune, the methodology and process for the urban rehabilitation plan in Kinshasa will be proposed.

(10) Conclusion and Recommendation

Before finalizing The Study, propositions are pronounced as the Conclusion and Recommendation.

1.8 STUDY SCHEDULE

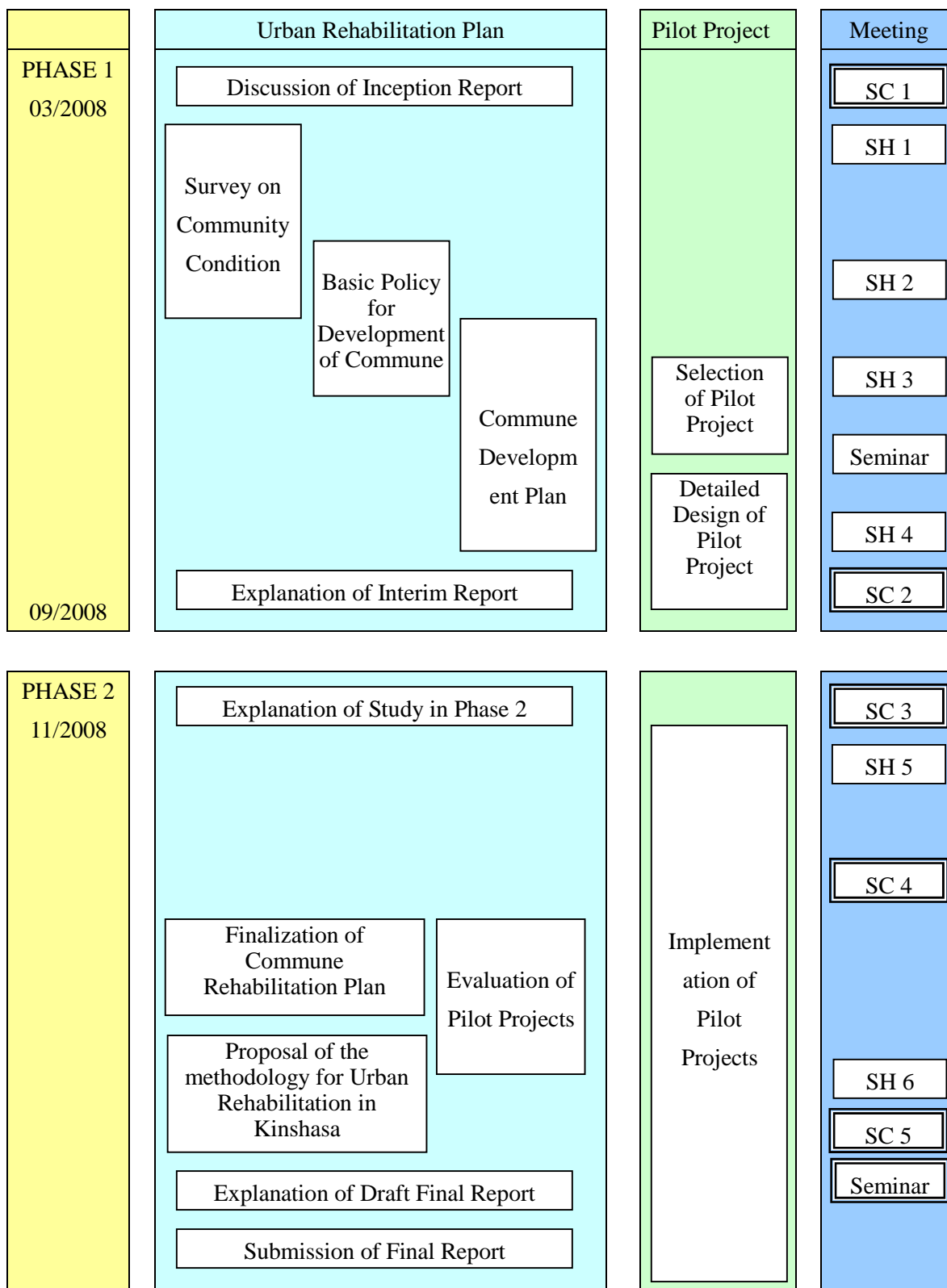


Fig. 1.5 Study Schedule

1.9 STUDY ORGANIZATION

The Study is conducted under close cooperation with the Kinshasa Provincial Government and N'djili commune. Kinshasa Provincial Government is represented by the Ministry of Plan, Budget, Public Works and Infrastructures (formerly the Ministry of Reconstruction and Plan), and N'djili commune is represented by commune office. The Study Team is organized by The JICA Study Team, the members of Kinshasa Provincial Government and N'djili commune.

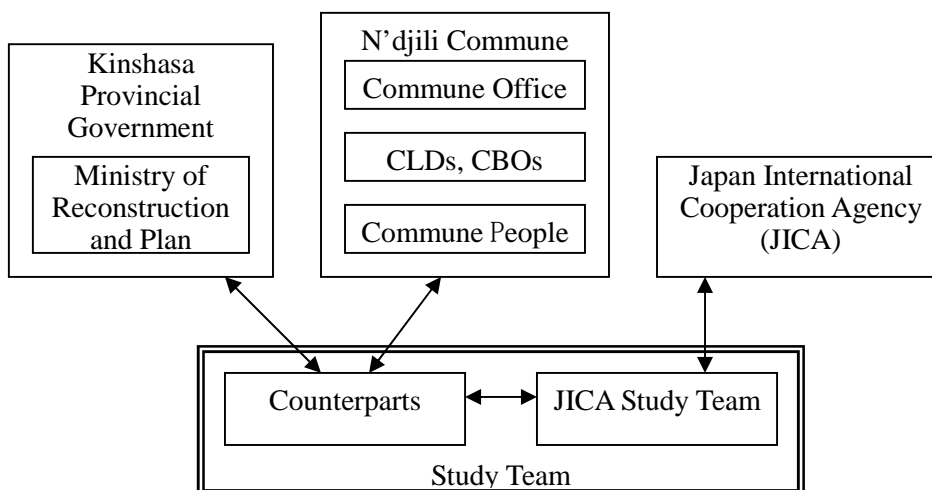


Fig. 1.6 Study Organization Chart

CHAPTER 2 : REVIEWING OF EXISTING DEVELOPMENT POLICIES AND STRATEGIES

2.1 NATIONAL DEVELOPMENT PLANS

2.1.1 Poverty Reduction Strategy Papers (PRSP)

The Congolese Government has set out an ambitious vision for the country’s development. This vision is articulated in the PRSP, which was presented on July 2006. It emphasizes the need to break with past practices and to ensure a dramatic improvement of living conditions throughout the country, as a condition for sustained peace and eventual economic recovery. The PRSP builds on the 2001 Interim PRSP and like the Interim PRSP (which was endorsed by all Congolese political forces at the onset of the peace process) it enjoys broad support among all key constituencies.

2.1.2 Millennium Development Goals (MDGs)

DRC is likely to miss most of the Millennium Development Goals by 2015. While detailed statistical information is lacking, available indicators suggest that the conflict has caused “development in reverse” in the social sectors. Life expectancy stands at 43 years, the under-5 mortality is above 205 per thousand. DRC’s Human Development Index declined by more than 10 percent in the last ten years – and DRC now ranks 167 out of 177 rated countries. Progress made between independence and the early 1990s has largely vanished.

Table 2.1 Targets in 2015 and Current Status of MDGs in DRC

| Millennium Development Goal | 1990 | Target | Status | Remark |
|--|-------|--------|--------|--------------------|
| Eradicate extreme poverty and hunger | 80.0% | | 71.0% | |
| Achieve universal primary education | 54.4% | 100% | 64.0% | |
| Promote gender equality | | 100% | 0.78 | primary female |
| | | | 0.58 | Secondary |
| Reduce child mortality | 205 | 69 | 205 | Per 1,000 |
| Improve maternal health | 1,300 | 975 | 990 | Per 100,000 |
| Combat HIV/AIDS, malaria and other diseases | <4% | | 3.2% | |
| Ensure environmental sustainability Forest Area | 62.0% | | 59.0% | |
| Proportion of people without sustainable access to safe drinking water | 36 | 18 | 78 | Base level in 1980 |

Source: PRSP

2.1.3 Development Strategy

The DRC Government is committed to improving social indicators. In demonstrating its commitment to achieve the MDGs and acknowledging the importance of human capital in poverty reduction, the Government has devoted an entire pillar of the PRSP to developing the social sectors. Following development strategies prioritizing five sectors had been declared by the President, which might govern the regional development plan to be proposed in this study.

- a) Rehabilitation of rural infrastructure including the road network
- b) Health and sanitation

- c) Education, training and human security
- d) Creation of employment opportunity and poverty alleviation
- e) Access to the water and electricity

2.2 DEVELOPMENT ASSISTANCE BY DONORS

In the fiscal year of 2003-2004, DRC received sum of US\$ 3,183 million Development Assistance by donors, defined as International Organization or Industrialized Countries. That amount was second largest Development Assistance: second only to Iraq. Regarding DRC, USA was the leading provider among those donors, followed respectively by European countries in descending order, namely; France, Italy and UK. Particularly, as a background to the process of peace keeping and post conflict economic recovery in DRC, Development Assistance for DRC focuses on urgent rehabilitation program for Kinshasa and eastern provinces.

2.2.1 Assistance Frameworks and Policies

In order to assist more efficiency support and upgrade synergy effects, the donors set up its development policies and strategies under their development assistance frameworks and action plans.

2.2.2 Development Assistance in Kinshasa City

International Organizations, such as WB, UNICEF, UNDP, UNHCR, UNEPA, UNESCO, support assistance of Health, Hygiene, Education and Community Development sectors in Kinshasa City. Bilateral Development Assistance disbursed those sectors as well through the collaboration with Belgium (BTC), UK (DFID), USA (USAID), and Germany (GTZ).

2.2.3 Development Assistance in the N'djili Commune

In the N'djili Commune, Development Assistances are supported by BTC, China and UN-HABITAT.

(1) Development Assistances by BTC

In N'djili commune, BTC implemented road rehabilitation projects of Cecomaf road. The Cecomaf road is a 2.2km long pavement (asphalt) road with drainage works from Airport Road southwards alongside the N'djili River.

(2) Development Assistances by China

China constructed The China-RDC Friendship Hospital in 2007. The hospital, which is equipped with advanced standard facilities, is designated as Tsgangu district's reference hospital.

(3) Development Assistance by UN-HABITAT

UN-HABITAT (The United Nations Human Settlements Programme) is implementing capacity development project in N'djili commune and Masina commune for commune officers, CLD leaders and NGOs from November, 2008. Implementation period is two years. Content of capacity building consists of the following modules;

- Module 1: Local leadership
- Module 2: Local economic governance
- Module 3: Participation for communal development

CHAPTER 3 : GENERAL CONDITION OF KINSHASA PROVINCE

3.1 NATIONAL CONDITION

3.1.1 Location

Kinshasa is located in an alluvial plain of about 700 km upstream from the Atlantic Ocean of the Congo River, with an altitude in the range of - 550 m to 300 m above sea level. The Congo basin system is the main source of the drinking water supply. The water level of the Congo River tends to increase during the rainy season, which begins around November.

3.1.2 Climate

The climate of the Democratic Republic of Congo consists of two seasons; the rainy season and the dry season. The rainy season lasts from November through April, and May through October. METELSAT, L'agence nationale de météorologie et télédétection par satellite, is in charge of the weather survey.

3.1.3 Geology

The surface stratum of Kinshasa is comprised of sand and silt clay by river sediment. A sandstone layer exists 6 m-10 m underneath of the earth's surface.

3.2 ADMINISTRATIVE SYSTEM

At present, the DRC has 11 provinces within its own territory, including the Kinshasa Province, which is the sole province withholding a special status in the DRC. There are urban Divisions for the various Ministries. These have so far been functioned under the Authority of the Central Government. However, after the Decentralization Law was promulgated by the President of the Republic in July of 2008, some functions that were falling under the responsibility of the Central Government were shifted to Kinshasa's Provincial Government. It should be noted that the Central Government consists of more Ministries than the Provincial Level, as most functions at the Central Government level are combined into one Ministry at the Provincial Level. Kinshasa's Local Government has 10 ministries and within them is the Urban Divisions.

3.3 COMMUNITY ORGANIZATION

Generally, the community unit/entity in Kinshasa Province is classified on a commune basis. At present, Kinshasa Province manages a total of 24 communes. In the case of the N'djili commune, it is directed by the burgomaster, a representative of the commune, with 28 public departments. Moreover, the N'djili commune has 1 commune administration office and 23 administrative branch offices. The habitat zone under the commune is referred to as "Quarter," which has its own Quarter leaders respectively.

3.4 SOCIO-ECONOMIC CONDITIONS

3.4.1 Population

According to the household survey conducted by the National Institute of the Statistics (INS) in 2004, 51.2% of the population of Kinshasa City is composed of women. The majority of the population consists of the younger generation and more than half (51.3%) of the individuals are below 20 years

old, of which 97.9% is Congolese, and 71% of whom originated from Kinshasa or its surrounding provinces.

3.4.2 Land Use

(1) Existing Land Use Plan

The following two plans are provided as a land-use master plan that concerns Kinshasa City and the N'djili commune now. These plans were determined in the 1960-70's. Therefore, the plan is not completely appropriate for the present urban situation.

1) SCHEME DIRECTEUR D'AMENAGEMENT ET D'URBANISME"

This master plan targets Kinshasa's Economic Region (REK: Region Economique de Kinshasa). The Study of the plan started in 1972, and its outline was provided in 1975. B.E.A.U. (Bureau d'Etude d'Amenagements Urbains) was chiefly involved in the planning and survey of this master plan. This plan is the latest master plan targeting the whole city. The plan aims to complete its objective by the year 1990.

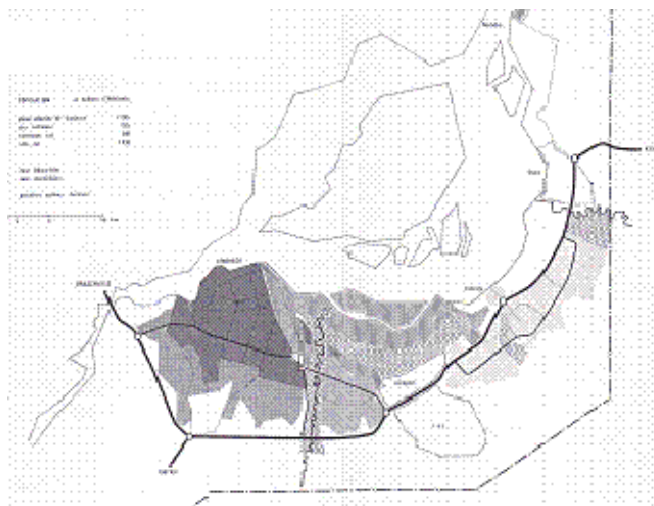


Fig. 3.1 Distribution of the Population

Source: SDAU Kinshasa (BEAU, 1975)

2) "Agglomeration de N'djili: Plan Particulier d'Amenagement"

The district master plan was intended for each of the communes; N'djili, Masina, and the present Kinbanseke, which was provided in 1969 before the decision of the city master plan was provided in 1975, which was intended for REK. This master plan was provided as a planning document based on governmental ordinance concerning urban planning (Decret du 20 juin 1957 sur l'urbanisme) supported by the French institution. This document is composed of planning documents, drawings, and documents of the city's planning regulations.

The district development plan intended for three communes was prepared. The land-use plan and improvement scheme plan for the Pilot Project site are shown in the plan drawing. The planning document which explains the planning process from results of the surveys to concrete projects cannot be obtained. However, whether it exists or not cannot be confirmed.

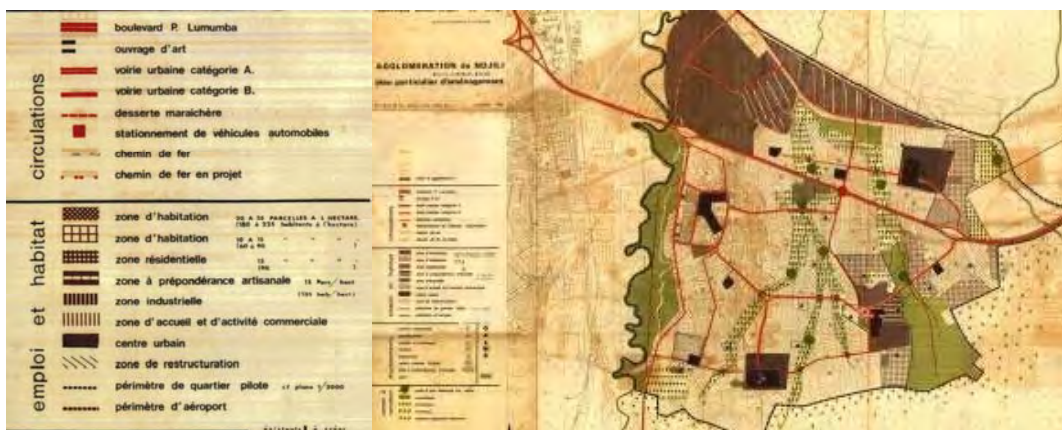


Fig. 3.2 Distinctive Urban Master Plan for N'djili Area

source: Agglomeration de N'Djili plan particulier d'aménagement (BERU, 1969)

(2) Structure of Existing Land Use

The land use situation of Kinshasa City of today is shown as in following figure.

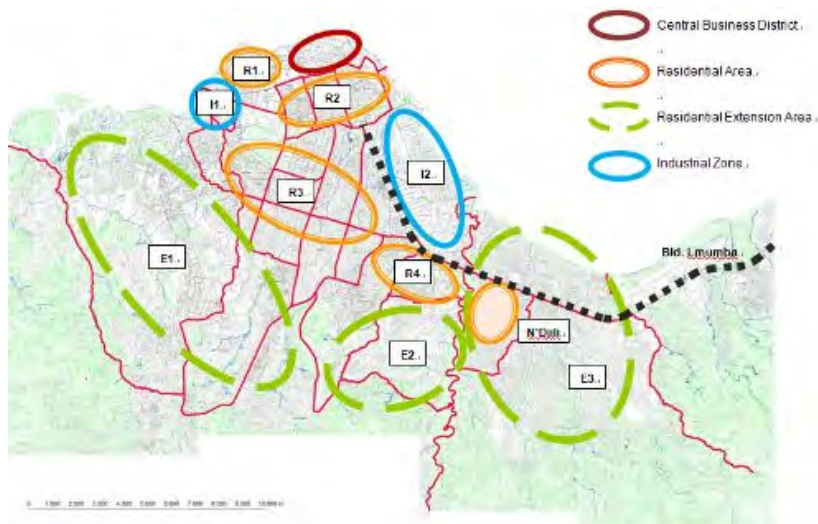


Fig. 3.3 Structure of Existing Land Use

Source: JICA Study Team

(3) Issues on Urban Planning/Development

The problems of the Kinshasa province concerning land issues, land use, and urban environment are shown as in Table 3.1. The problems which mainly exist are within the contents of the current urban plans and the insufficiency of the legal system.

Table 3.1 Issues Regarding Urban Planning and Land Use

| Problems on Existing Urban Plans of Kinshasa Province |
|---|
| - Inconsistency between Kinshasa’s city plan, commune land use plan, and actual urban condition (outdated) |
| - Lack of a developmental policy at the city level as a whole |
| - Lack of reliable census and other relative information |
| - No detailed plan or planning regulations (except for two limited districts including the N’djili commune) |
| - Inadequate planning index or local life style (too modernized) |

3.5 SECTOR CONDITIONS

3.5.1 Urban Infrastructure

(1) Roads

1) Existing Road Conditions in Kinshasa

According to the Local Development Plan for Primary Roads in Kinshasa, existing road conditions for primary roads in Kinshasa are shown in the following Figure.

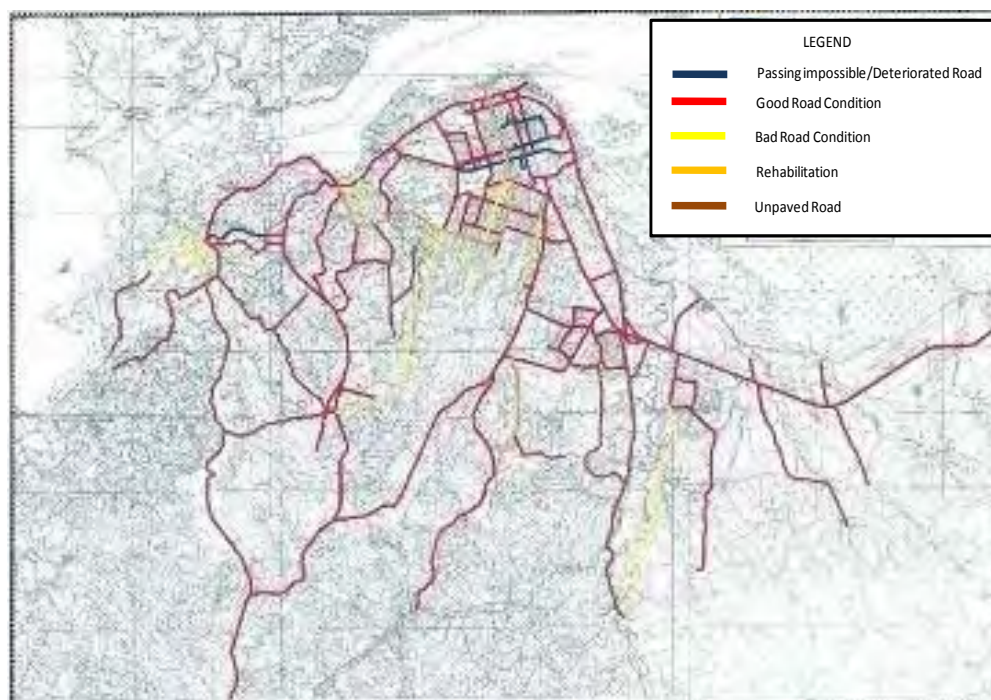


Fig. 3.4 Existing Primary Road Conditions in Kinshasa

Source: Division Urbaine des Transports et Voies de Communication, Ville de Kinshasa(2008)



Fig. 3.5 Road Project Map by each Donor in Kinshasa

Source: Division Urbaine des Transports et Voies de Communication, Ville de Kinshasa(2008)

2) Existing Networks and Traffic Volume

“Boulevard Lumumba” connects from downtown of Kinshasa province to N’djili Airport and “Boulevard Poids lourds,” a port area in the eastern part of downtown to the intersection of Limete in the suburbia. “Route de Matadi” from Kinshasa to Matadi, “Boulevard du 30 Juin,” “Avenue Pierre Mulele,” and “Avenue Kasavubu” are the central routes in Kinshasa, while “Boulevard Triomphal” and “Boulevard Sendwe” face the stadium and exist as Kinshasa’s main arterial road.

The results of the traffic survey in “Edude de reforme du cadre institutionnel des transports urbains en Republic Democratique Congo, 2005” is shown in the following map. The heaviest traffic volume tracked on Boulevard du Juin was 35,749 vehicles/12h. The second was 33,975 vehicles/12h at the west side of the Limete intersection on Boulevard Lumumba to N’djili airport at 33,975 vehicles/12h, and the third was 23,221 vehicles/12h at the east side of Limete intersection.

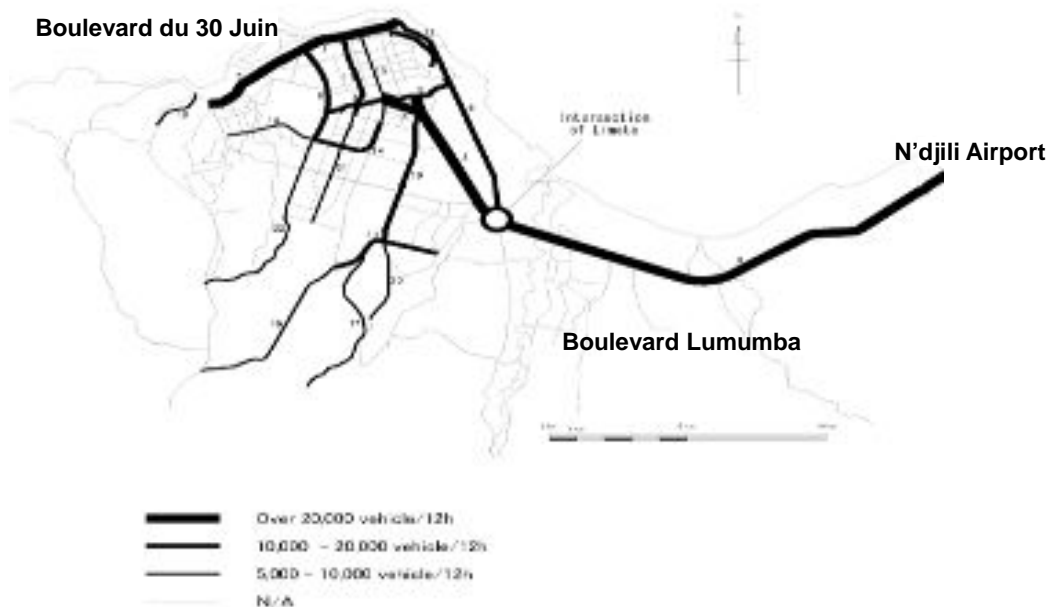


Fig. 3.6 Traffic volume in Kinshasa

Source: Division Urbaine des Transports et Voies de Communication, Ville de Kinshasa(2008)

3) Traffic Accidents

The number of traffic accidents and victims involved are shown in the chart below. Although the number of traffic accidents in the last decade was consistent until 2006, the number has increased to 3,674 cases in 2007 (an increase of 959 cases from 2006). The number of victims involved per accident is shown in the bar chart below, peaking in 2004 and decreasing ever since, as the ratio shown in 2007 1.5 persons/accident. However, the total numbers of victims involved are increasing; 361 people have died from traffic accidents, 3,901 people were seriously injured and 1,330 people had minor injuries to count.

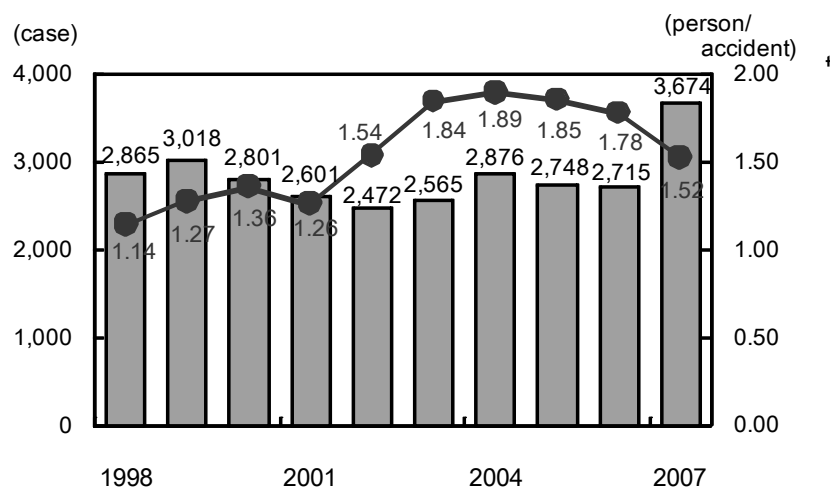


Fig. 3.7 Number of Traffic Accidents and Victims Involved per Accident

Source: Etude de reforme du cadre institutionnel des transports urbains en Republic Democratique Congo

(2) Public Transport (railways and buses)

1) Railway

There are three railway lines in Kinshasa, Gare Centrale-N'djili Airport, Gare Centrale-Kasangulu-Matadi (Bas Congo province), and Gare Centrale-Kitambo-Kinsuka. However, Gare Centrale-Kitambo-Kinsuka is not operational because of the condition of the current system and the lack of available engines. Trains are operated by ONATRA (Office National de TRAsport). Regarding stations, Gare Centrale-N'djili Airport has 10 stations, while Gare Centrale-Kasangulu-Matadi has 9 stations. Two trains are scheduled in the morning and only one train in the evening for Gare Centrale-N'djili Airport, while the other train is scheduled for both ways in Gare Centrale-Kasangulu-Matadi.

2) Bus

The bus operation system is managed by public corporations such as CITY TRAIN and RETRANS KIN, or by private companies and/or owner-drivers. Among the buses being managed by public corporations, CITY TRAIN operates the inner city lines and intercity lines. RETRANS KIN is managed by the Kinshasa province and operates only in inner city lines. The Buses operated by CITY TRAIN and RETRANS KIN were donated by Korean Aid. The bus routes are operated by CITY TRAIN and are shown in the next pages. Minibuses are operated by private companies and/or owner-drivers. As for the private companies, CONGOBUS and JEFFERYTRAVELASE have many buses within Kinshasa. The capacity of passengers for a minibus is 12-16 people, and 3 or 4 lines of benches are provided for a maximum of 4 people per bench.

3.5.2 Health and Sanitation

(1) Health

1) Government Priority Action Programme (PAP) for the Health Sector

National Ministry of Planning and UNDP (United Nations Development Programme) formulate the "GOVERNMENT PRIORITY ACTION PROGRAMME (PAP)," in PRSP. The vision is articulated in PAP, which was presented in August of 2007. The target years are set from July of 2007 to December of 2008. The post-conflict social situation in the DRC is economically at its lowest level. The health and education sectors, along with accessibility to safe water in a safe environment with almost a non-existing social security, need urgent attention and well-balanced action plans.

2) "Five-Year Health Plan for the Kinshasa Province 2008–2012, Health Development Plans for Kinshasa Provincial Government"

The FIVE-YEAR HEALTH PLAN was prepared through UNICEF and WHO in collaboration with BDOM, Salvation Army Church, Rotary Club and Kinshasa Health Inspection in 2007. The general objective is to improve the medical situation of the population for the Province of Kinshasa. Specific objectives are: 1.) To revitalize the health zones to correct the distortions, for recovering its function as preliminary unit of health and sanitation activities; 2.) To reorganize the intermediate level of Health and Sanitation sector; 3.) To rationalize the finances of the health sector; 4.) To reinforce the intra and intersector partnership; 5.) To develop human resources for health and 6.) to reinforce the research of the system of health.

Table 3.2 Epidemiologic Situation of 2005

| N° | Diseases | Cases | Deaths | Lethality |
|----|-------------------------------|-----------|--------|-----------|
| 1 | PALUDISM | 2,112,834 | 4,650 | 0.20 % |
| 2 | TYPHOID FEVER | 376,991 | 208 | 0.05% |
| 3 | MEASLES | 161,005 | 1425 | 0.80% |
| 4 | MENINGITIS | 4,060 | 405 | 9.90% |
| 5 | BLOODY DIARRHEA | 2,384 | 20 | 0.83% |
| 6 | WHOOPING COUGH | 674 | 1 | 0,90% |
| 7 | NNT (Neo Natal Tetanos) | 128 | 11 | 8.60% |
| 8 | AFP(Acuite Fraccid Paralysis) | 0 | 0 | 0.00% |
| 9 | CHOLERA | 0 | 0 | 0.00% |

Source: Inspection Provinciale de la Santé

3) General Administrative Condition

The province of Kinshasa has thirty-five Health Zones in six health districts. Out of the 35 health zones in the city, 5 of them presents a coverage rate lower or equal to 25%, 13 with a coverage rate higher than 25% and lower or equal to 50%, 11 with a coverage rate higher than 50% and lower than 75%, and 6 with higher than 75% and lower or equal at 100%.

According to the provincial inspection section of Kinshasa, the budget for health and sanitation is approximately 4.2% of the national budget of the RDC. However, this amount is actually less than 2%. Annually, 3 US dollars per person is required to receive decent medical services.

4) Health Facilities

Total number of facilities, beds, and doctors in the province of Kinshasa is as follows:

Table 3.3 Total number of facilities, beds, and doctors in the province of Kinshasa

| Health District | No. of Facility | No. of Bed | No. of Doctor |
|-----------------|-----------------|------------|---------------|
| FUNA | 243 | 1,522 | 193 |
| GOMBE | 201 | 772 | 146 |
| KALAMU | 553 | 2,626 | 108 |
| LUKUNGA | 307 | 1,740 | 49 |
| NDJILI | 376 | 2,097 | 330 |
| NSELE | 56 | 243 | — |
| TOTAL | 1736 | 9000 | 826 |

Source: Inspection Provinciale de la Santé

(2) Sewage

1) Existing Plan

There is no sewerage system development plan or development priority of sewer network system and treatment plant is relatively low in Kinshasa.

2) Administrative System

It is based on the program of "PMURR" (2006) which was funded by the World Bank under which it was decided that environmental improvement of the Kinshasa province would be undertaken by CNAEA. The program included plans and implementation of environmental improvement projects. Main ministries of the provincial government, for example, Ministry of Finance, Ministry of Planning, Ministry of Environment, Ministry of Nature, Conservation and Tourism, and Ministry of Public Health, share the enforcement of planning and projects concerning the city's environment (human waste, sewage and rain drainage, solid waste disposal, etc).

3) Existing Conditions

The Kinshasa province does not have any sewage system which collects domestic wastewater or human wastes by a pipe network. Basically, it is eliminated through an on-site treatment and disposal system or is discharged into a drainage canal or tributary rivers of the Congo River. The pit latrine toilet can be used continuously by the disposal of faecal sludge (usually dry sludge), which accumulates every six months to one year. Otherwise, a pit latrine can be used by re-installation at the adjoining location. Therefore, pit latrines are low cost toilet facilities which are very easy to install and use. However, in the case when the groundwater level is high, environmental living problems occur, which include the possibility of well water contamination, sanitation problems, bad smells, and the possible occurrence of some plagues.

On the other hand, toilets with septic tanks and isolated tanks require the removal of faecal sludge (liquid sludge) periodically. These types do not face the above-mentioned problems however. Furthermore, a treatment plant for generated faecal sludge is required. The provincial government has a plan to build a sludge treatment plant in a solid waste landfill site at present.

4) Domestic Wastewater

The Kinshasa province has no sewage pipe system. Therefore, the discharge pattern of wastewater (mainly domestic wastewater) in the Kinshasa province can roughly be classified into the following two types.

One is in the partial urban areas and peri-urban areas. A water tap is usually in the form of a yard connection. In this case, domestic wastewater from the household is sprinkled out to yard.

The other is in households of urbanized areas. A water tap is usually in the form of a house connection. Usually, a drainpipe is installed and wastewater is discharged into the drainage ditch or the river through the drainpipe.

At the moment, development priority of sewerage system is still low. However, it will be required to long term.

5) Rainwater

The rainwater drainage system in the Kinshasa province performs effectively due to the high infiltration capacity of soil and dense Congo River network. (Refer to Figure 3.9) Urban areas of the Kinshasa province are developed along the Congo River and rainwater is eliminated through the road drainage canal and the tributary rivers of the Congo River. However, in case of intense rainfall, temporary floods occur on the roads of the urban areas, but are eliminated within a short time. It is presumed that serious flood damages do not occur. However, there are instances of traffic disruption and hindrance as a result of road inundation. Drainage systems, therefore, are required to maintain together with road development.

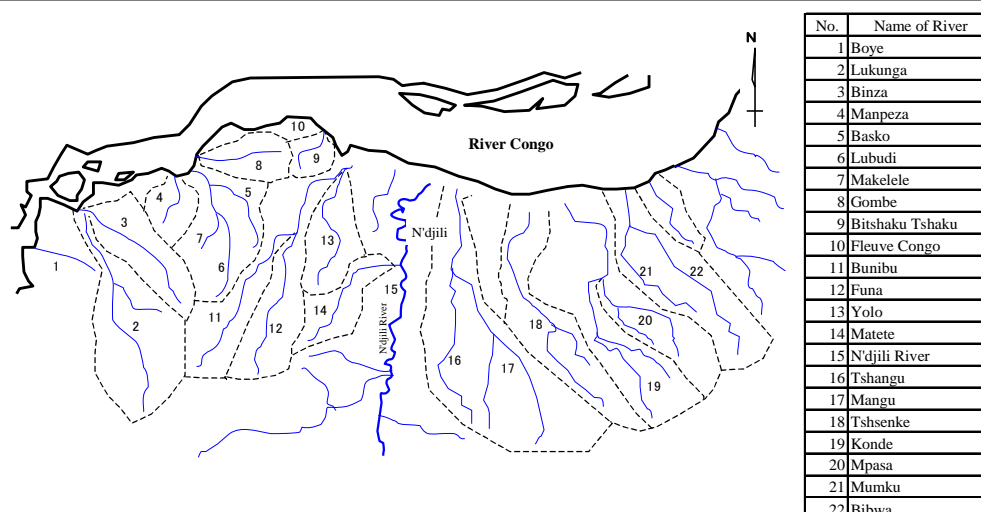


Fig. 3.8 River Network of Congo River and its Tributary

Source: *The studies for the realization of the plan of actions for the purification of the city of Kinshasa (2006)*

(3) Waste Disposal

1) Existing Plan

Kinshasa's provincial government has a plan to promote the privatization of the solid waste collection service. In addition, it plans to dispose of the collected solid waste to a final disposal site provided by Kinshasa's provincial government. However, there is no final public disposal site in operation now, and two of the final disposal sites in the eastern and western area of the Kinshasa province are under construction or preparation phases for future operations. Regarding the solid waste collection service, one private company has started a collection service in central area of Kinshasa. Moreover, Kinshasa's provincial government has a plan to start a solid waste collection service with two or more private companies and plans to expand the collection service zone in the future. The outline of on-going projects regarding final solid waste landfill sites and solid waste collection services by private companies are mentioned below.

2) Administrative System

As described in the section on sewage, a single administrative organization, which takes charge of planning and implementation concerning solid waste management, cannot be found. The Ministry of Planning, Ministry of Environment, Ministry of Nature, Conservation and Tourism, Ministry of Funds, and Ministry of Public Health are in charge of planning and the implementation of the improvement of the environment respectively. The National Committee of Water Action and Sanitation (CNAEA) determine the assignment to each ministry, which is under the control of the Ministry of Planning.

3) Existing Conditions

The current situation is that most solid waste collections and disposals (except for road cleaning) are not carried out in Kinshasa. Private companies carry out the solid waste collection service in only some areas of the Kinshasa province. However, since collection is very expensive, the solid waste collection service is intended only for households of high economic status. On the other hand, the solid waste from households of medium or low economic status is collected by individual solid waste collectors using a handcart, and it is disposed near the dumping site. As for the solid waste in

peri-urban areas and urban areas, similarly, (although the landfill is performed within housing areas using some solid wastes), many wastes are disposed near the dumping site. Since suitable solid waste collections and disposals are not performed, problems such as sanitary problems and inappropriate disposals related to solid waste have occurred.

Table 3.4 Estimation of Solid Waste Generation in the Kinshasa Province

| Year | Population | Solid waste generation (volume) | | Solid waste generation (weight) | |
|------|------------|--|-----------------|------------------------------------|------------------|
| | | Per capita generation (litter/cap/day) | Volume (m3/day) | Per capita generation (kg/cap/day) | Weight (ton/day) |
| 2005 | 5,260,000 | 1.19 | 6,259 | 0.41 | 2,157 |
| 2015 | 7,300,000 | 1.31 | 9,563 | 0.46 | 3,358 |
| 2020 | 8,600,000 | 1.38 | 11,868 | 0.48 | 4,128 |

Source: The studies for the realization of the plan of actions for the purification of the city of Kinshasa (2006)

4) On-going Projects on Final Solid Waste Landfill Site

The Kinshasa's provincial government selected two places from the proposed six final solid waste landfill sites in the studies for the realization of the plan of actions for cleaning the living environment in the city of Kinshasa. Currently, the construction of two final solid waste landfill sites in Mpsasa and Mitendi are being carried out. The outline of the two landfill sites is listed below.

Table 3.5 Outline of Solid Waste Landfill Site in the Kinshasa Province

| Items | MPASA | MITENDI |
|-------------------------------|--|--|
| Distance from the Town centre | This site is located at 35 km Kinshasa City eastern part | This site is located at 29 km Kinshasa City eastern part |
| Schedule/Progress | Under preparation Phase for operations | Under Construction Phase |
| Area of Final Dumping Sites | 250 ha | 135 ha |
| Construction costs | 35 millions USD | 7 millions USD |

Source: The studies for the realization of the plan of actions for the purification of the city of Kinshasa (2006) *: Information obtained from Kinshasa's provincial government

3.5.3 Education and Citizenship

(1) Existing Plan (GOVERNMENT PRIORITY ACTION PROGRAMME (PAP) for the Education Sector)

The vision is articulated in the PAP, which was presented in August, 2007. Target period set from July, 2007 to December, 2008.

Strategic and operational management has been improved in the education sector.

- National Education Strategy and long-term sector programme (SWAp) involving all the stakeholders have been set up.
- Public finance mechanisms involving validation of the numbers of teachers have been improved.
- Level of funding of the public education sector has increased and the financial management improved.
- The coverage and the quality of services at primary and secondary school levels have been improved.

(2) Schools and students in Kinshasa Province

Primary and secondary school are within jurisdiction of the Ministry of Education of Primary, Secondary and Professional (Ministère del Enseignement Primaire, Secondaire et Professionnel, MEPSP). The primary and secondary education systems of DRC consist of six years of primary education and six years of secondary education. In secondary education, the first two years is for basic compulsory subjects and the other four years is for specific subjects including vocational training subjects based on selected courses. According to the statistic data from MEPSP (2008), the number of students in primary school is 778,216 (10.8% in all of RDC), secondary school is 431,022 (14.8% in all of RDC). The school attendance rate is 57.8% for primary school and 37.4% for secondary school. Public schools consist of two different categories, one type is managed by only the government and the other type is managed in collaboration with religious corporations. The number of students in private school is approximately twenty percent (20% of the total students.)

School statistics are shown in Table 3.6.

Table 3.6 School's Statistical Data in Kinshasa Province

| | Kindergarten | Primary School | Secondary School |
|------------------------|--------------|----------------|------------------|
| No. of School | 889 | 2,300 | 1,413 |
| No. of Class | 2,231 | 21,054 | 13,921 |
| No. of Students | 51,569 | 778,216 | 431,022 |
| No. of Girls | 26,292 | 390,278 | 209,808 |
| No. of Teachers | 2,726 | 20,693 | 24,816 |
| No. of Female Teachers | 2,231 | 7,145 | 3,245 |

Source: Inspection Provinciale de la Sante

3.5.4 Industry and Employment

(1) Industry/Commerce

After the conflict in 1991 and 1993, and recent armed conflicts that have hampered economic development of the city, there has been intensive development of activities in farming and within the chemical and steel construction industry sector. In spite of the fact that main economic activities are carried out within the informal sector, the following facts were also observed.

- Suspension of industrial activities expansion,
- Deterioration of the bank network in the urban area,

(2) Agricultural Sector

Agricultural activities play an important role in supplying the products which meet the demand of the people in Kinshasa. There are four centres of production for farming, namely; Kimwenza Valley, N'djili, and the Nswenge and Bateke Plateaus, which are used for food crops and cultivation (manioc, maize and vegetables). After rehabilitation and irrigation improvements, the Pool of the Malebo area, with a surface of more or less than 50,000 ha ranging from Kingabwa to Nsele, presented a production potential of 30,000 tons of rice every two to three times per year which covers 50% of the demands of the town's capital and which also creates 1,000 extra jobs in the sector.

(3) Informal Sector

The informal sector is defined as the entities of production not having a national identification number (ID Number) and/or accounting formalized according to the norms of the Congolese Accounting Charter. According to a household survey conducted by INS in the third quarter of 2004, the region of Kinshasa accounted for 538,200 informal entities of production in shopkeeper branches. Trade accounted for 63.2% of production entities; industry 14.8%; services 12.3%; agricultural activities 7.5% and construction 2.2%. It is confirmed that the informal sector shares 70.9% of total employment.

(4) Employment

The labour force rate, according to a household survey, indicates it is 42.5% (47.4% with the inclusion of unemployed persons). Of the labour force rate, men are 49.7% while women are 35.7%. The unemployment rate within Kinshasa is only of 6.3% with the majority of those out of work consisting mostly of women. The unemployment rate is highest among people in the age range of 25-29 years. This problem is most serious for those who are educated and those who are the heads of their households. More than half of the unemployed persons (54.8%) desire a decent job with a decent pay but only 7.9% succeed in finding one. The proportion of the people working less than 35 hours per week in an involuntary manner corresponds to the observable unemployment rate.

3.5.5 Water and Lifeline

(1) Water supply

1) Existing plans

The water supply's master plan of Kinshasa ("Programme Multisectoriel D'Urgence Pour la Rehabilitation et la Reconstruction "PMURR", Plan Directeur D'Alimentation en Eau Potable de la Ville de Kinshasa, BCMI-No 11.06, D'cembre 2007") aims at the improvement of the water supply system in the Kinshasa province, which is formulated by the World Bank. The target year for the master plan is 2017, and the outline is briefly illustrated in the following figure.

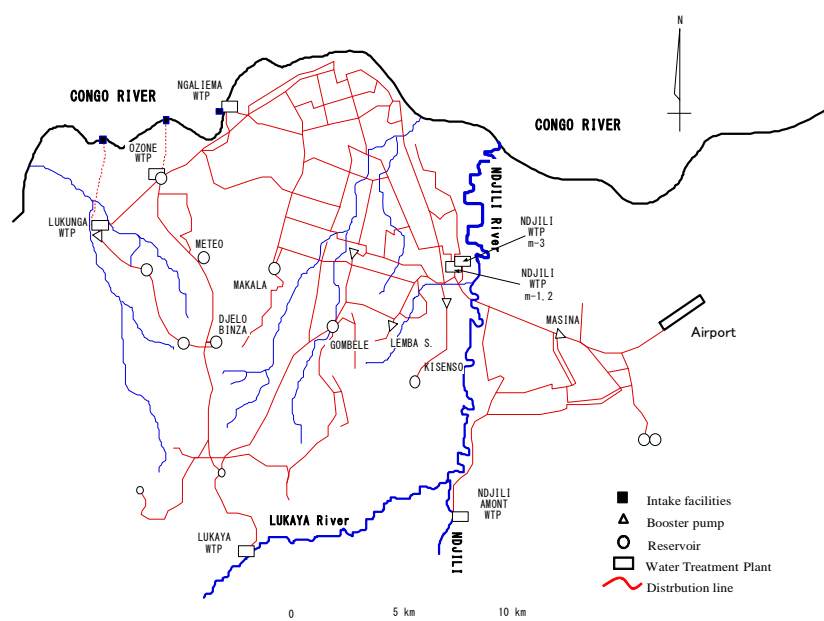


Fig. 3.9 Master Plan of the Water Supply in Kinshasa Province (2009–2017)

Source: REGIDESO

As of March 2009, accomplished projects and on-going projects in the water supply sector are as follows.

Table 3.7 On-going Projects in the Water Supply Sector

| Donor | Schedule | Description of Project |
|-------|-------------------|--|
| WB | Completed | Rehabilitation : N'djili WTP Module 1 and 2 (220,000 m ³ /day) |
| EU | On-going | Rehabilitation : WTP Lukunga |
| WB | Completed | Construction : N'djili WTP Module 3 (110.000 m ³ /day) |
| WB | Completed | Construction : Reinforcing Conveyance line to Kinshasa Province Southern Area |
| EU | On-going | Rehabilitation : Distribution Network Improvement (secondary and tertiary pipes) in nine communes : Barumbu, Kinshasa, Lingwala, Ngiri-Ngiri, Bandalungwa, Kintambo, Matete, Makala and Lemba, including Matonge, Yolo and Ezo areas |
| JICA | / On-going Survey | Extension : Ngaliema WTP (30,000 m ³ /day) Rehabilitation : Distribution Network Improvement in Kinshasa Central Area (under detailed examination) |

Source: REGIDESO

2) Regulations and Institutions

Water supply services of the Kinshasa province were initiated from the central area of the Kinshasa province in the latter half of the 1930s. In 1939, Lukunga WTP commenced operations as a water treatment plant for the water supply in the Kinshasa province, and subsequently, Ngaliema WTP operated from 1952. Presently, the water supply system in the Kinshasa province consists of five water treatment plants and water source wells, with a total quantity of treated water of 432,000m³/day. Major water sources for the water supply consist of surface water from the Congo River and N'djili River, a tributary of the Congo River. The outline of the water supply facilities are shown in the following table.

Table 3.8 Existing Water Facilities in the Kinshasa Province

| Name | Operation Inaugural year | Capacity of WTP (m3/day) | Actual Production (m3/day) |
|-------------------------|--------------------------|--------------------------|----------------------------|
| WTP N'djili | 1972, 1983,2008 | 330.000 | 360.000 |
| WTP Ngaliema | 1952, 1990 | 86.400 | 108.000 |
| WTP Lukunga | 1939 | 42.000 | 50.000 |
| WTP Lukaya | 2006 | 18.000 | 24.000 |
| Maluku pumping Station | - | 2.400 | 2.650 |
| Mitendi pumping Station | - | - | 1.920 |
| Kinkole pumping Station | - | - | 720 |
| Total | - | 378.400 | 547.290 |

Source: REGIDESO

Communes in the central area of Kinshasa have access to water supply services in general. However, a large number of the population in the surrounding communes have difficulty obtaining access to the water supply services. This indicates that it is necessary to expand the water supply services considerably from now on.

(2)Electricity

Concerning the plan of the electric facilities in the Democratic Republic of the Congo, it is thought that a plan regarding extension and rehabilitation is required for all the institutions of power generation, power transmission, power distribution and electric supply. However, the implementation depends on the source of revenue and the assistance of a donor as well as the development projects of other sectors. Therefore, due to the current circumstances, the implementation of the planned projects cannot advance. Existing conditions of the electric power supply in the Kinshasa province, including urgent problems, ongoing or planned projects and the administrative system are mentioned below.

1)Existing Conditions of the Electric Power Supply in the Kinshasa Province

As for the construction of infrastructure of the electricity in Kinshasa, construction was started from the 1950s, and improvement of the electric power system has progressed. However, it is reported that a problems have arisen regarding the electric power supply as a result of the rapid increase in electricity demand due to urbanization and the increase of the population. Furthermore, obstacles created by superannuation of electric facilities have also arisen.

Electric power supply service levels of each commune are characterized by the differences between local electricity demand and electric infrastructure. The problems of the electric supply services in Kinshasa are not only due to the interior difficulties within the State of Kinshasa but also to issues related to power generation and transmissions.

2)Urgent Problems of Electric Power Supply in the Kinshasa Province

Urgent problems regarding rehabilitation to be solved for the improvement of the electric power supply in the Kinshasa province are itemized below.

- Rehabilitation of 30 KV for Kinshasa's Electricity Loop etc.
- The rehabilitation of BT/Low tension and accessories for the Kinshasa province to prevent incidences of electrocution casualties, especially during the rain.

- The increase of the capacity of two substations

3)Ongoing Projects and Planned Projects

Contents of the programme /components are shown below.

- PMURR (Programme Multisectoriel d'Urgence de Reconstruction et Réhabilitation: Multisector Emergency Programme for Reconstruction and Rehabilitation) funded by the World Bank.
- 30 new electric substations in Kinshasa.
- Five new stations.
- PMDE: (Projet des Marchés Domestiques de l'Electricité = Local Electricity Distribution Project)

3.6 ENVIROMENTAL MANAGEMENR SYSTEM IN CONGO

A basic environmental law has not been prepared in the DRC. The environmental quality standards on air, water, soil and noise have not been enacted. However, the Constitution of the DRC along with sectoral laws and decrees, establish the environmental management, issues and protection.

3.6.1 Environmental Impact Assessment (EIA) System

The laws related to the EIA system in the DRC are as follows:

- Decree No. 013/CAB/MIN/ECN - EF/2005 of March 16, 2005.
- Ministerial decree No. 043/CAB/MIN/ECN - EF/2006 of December 08, 2006
- Ministerial decree No. 044/CAB/MIN/ECN - EF/2006 of December 08, 2006

Because the official guidelines have not been prepared in the DRC, the actual project components subjected to the environmental and social impact assessment and the required level of The Study depending on the project impacts have not been defined yet. The recent studies on environmental and social impact assessment in large scale projects have referred to the guidelines of the donating organizations such as the World Bank and African Development Bank. Also, in JICA's projects, the studies on environmental and social considerations need to refer to the Congolese legislation as well as JICA's Guidelines.

3.6.2 Land Acquisition for Public Utility

The land ownership system in the DRC is established by "The Transitional constitution of April 3rd, 2003 (especially within article 9)" and "The law No 73-021 of July 20th, 1973 containing general regime of properties, real estate and the safeguard". The land owners are divided into perpetual concessions and ordinary concessions which are renewable leases of a period of 25 years with annual fees dues. However, the under-ground materials of the private domain are inalienable and imprescriptibly property of the state.

CHAPTER 4 : PRESENT CONDITIONS OF THE N'DJILI COMMUNE

4.1 LOCATION

The N'djili commune is located in the eastern area of Kinshasa and the gross area is approximately 11.4 km². This commune is in the centre of Tshangu District.

4.2 GEOGRAPHY

The N'djili commune is located in a sandy area with shallow bedrock of sandstone and is well drained. The terrain is flat and 280-290 m above sea level. The natural vegetation consists of a moist savannah.

4.3 ENVIRONMENTAL CHARACTERISTICS

Kinshasa is located in humid tropical zone. The annual average rainfall and temperature are about 1,400 mm and 25 degree Celsius. The dry season is from June to September. More than 10 days a month from October to May are rainy days.

4.4 POPULATION

As of 2007, the total population of the N'djili commune was estimated as 320,762. The population of people under 20 years old accounts for 51.9% of the total population. The N'djili commune is a highly populated area in the Kinshasa Province, and its population density is 397.9 person/ha..

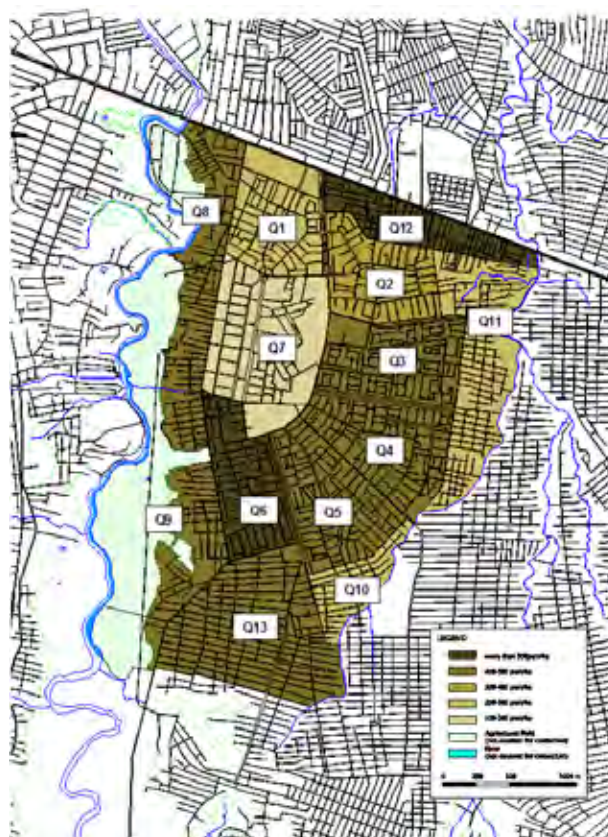


Fig. 4.1 Population Density by Commune (2007)

Source: JICA Study Team

4.5 ADMINISTRATION OF THE COMMUNES

4.5.1 Commune Offices

The commune's administration office is located in Quarter 7. The Commune divided by 13 Quarters with Quarter leaders respectively. The organisation of the commune's administration is headed by the burgomaster and consists of 23 administrative offices. The staffs include civil servants of the Kinshasa province and belong to the N'djili commune. There are 334 officials (187 for the commune office and 147 for 13 Quarters).

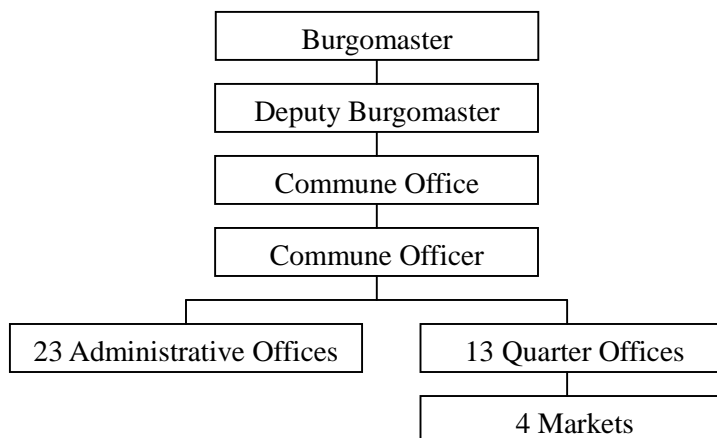


Fig. 4.2 Organization Chart of Commune Office

Source: N'djili Commune, JICA Study Team

4.5.2 CLD

Belgian Technical Cooperation (BTC) had supported the establishment of grassroots bodies for development in N'djili under the community-led development support programme called PAIDECO. However, in the end, BTC decided to implement PAIDECO subprojects not within N'djili but within Kisenso and Kinbanseke. The established organisations named Committee of Commune Development (CCD) and Committee of Local Development (CLD) in each Quarter, nevertheless, still exist in the N'djili Commune.

4.5.3 Civil Societies

A civil society can be defined as a web of associations, social norms and practices that comprise of activities of a society separate from its state and market institutions. Civil societies or civil-based organisations (CBOs) in N'djili have taken roles of grassroots development and advocacy, especially within the education and sanitation sectors. However, the involvement of residents in collective and voluntary works seems to be minimal. According to a household survey, only 44.4% of households have ever participated in works such as cleaning-up programs.

4.5.4 Religious Organizations

There are a number of religious organisations such as churches. Churches seem to be the most reliable organisation within the population. According to a household survey, 44.5% of the households answered that church is the most reliable organisation in N'djili. Also, during the planning workshops of the local communities for development (CLD) within the 13 districts of the commune, the church was at the center of the capital. Major churches include Catholic, Protestant and "Kimbanguist". These

churches are run and managed by public facilities, such as schools and health clinics.

4.5.5 NGOs

The commune has a list of non-governmental organizations, (NGOs), with 87 in operation within the 13 districts. The Study Team reviewed the comprehensive list of NGOs on site throughout the entire commune of N'djili and was able to locate 38 of them. The active NGOs are working with the population in various issues including education, health and hygiene, fighting against HIV/AIDS, youth activities, vocational training, reforestation, sanitation, farming and microfinance. Considering past experience and behaviour of NGOs, many of them seem to be contractors rather than a civil-based organisation, although there are NGOs which are supporting the community with their own budget as well as contracting works from donors.

Table 4.1 Major Activities of NGOs Operated in the Commune of N'djili

| Main activity | Frequency | Percent |
|-------------------------------------|-----------|---------|
| Savings | 3 | 7.9 |
| Health | 5 | 13.2 |
| Orphanages | 1 | 2.6 |
| Education | 3 | 7.9 |
| Joinery | 1 | 2.6 |
| Vocational training | 4 | 10.5 |
| Assistance to malnourished children | 1 | 2.6 |
| Fight against AIDS | 2 | 5.3 |
| Agriculture | 4 | 10.5 |
| Sensitization of the population | 1 | 2.6 |
| Supervision of the population | 6 | 15.8 |
| Pharmacy | 2 | 5.3 |
| Construction | 1 | 2.6 |
| Painting | 1 | 2.6 |
| Breeding | 1 | 2.6 |
| Shops | 1 | 2.6 |
| Cleanliness and the environment | 1 | 2.6 |
| Total | 38 | 100.0 |

Source: N'djili commune, study team 2008

4.5.6 Associations

There are various types of associations in N'djili, such as youth clubs. At the Quarter level, each street has a street leader who has the responsibility of sharing information from a quarter leader with the residents along the street.

4.6 ECONOMY

N'djili extends to a wide variety of socio-economic activities both in the formal and informal sector, although the informal sector is dominant, as seen in the Kinshasa Province.

The Incomes of the households in N'djili do not vary widely. Only 48.40% of the households of N'djili have a monthly income of more than 75,000 FC.

The primary sector represented by market-gardening activities of N'djili is well-known to consumers in Kinshasa through its history and its dynamics in the supply of Kinshasa. The monthly net income from market-gardening is relatively higher than the average income of civil servants.

The second industry sector specifically occupied within N'djili is that of car repair shops, as all of Kinshasa recognizes the sharpness and dynamism of these activities. The commune of N'djili is

identified in this field as the Japan of the Democratic Republic of the Congo. It is also important to mention that the local industries of wooden by-products, in particular the manufacture of coffins are characteristics of the commune of N'djili. Lastly, the tertiary sector of N'djili is developing in a similar manner to other communes of Kinshasa, since car repair, dent removal, welding and painting shops represent the top of the list of local potential industries of the commune of N'djili.

4.7 LAND USE

4.7.1 General Circumstances of Land Use

For the examination of land use of the N'djili commune, nine large categories and 12 sub-categories were set, and the current state of each area and its composition ratio are calculated.

4.7.2 Residential Areas

Residential areas occupy about 60% of the entire commune area. In quarters (except for Quarters 8 and 9), where agricultural sites occupy the majority of the land, 60-90% of the land is used for housing or mixed-use buildings. Therefore, land used for specialized single purposes (ex. office and industry, etc.) hardly exists within the N'djili commune.

4.7.3 Administrative / Official Areas

Administrative facilities do not exist except for some facilities which are located around the commune office in Quarter 7. Most of these facilities are intended for the service of the nearby district. Facilities corresponding to the functions as the new center of the city in the eastern part proposed by the master plan are not constructed.

4.7.4 Commercial / Business Areas

Service level for commercial/Business area in N'djili commune is not sufficient from its surface. Moreover, the area for the market, which is located at Quarters 2, 6, and 7, is not large enough, with a measurement of 0.1 square meters per population. In the entire district, mixed-use houses are a complementary supplement for the gap in the need for commercial services.

4.7.5 Educational Areas

Referring to the land use ratio, there seems to be enough area secured for the educational facilities in the N'djili commune. However, in some quarters where there is large enough areas used for educational facilities, such as in Quarter 3, 4 and 7, there also exists quarters which are equipped with less than 2 hectares of the site for educational use.

4.7.6 Health Centers

As the commune's capacity as a whole, enough land is secured for communal facility sites including schools. However, half of the health facility sites of Sino-Congolais Hospital are located in Quarter 7 and this hospital is not facilitated for civilian daily use. Moreover, sites intended for health facility use hardly exist in other quarters except for Quarters 2, 6 and 7, which is located near the centre of the commune.

4.7.7 Parks

An equipped public park hardly exists within the N'djili commune, and public, unoccupied public land and green space are used for recreational purposes. The area of unoccupied land per population is 0.56

square meters, and it is extremely small in value.

4.7.8 Agricultural Areas

The mass of farmland is located in Quarters 8, 9 and 13 on the N'djili River's eastern shore. The farmlands in the other quarters are originally wide in width and the roads are used for cultivation purposes.

4.7.9 Transport / Roads

The roads of the N'djili commune occupy 10.9% of the entire commune which is not a high ratio. The surface ratio is not high in the ancient quarters, considering that the width of the roads in these quarters is radial.

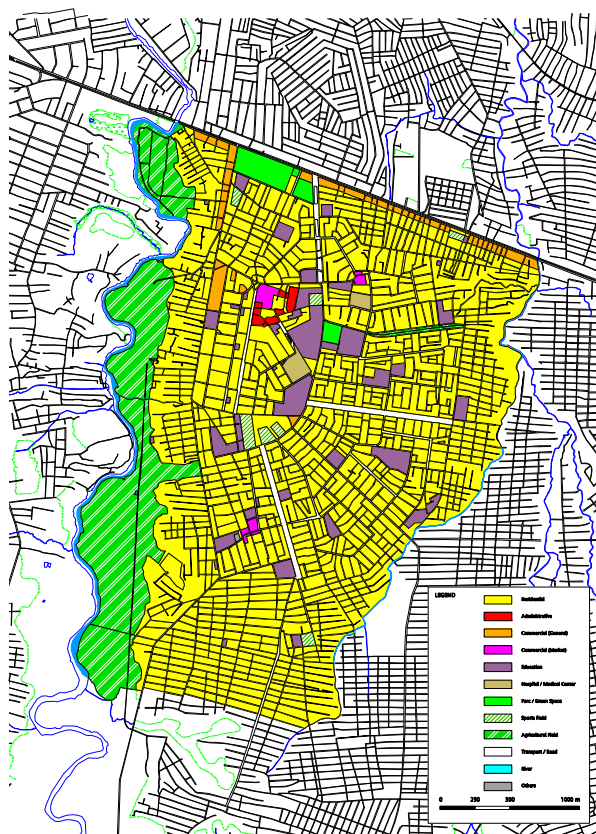


Fig. 4.3 Current Land Use in N'djili

Source: JICA Study Team

4.8 SECTOR CONDITIONS

4.8.1 Urban Infrastructure

(1) Existing road network

Boulevard Lumumba and Route CECOMAF are located in the eastern side of the commune; roads enclosing Quarters 7, 2^{eme} Republique and access road to Chinese-DRC hospital in Quarter 7 are paved with asphalt. Due to the road's deprecation and potholes, the condition of the asphalt pavement is not satisfactory and all other roads are unpaved.

The roads with more than 30 m in width are Boulevard Lumumba and three other roads allocated on Quarter 7's radial. Asphalt roads are relatively wide. Some roads with relatively wide widths are allocated and connected by the radial road in Quarter 7. Asphalt roads are operated as two lane roads

without any lane markings.

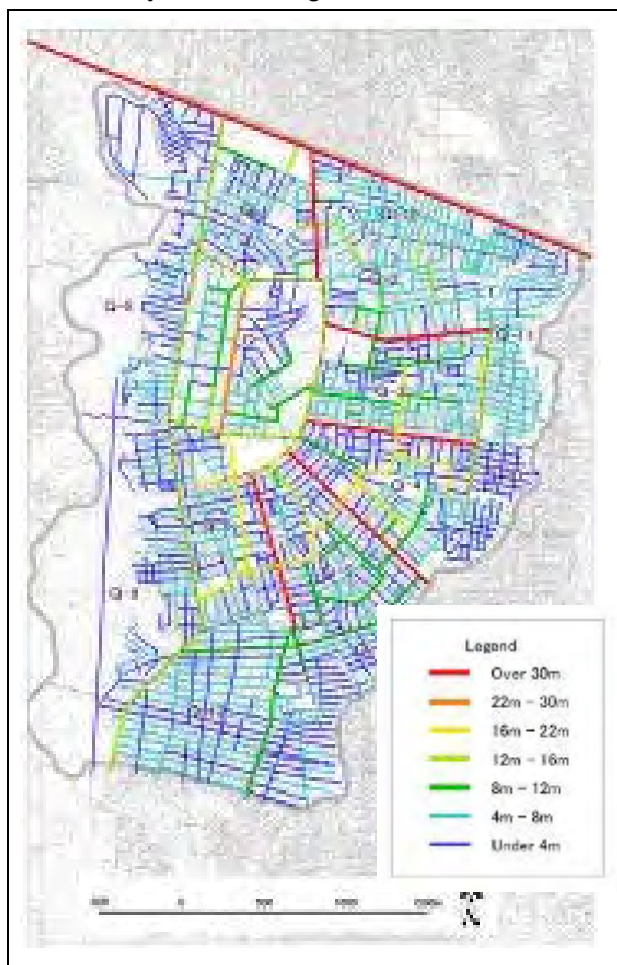


Fig. 4.4 Width of Roads



Fig. 4.5 Image of Traffic Volume by Vehicle

(2) Traffic Survey Results

Traffic volume at the northern border of the N'djili commune was 19,100 pcu/ 12h, which was counted on Route CECOMAF and Route Bikali. Traffic volume on the southeast border between the N'djili commune and Kimbanseke was 10,900 pcu/ 12h on Route CECOMAF, Croquet Kimbanseke, and 2 eme Republique. Traffic volume in the center of the N'djili commune was 12,000 pcu/ 12h on Route CECOMAF and the eastside of the road in Quarter 7. The heaviest traffic volume was 17,470 pcu/ 12h on Route CECOMAF. The second was 9,327 pcu/ 12h on the eastside of the road in Quarter 7.

The traffic volume of pedestrians was more than 5,000 persons/ 12h, excluding Route Bikali because of the narrow width and under construction sections. In particular, traffic volume of pedestrians on Croquet Kimbanseke was 13,047 persons/ 12h, which accounted for the heaviest volume.

(3) Public Transport

For minibuses, the drivers mainly use the asphalt roads since their routes not definitive. 20 bus stops are found in the N'djili commune without any waiting facilities or institutions for people waiting for the minibuses.

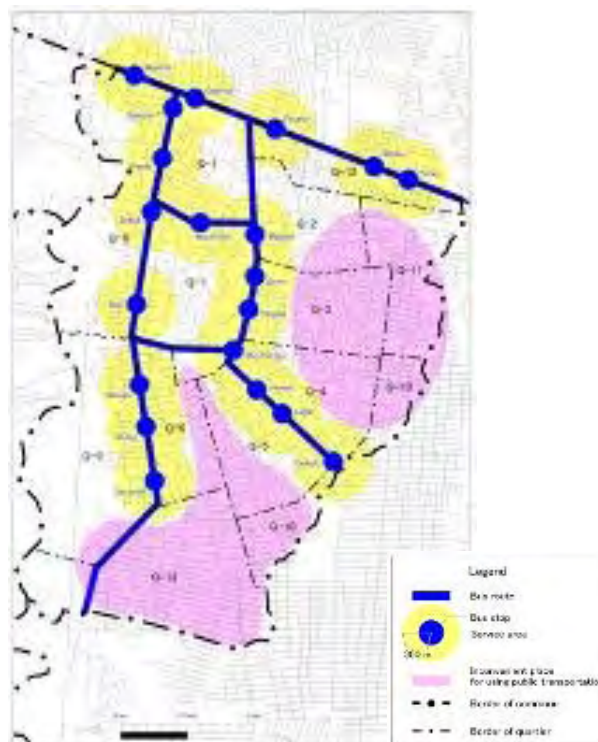


Fig. 4.6 Bus Routes, Bus Stops and Service Areas

4.8.2 Urban Facility

(1) Public Marches

There are 4 public Marches in Q-2, Q-5, Q-6 and Q-7 in the N'djili commune. The Marches of Q-6 and Q-7 are large scaled. The Marches of Q-2, Q-5 and Q-6 are not easily accessible and the compositions of the shops are diffused among the surrounding roads.

(2) Public Toilets

Presently in the N'djili commune, there are only a few public toilets. Furthermore, they are poorly maintained and so generate dirty and unsanitary conditions. To develop awareness of public hygiene and a wholesome environment, it is essential to rehabilitate or install new public toilets where there are crowds of many people, for instance shopping or meeting areas. The toilets in the market of Q-7 can be utilized as they are while those in the markets of Q-2, Q-5 and Q-6 are extremely worn out. These toilets shall be re-constructed and at some bus-terminals, new toilets shall be installed shortly.

4.8.3 Health and Sanitation

(1) Health

1) Common Diseases

The common diseases are malaria, diarrhoea, tuberculosis, measles, typhoid and sexually transmitted diseases (STD) such as HIV/AIDS. Health zone of N'djili has problems of malnutrition and a low rate of immunization. As for malnutrition, low vitamin A supplementation for infants and breast-feeding mothers is reported. Maternal mortality is lower than the national average while infants' mortality during delivery is higher than the national average, even though it has been decreasing during recent years.

2) Medical Services

Health zone of N'djili covers the same geographical area as the N'djili commune. The health zone is divided into 14 health areas which are the same as Quarter 1-12 and two health areas in Quarter 13 (Q13A and Q13B). In the Health zone of N'djili, there are two general hospitals; 110 health centers located in the 14 health areas. The following table shows the health facilities in N'djili commune.

Table 4.2 Health Facilities in the N'djili Commune

| Health Facility | Number |
|---------------------------------------|--------|
| Hospital | 2 |
| Health Centre (Government and Public) | 1 + 5 |
| Health Centre (Private) | 104 |
| Pharmacy | 317 |
| Medical School | 2 |

Source: N'djili Commune Office

(2) Sanitation

Sanitary conditions of the N'djili commune are a serious problem. Only 20% of households have an indoor toilet. Littering is also another serious problem found on the streets and other public spaces of N'djili. According to a household survey, 14% of households dispose their rubbish on the streets or other places, while the remaining other households dispose their rubbish through waste collection men or by digging a hole within their household compound. It seems to be difficult for the majority of poor households to afford paying the fees required for waste disposal through waste collection men. There is no official dumping site in the commune so the wastes collected through waste collection workers are dumped at illegal dumping sites along the N'djili River or by digging holes in the streets. In addition, more than 50% of households do not have a drainage system in their household. Thus, waste water tends to flow onto the street or streams directly. Due to the above-mentioned conditions, street gutters and streams are contaminated with rubbish and other wastes. During the rainy season, the condition causes floods and creates an unclean environment which causes diseases such as malaria.

(3) Sewage

There is no sewage system with pipe connections in the N'djili commune.

(4) Waste Disposal

There are no public, continuous solid waste collections or disposal services in the N'djili commune. It is thought that generated solid waste in the N'djili commune is left in open dumpsites of the N'djili Commune or its surrounding area. There are numerous open dumpsites located within the N'djili commune and many places within the circumference of the housing zone area are confirmed as dumping sites (refer to the following figure).

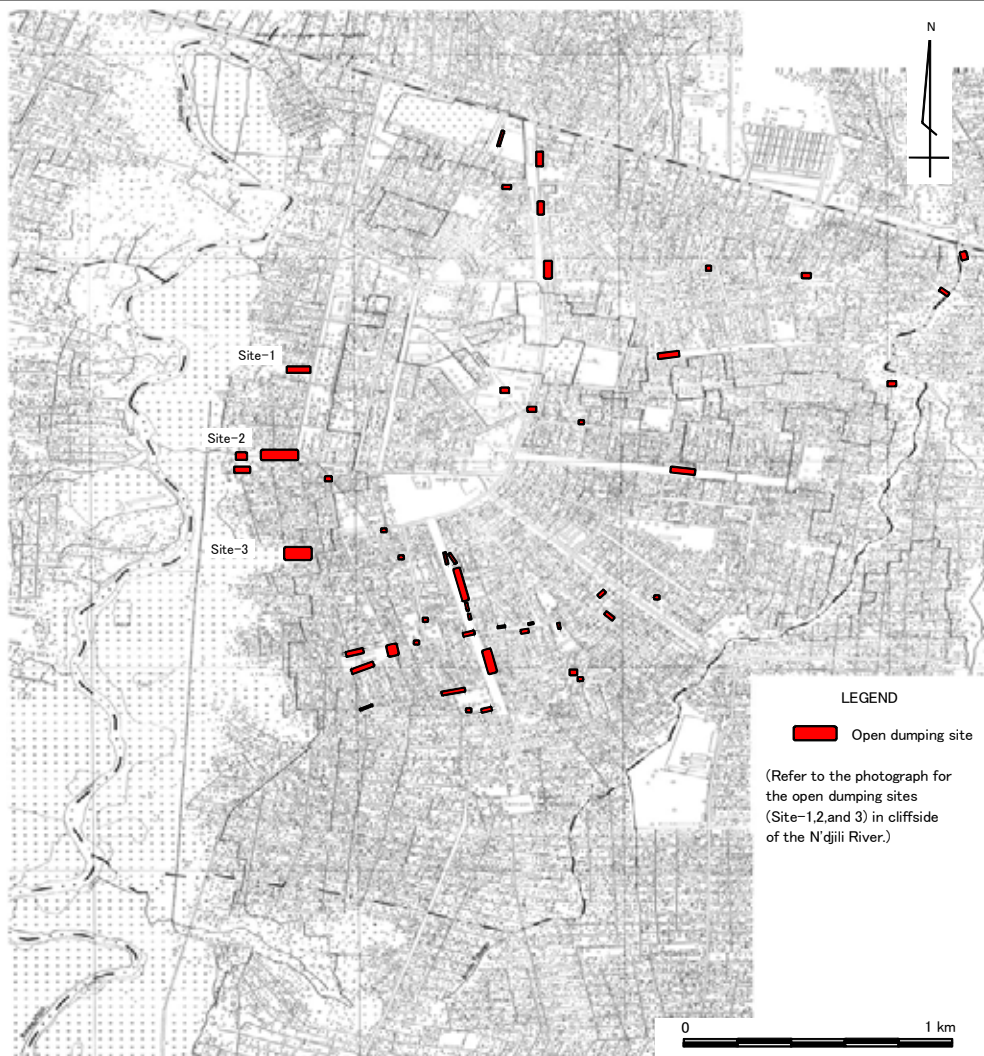


Fig. 4.7 Dumping Sites located at the cliff sides of the N'djili River

Source: Public Inventory Survey 2008

4.8.4 Education and Citizenship

(1) Education

1) Schools

There are 281 schools in the N'djili commune including one of the four institutes of Industrial Technology Institute (ITI) of Kinshasa, as shown in the table below. Many of the schools run their classes in two shifts (morning and afternoon).

Table 4.3 Education Facilities in the N'djili Commune

| Education Facility | Number | Number |
|--------------------|-------------|--------|
| Primary School | Total | 116 |
| | Government | 12 |
| | Catholic | 13 |
| | Protestant | 14 |
| | Kimbanguist | 2 |
| | Islamic | 1 |
| | Fraternite | 1 |
| | Salvtiste | 5 |
| | Private | 68 |
| Secondary School | Total | 83 |
| | Government | 11 |
| | Catholic | 5 |
| | Protestant | 12 |
| | Kimbanguist | 1 |
| | Islamic | 2 |
| | Salvtiste | 3 |
| | Private | 44 |
| Tertiary School | University | 3 |

Source : N'djili Commune Office

2) Students

The number of students is 68,335 in primary school and 46,780 in secondary school. The enrolment rates of both primary and secondary school for boys are significantly high and almost twice that of the school age population. This may be due to a statistical data error or the possibility that a number of students enrolling into the schools are from the neighbouring communes.

Table 4.4 Number of Students in the N'djili Commune

| Education Level | Gender | Number |
|---------------------------|--------|--------|
| Early Childhood Education | Total | 4,596 |
| | Boys | 3,068 |
| | Girls | 1,528 |
| Primary Education | Total | 68,335 |
| | Boys | 45,414 |
| | Girls | 22,921 |
| Secondary Education | Total | 46,780 |
| | Boys | 31,992 |
| | Girls | 14,788 |

Source : N'djili Commune Office

Problems in education are identified through a household survey and the CLD planning workshops and they include high school fees and poor conditions of the school facilities and equipment. Public education is basically free of charge. However, parents need to pay for some of the fees for the teachers

to compensate for their low salaries. The fees are a heavy burden on the parents which make it difficult for them to continually send their children to school. Also, it seems to be a hotbed of corruption for teachers and headmasters.

(2) Citizenship

1) Gender

The roles and responsibilities of men and women in the household are slightly different. Men tend to supervise and protect the household. On the other hand, women tend to supervise their children or become housewives. According to a household survey, nearly three-fourths of the head of households are male while one-fourth are women. Many women work as small vendors and farmers in traditional work, such as “maman manoeuvre” who are women whose job is to ensure the marketing of food products from rural areas on behalf of the owners of the products for which they receive commission. According to the household survey, 58.2% of women contribute to their household budget.

2) Vulnerable Groups

Children, elders, widows, and disabled persons are defined as vulnerable groups in the N'djili commune. Due to poverty and difficult life circumstances, some people tend to neglect these vulnerable family members. The phenomenon of “sorcier” or witch is a serious social problem which creates more difficulty for this vulnerable group of people. Some parents label their children as sorciers and force him or her out of the household. Sometimes, small churches promote the phenomenon and manipulate the parents. This phenomenon is one of the causes of street children. Similarly, elders and disabled persons who burden their family's household tend to lose support from the head of household.

3) Security

The security of the N'djili commune is a serious concern for the population (especially during nighttime). There is high incidence of crimes that include robbery, rape, vandalism and other illegal activities. In August 2008, for instance, there were 75 cases of crimes which included two murder cases according to the statistics of the N'djili commune police. According to a household survey, the most serious threat for the households was the existence of criminal groups, accounting for 43.5%, followed by street children called “shegues,” which accounts for 22.3% and is regarded as the number one threat for households. Many of the criminal activities seem to be linked with drug addiction and alcohol, especially within the younger generation.

There seems to be two sets of statistics concerning the analysis, the former being from the police and the latter from the Prosecutor's Office of First Instances in N'djili. The statistics also differ by the category of criminals and victims. Crimes, according to the statistics of the Prosecutor's Office of First Instances in N'djili (August 2008)

4) Street Children

The investigation of street children has been carried out by The Study Team under the supervision of the communal inspector in charge of development, which, for this case, seconded the communal officer in charge of the community's Development Unit. It is important to note the distinction between

children who are abandoned, forsaken or rejected by parents and bewitched and those who are street children. A number of so-called bewitched children are seen in many Revival churches while street children in many instances spend their nights in the open and wander on the streets and roads within the town. As for street children, they exist in many areas of the commune. NGOs and associations are supporting a given number of street children.

4.8.5 Industry and Employment

As for the livelihood structure, the average household monthly income is 91,566 FC with a monthly expense of 103,795 FC on average. However, the average seems to be overstated due to the influence of the rich population. In fact, 19.5% of households have income less than 25,000 FC per month. This means approximately 20% of the population live on less than 1.5 USD a day. On the other hand, 82% of household expenses tend to be used for food on average. In terms of food security, 71.6% of the population are able to have meals twice a day.

The N'djili commune's industry is mainly characterized by agricultural farming activities, automobile mechanics, mechanical engineering and related activities and small businesses (in particular small vendors that exist in the five main marketplaces).

4.8.6 Access to Water and Lifeline

According to a household survey, 97% of households have access to tap water from REGIDESO in their household compound or through their neighbours' compound. However, most of them are unsatisfied with the water quality due to the poor conditions of the piping system and unstable water supply. There are problems of insufficient water supply in Quarters 5, 6, and 13.

Concerning energy resources, 80% of households have connection to electricity by SNEL. However, the connection is irregular and unstable.

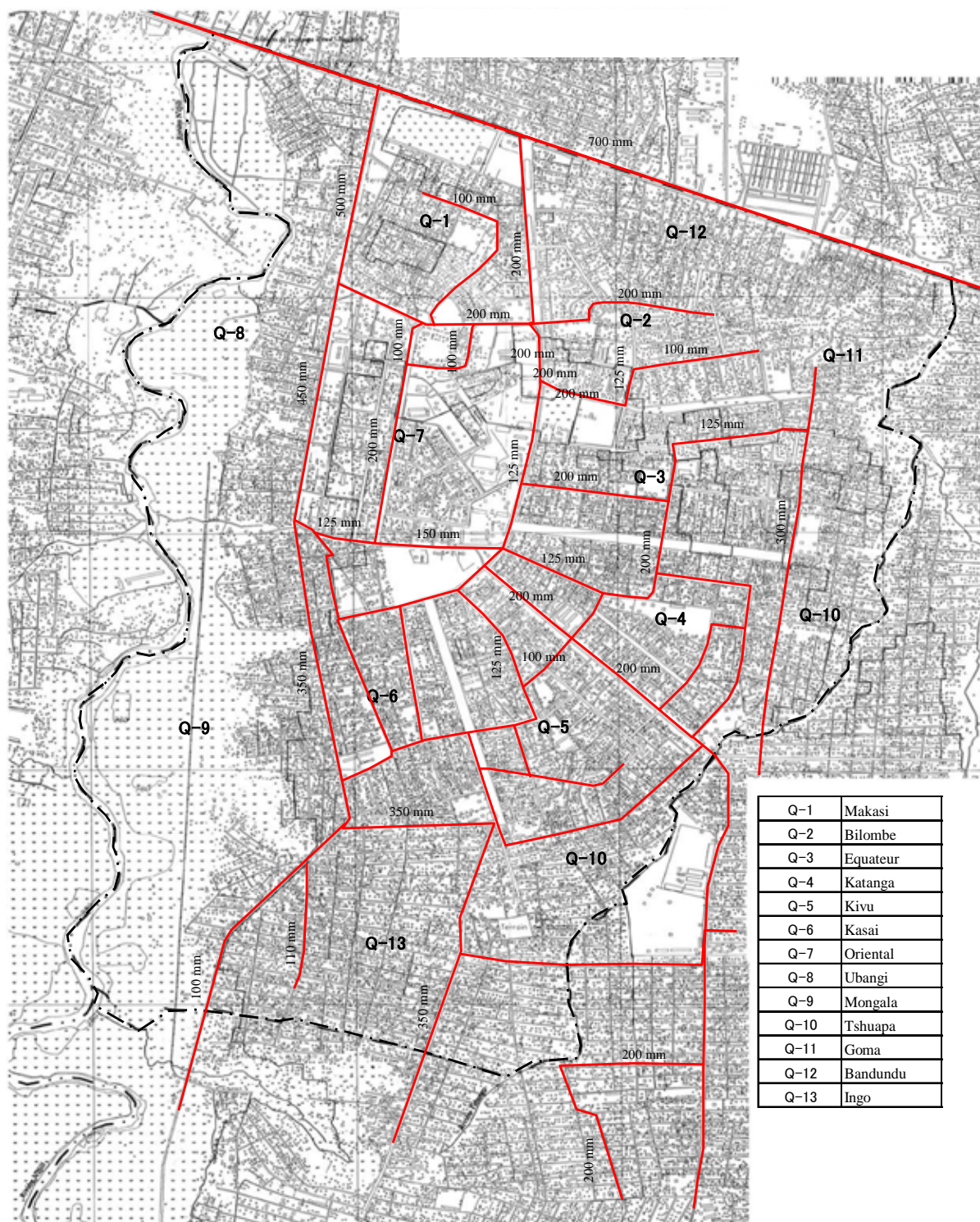


Fig. 4.8 Main Distribution Network in the N'djili Commune

Source: REGIDESO