

Ministry of Environment, Science, Technology and Innovation (MESTI)

Town and Country Planning Department (TCPD)



THE STUDY
ON
Asaaman Ashanti
THE COMPREHENSIVE URBAN
DEVELOPMENT PLAN
FOR

GREATER KUMASI

IN Juaben
THE REPUBLIC OF GHANA



FINAL REPORT
VOLUME 3

September 2013

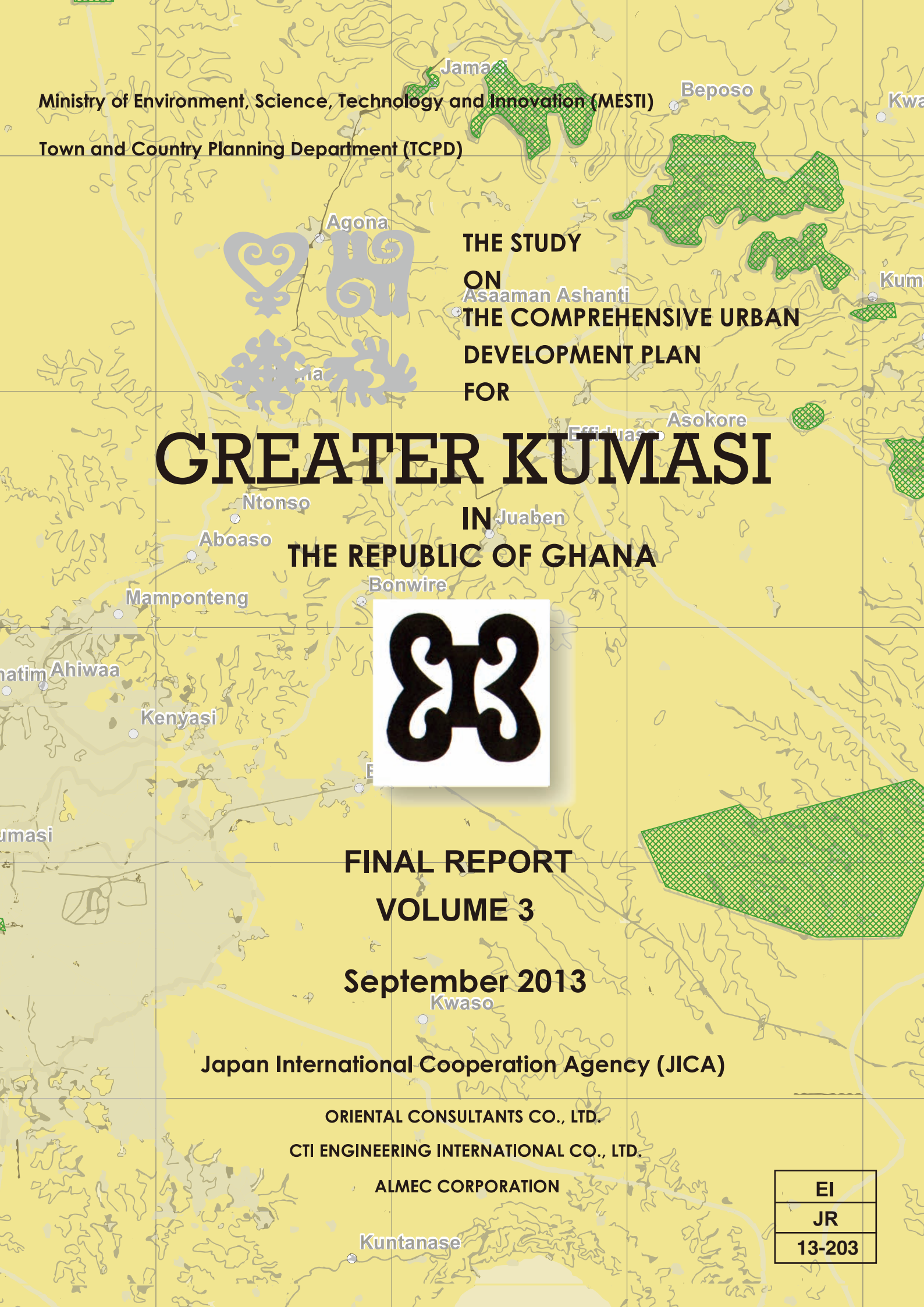
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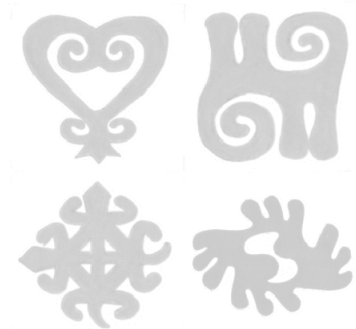
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**The Study on the Comprehensive Urban Development Plan
for Greater Kumasi in the Republic of Ghana**

Final Report

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List of Abbreviations

AFD	Agence Française de Développement French Agency for Development
AGI	Association of Ghana Industries
BOST	Bulk Oil Storage and Transportation
BPO	Business Processing Outsourcing
BRRRI	Building and Road Research Institute
BRT	Bus Rapid Transit
BSP	Bulk Supply Point
CAP 84	Town and Country Planning Ordinance, 1945
CAPEX	Capital Expenditure
CBD	Central Business District
CHPS	Community-based Health Planning and Services
CSIR	Council for Scientific and Industrial Research
CWSA	Community Water and Sanitation Agency
DFR	Department of Feeder Roads
DMU	Drain Maintenance Unit
DPCU	District Planning Co-ordinating Unit
DUR	Department of Urban Roads
DVLA	Driver Vehicle License Authority
EAP	Economically Active Population
EC	Energy Commission
ECG	Electricity Company of Ghana
EHD	Environmental Health Department
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EPA	Environmental Protection Agency
EPO	Economic Planning Officer
FIRR	Financial Internal Rate of Return
FRHP	Focus Region Health Project
GCNet	Ghana Community Network Services Limited
GDP	Gross Domestic Product
GHA	Ghana Highway Authority
GHC	Ghana Cedi
GHS	Ghana Health Service
GIS	Geographical Information Systems
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit German International Cooperation

GNFS	Ghana National Fire Service
GoG	Government of Ghana
GPRTU	Ghana Private Road Transport Union
GRDP	Gross Regional Domestic Product
GRIDCo	Ghana Grid Company Limited
GSGDA	Ghana Shared Growth and Development Agenda
GSS	Ghana Statistical Service
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit German Technical Cooperation Agency
GUMPP	Ghana Urban Management Pilot Project
GWCL	Ghana Water Company Limited
HOV	High Occupancy Vehicles
HSD	Hydrological Service Department
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communication Technology
IEE	Initial Environmental Examination
IMF	International Monetary Fund
IPP	Independent Power Producers
IRI	International Roughness Index
ISPs	Informal Service Providers
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
KATH	Komfo Anokye Teaching Hospital
KBTH	Korle Bu Teaching Hospital
KCRP	Kumasi Composting & Recycling Plant
KMA	Kumasi Metropolitan Assembly
KMA-WMD	Kumasi Metropolitan Assembly Waste Management Department
KNUST	Kwame Nkrumah University of Science and Technology
KVIP	Kumasi Ventilated-Improvement Pit
LAP	Land Administration Project
LP	Local Plan
LUSPA	Land Use and Spatial Planning Authority (Proposed)
MCI	Millennium Cities Initiative
MDA	Ministry, Department and Agency
MDGs	Millennium Development Goals
MESTI	Ministry of Environment, Science, Technology & Innovation
MLGRD	Ministry of Local Government and Rural Development
MMDA	Metropolitan, Municipality, District Assembly
MMT	Metro Mass Transit

MoFEP	Ministry of Finance and Economic Planning
MOH	Ministry of Health
MOU	Memorandum of Understanding
MRF	Materials Recovery Facility
MSL	Mean Sea Level
MTDP	Medium Term Development Plan
MTHS	Medium Term Health Strategy
MTTU	Motor Transport Transit Unit
MVA	Mega Volt Ampere
MWRWH	Ministry of Water Resources, Works and Housing
NDPC	National Development Planning Commission
NGO	Non-Governmental Organization
NPV	Net Present Value
NRW	Non-Revenue Water
O&M	Operation and Maintenance
OASL	Office of the Administration of Stool Lands
OMC	Oil Marketing Companies
OPEX	Operating Expense
PAPs	Project Affected Persons
PCU	Passenger Car Unit
POW	Program of Work
PPMED	Policy, Planning, Monitoring and Evaluation Division
PSS	Primary Substation
PURC	Public Utility Regulator Company
RCC	Regional Co-ordinating Council
RED	Roads Economic Decision Model
ROW	Right of Way
RPCU	Regional Planning Co-ordinating Unit
S/W	Scope of Work
SDF	Spatial Development Framework
SEA	Strategic Environmental Assessment
SIP	Strategic Investment Programme
SP	Structure Plan
SRTM	Shuttle Radar Topography Mission
SSP	Strategic Sanitation Plan
SWM	Solid Waste Management
TCPD	Town and Country Planning Department
TDM	Transportation Demand Management

UESP	Urban Environmental Sanitation Programme
UGB	Urban Growth Boundary
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UPTUs	Urban Passenger Transport Units
VIP	Ventilated Improved Pit
VOC	Vehicle Operating Cost
VRA	Volta River Authority
WC	Water Closet
WD	Works Department
WEDC	Water, Engineering and Development Centre
WHO	World Health Organization
WPA	Wildlife Protected Area
WRC	Water Resources Commission
WRS	Water Resources Science
WTP	Water Treatment Plant



PART VIII

Capacity Development Programme for Spatial Development Planning and Implementation



Chapter 25 Capacity Development Programme for Spatial Planning and Implementation

25.1 Introduction

In the beginning of this chapter, an institutional analysis for spatial planning and implementation is presented as a basic understanding for preparing a capacity development programme for spatial planning and implementation in relation to the Greater Kumasi Sub-Regional SDF and Conurbation SP,

In the next section, based on the institutional understanding, a framework for a capacity development programme is presented.

Consequently, a capacity development programme targeting 5 groups and consisting of 12 sub-programmes is presented with a description of the scopes of the sub-programmes.

25.2 Institutional Analysis for Spatial Planning and Implementation

In this section, major characteristics of the organizations for spatial planning and implementation at the national, regional and district levels are described.

25.2.1 Town and Country Planning Department (becoming the Land Use and Spatial Planning Authority (LUSPA) under the forthcoming new law).

(1) Objectives

The Town and Planning Department (TCPD), which is a department within the Ministry of Environment, Science and Technology, has existed since the enactment of the 1945 Town and Country Planning Department Ordinance. The objective of the Department is to formulate effective policies and strategies for the socio-economic and physical development to ensure the proper use of land and the exploitation of natural resources for the benefit of the people.

Under the forthcoming Land Use and Spatial Planning Bill it will be transformed into the Land Use and Spatial Planning Authority (LUSPA). The Authority's objectives as stipulated in the Land Use and Spatial Planning Bill are summarized as follows:

- Perform spatial land use and human settlement planning functions of the national development system;
- Prepare and provide the technical human settlement planning components for inclusion in national development plans or infrastructure plans prepared by the

- National Development Planning Commission;
- Prescribe the format and content of the SDF, Structure Plan and Local Plan;
 - Provide directions and guidelines for the spatial and human settlement planning;
 - Enhance the capacities of the District Assemblies and other institutions for effective performance of their spatial planning and human settlement management functions;
 - Ensure efficiency in the development control function at national, regional and district levels through the decentralized governance structures;
 - Oversee the implementation of approved policies regarding spatial planning and physical development; and
 - Prepare the National SDF and evaluate Regional and District SDFs to ensure conformity with the National SDF. (This is where the alignment of the Greater Kumasi Plan with the national level plans will take place.)

The Bill stipulates that the Authority shall have the divisions responsible for at least the following functions:

- Research, policy and development of planning standards;
- Monitoring of and compliance with planning standards;
- Management of the information system;
- Formulation of SDF;
- Communication and public relations.

(2) Composition

The Head Office is concerned with the organization and management of the Department in financial control, personnel, spatial development planning and development control and land surveying and research.

With the current decentralization policy, the Head Office is required to assist Regional, Metropolitan and District Offices by establishing an efficient spatial planning system. The Head Office is also responsible in assisting in the recruitment, training and manpower development of various offices and personnel, providing guidelines for spatial planning and development control and assist in the preparation of Plans when the need arises.

For the Department, the following four categories of staff are present:

- Professional category, including Director-General, Director, Deputy Director, Principal Town Planning Officer, Senior Town Planning Officer, Town Planning Officer, and Assistant Town Planning Officer
- Technical category, including Chief Technologist, Technologist, Chief Technical Officer, Assistant Chief Technical Officer, Principal Technical Officer, Senior Technical Officer, and Technical Officer
- General services category, including Accounting/Auditing Staff, Executive Class, Procurement/Store Staff, Clerical Staff, Secretarial Staff and Telephonists

The current TCPD head office is comprised of a Director (acting), and Technical Director, 6 Town Planning Officers, 8 Technical Officers and 6 General Services

Staff. LUSPA is expected to be a much larger organization, although the scale of its human resources and budget is yet to be known.

25.2.2 Regional Office of TCPD (becoming the Physical Planning Department of the RCC)

(1) Objectives

The Regional Office of the TCPD is responsible for preparing a Regional Spatial Development Framework for the region's overall development and Multi-District or Sub-Regional Spatial Development Frameworks which harmonize the Plans of Districts, align with national policies as they affect the regions, and provide the basis for major decisions on development by the regional authorities. The TCPD Regional Office is also supposed to provide frameworks for structure planning in the districts.

The TCPD Regional Office also plays a coordinating role by assisting and facilitating the smooth operation of the District Offices within the Region, particularly those with fewer personnel.

The Land Use and Spatial Planning Bill stipulates that the Regional Coordinating Council (RCC) of each region shall establish a "Regional Spatial Planning Committee" as a technical committee of the Regional Planning Coordinating Unit¹, which comprises:

- Head of RCC as the chairman;
- Head of the Physical Planning Department as the secretary;
- Head of the Regional Development Planning Department; and
- Representatives of other relevant public entities in the region.
- Others may be co-opted with observer status

The Regional Spatial Planning Committee's functions in the Bill are the following:

- Develop the Regional SDF for the region in consultation with the District Assemblies as part of the spatial development component of the Regional Development Plan;
- Adjudicate on appeals or complaints resulting from decisions, actions or inactions of the District Spatial Planning Committee of the District Assemblies;
- Where required prepare sub-regional or multi-district Spatial Development Frameworks with two or more Districts within the Region; and
- Perform spatial planning oversight functions of the District Spatial Planning Committees.

While the Local Government Act, 1993 (Act 462) does not establish departments of the RCCs, "the understanding is that the departments of RCCs shall continue to exist as the de-concentrated departments working for their national headquarters but through the RCCs" ² (Local Government Instrument 2009 "L.I. 1961"). On the

¹ According to Act 462, the Regional Planning Coordinating Unit comprises the heads of departments of the Regional Coordinating Council, i.e. regional heads of de-concentrated departments.

² This is inferred from L.I. 1961's description about Departments of District Assemblies that "the

other hand, according to the information provided by TCPD, the LUSPA will not have regional offices; the TCPD regional offices will be absorbed into their RCCs. It can be assumed that the TCPD regional staff, who will be transferred to RCCs, will be responsible for drafting the Regional SDF and overseeing the Districts' spatial planning functions³).

(2) Composition

At the Regional Office of Ashanti Region, there are currently one regional director, two town planning officers, ten technical officers, one accountant and other staffs.

The Regional Office is also functioning as a place for training newly recruited town planning officers before they move to district offices of TCPD. Currently two newly recruited assistant town planning officers are affiliated to the Regional Office. They are supposed to be transferred to other district assemblies.

25.2.3 Physical Planning (Town Planning) Departments at Metropolitan, Municipal and District Assembly (MMDA) Level

(1) MMDA Institutional Setting and Objectives for Physical Planning/Town Planning

The Land Use and Spatial Planning Bill stipulates that a District Spatial Planning Committee and its Technical Sub-Committee should be established in every District.

The District Spatial Planning Committee's composition is:

- District Chief Executive as the chairman;
- Head of the Physical Planning Department as the secretary;
- District Coordinating Director;
- Chairpersons of the sub-committees on development planning and the works department of the District Assembly; and
- Representatives of other relevant public entities and the Traditional Council in the district.

The District Spatial Planning Committee's major functions are to ensure the preparation of the District SDF, Structure Plans and Local Plans, and generally to deliberate on, and approve the Technical Sub-Committee's recommendations.

The Technical Sub-Committee's composition is:

- Head of the Physical Planning Department as the secretary;
- District Development Planning Officer;

Department of Physical Planning shall manage the activities of the Department of Town and Country Planning and the Department of Parks and Gardens".

³ Following the decentralization policy, most of the regional-level TCPD staff are currently being transferred to the district-level. The number of TCPD staff who will remain at the regional level is limited; in the case of the Ashanti Region, the Director, 2 planners and 2 technicians will remain at the regional-level while all the others will be transferred to districts. In addition, TCPD head office is planning to recruit 70 planners and 70 technicians in 2013, contingent on the availability of budget, some of which will be transferred to Ashanti Region and Districts.

- Heads of relevant Departments in the district; and
- Representatives of other relevant public entities in the district.

The Technical Sub-Committee's major functions are to prepare or review the District SDF, Structure Plans, Local Plans and Rezoning Plans, review all applications for physical development, and conduct technical services and monitoring.

The Land Use and Spatial Planning Bill stipulates that the Physical Planning Department of the District Assembly (which will assume the activities of the TCPD and the Department of Parks and Gardens, which were established under L.I. 1961), will serve as the Secretariat of the District Spatial Planning Committee. In other words, Physical Planners (town planning officers) will constitute the members of the District Spatial Planning Committee's Secretariat. Under the new Bill and Local Government decentralization process they will become Physical Planners who will be appointed directly by each District Assembly.

(2) Objectives for Metropolitan Office for Physical Planning/Town Planning

The Metropolitan Office of TCPD is to assist the Metropolitan Assembly to collect, collate, analyse and produce reports for identifying metropolitan area's potentials with regard to the development of urbanization, industrialization, commerce, mining and to some extent agriculture and to design action programmes for the Assembly.

The Metropolitan Office of TCPD is to advise on all development issues, to prepare a Metropolitan Structure Plan to guide urban development, and to undertake Local Plans for towns and villages within the Metropolis.

**(3) Composition of Metropolitan Office for Physical Planning/Town Planning
Metropolitan Office**

The Metropolitan Office of the TCPD has been already transferred to KMA in the context of the decentralization policy.

The Town Planning Metropolitan Office of KMA currently has one director, two town planning officers, nine technical officers, two accountants and other staffs.

(4) Municipal and District Office Objectives for Physical Planning/Town Planning

The Municipal and District Physical Planning Offices are one of the decentralized departments under the District Assemblies.

The Offices are to assist the District Assemblies to collect, collate, analyse and produce reports on physical development of the District and to identify the District's potentials with regard to the development of agriculture, mining, industries and commerce and to design action programmes.

It is to advise on all development issues and to prepare a District SDFs and Structure Plans as a framework for development of towns and villages in the District and to prepare Local Plans.

(5) Municipal and District Offices Composition for Physical Planning/Town Planning

Each Physical Planning/Town Planning District Office is to have at least one town planning officer. However, out of 30 MMDAs, only 13 MMDAs have town planning officers. The other 17 districts do not have any town planning officers.

Last year, the Head Office of the TCPD re-started recruitment of professional staff to strengthen its capacity and that of its regional, metropolitan, municipal and district assembly (MMDA) offices. A significant institutional change which will be made in 2014, in the context of the decentralization policy, is that town planning staff which are assigned to MMDAs are soon to be directly employed by them, rather than TCPD.

Table 25.2.1 Number of Physical Planning/Town Planning Staff by Category in MMDAs of Ashanti Region

No.	Region, Metropolis, Municipality, District		Director	Town Planning Officers	Technical Officers	Accountants	Secretaries, Typists	Others
1	Regional Office*	Region	1	2	10	1	2	10
2	KMA	Metropolis	1	2	9	2	1	3
3	Afigya-Kwabre	District	0	1	4	0	0	0
4	Kwabre East	District	0	0	5	0	1	0
5	Sekyere South	District	0	0	4	0	0	0
6	Mampong Municipal	Municipal	0	1	3	0	1	1
7	Ejura Sekyere	District	0	0	2	0	0	0
8	Sekyere Central	District	0	0	2	0	0	0
9	Ejisu-Juaben	District	0	2	4	0	1	1
10	Sekyere East	District	0	0	2	0	0	0
11	Sekyere Afram Plains	District	0	0	2	0	0	0
12	Kumawu	District	0	0	2	0	0	0
13	Bosomtwe	District	0	1	4	0	1	0
14	Atwima Kwanwoma	District	0	1	4	0	1	0
15	Atwima Nwabiagya	District	0	1	5	0	1	0
16	Atwima Mponua	District	0	1	4	0	0	0
17	Obuasi Municipal	Municipal	0	1	5	0	1	0
18	Bekwai Municipal	Municipal	0	1	4	0	0	0
19	Bosome Freho	District	0	0	1	0	0	0
20	Amansie Central	District	0	0	2	0	0	0

21	Amansie West	District	0	0	2	0	0	0
22	Adansi North	District	0	0	3	0	1	0
23	Adansi South	District	0	0	2	0	0	0
24	Asante Akim South	District	0	0	1	0	0	0
25	Asante Akim North	District	0	0	2	0	0	0
26	Asante Akim Central	District	0	1	5	0	1	0
27	Ahafo Ano North	District	0	0	3	0	1	0
28	Ahafo Ano South	District	0	1	2	0	0	0
29	Asokore Mampong	District	0	0	2	0	0	0
30	Offinso North	District	0	0	3	0	0	0
31	Offinso Municipal	Municipal	0	1	4	0	0	0
	Total		2	17	107	3	13	15

Note* Three Assistant Town Planning Officers are currently affiliated to the Regional Office.

However, soon after getting training, they are to be transferred to district assemblies.

Source: Regional Office of TCPD, Ashanti Region, 2013

25.3 Basic Framework for Capacity Development Programme for Spatial Planning and Implementation

25.3.1 Primary Objective

The primary objective for implementing the capacity development programme is to develop the capacity of those who are engaged in spatial planning and implementation at the national, regional and district levels so that they can utilize the Greater Kumasi Sub-Regional SDF and Conurbation SP and guide effective, efficient and sustainable spatial development in the Greater Kumasi Sub-Region.

25.3.2 Identifying Capacity Development Needs

The Capacity Development Programme is based on identification of capacity needed, and any gaps existing, in order that institutions can effectively use the Sub-Regional SDF and Conurbation SP at national, regional and district level (in particular the institutions as outlined in Chapter 20). The Capacity Development Programme also takes into account the key projects, actions and priorities of the Implementation Plan (Chapters 21-23)

25.3.3 Timeframe and Method for Capacity Development Programme

The Capacity Development Programme will be for three to five years of capacity development through step-by-step “learning by doing” (on the job training) and formal training. The aim will be for the process to become self-financing by the end of the three to five year period.

25.3.4 Agencies, Capacities, Gaps and Requirements for Implementation and Use of the Greater Kumasi Sub-Regional SDF and Conurbation SP

(1) Regional Level

Although the key policies and decisions on allocation of resources are ultimately made at the district level, the driving force behind the implementation of the Greater Kumasi Sub-Regional SDF and Conurbation SP will be the overall direction, monitoring and evaluation which will be undertaken by the Spatial Planning sub-committee of the RCC. The sub-committee may establish a “Regional Platform for Implementation of Greater Kumasi SDF and Conurbation SP” or similar organizational basis in order to provide the necessary focus which the implementation of the Greater Kumasi SDF and SP will need. The former TCPD at regional level will become the Regional Physical Planning Department, employed directly by the RCC, under the decentralization agenda. Key thematic areas for implementation which are identified (Chapters 21-23) above will form the agenda, and separate working groups for some or all of them may need to be established. The capacity requirements for this, including the stakeholders at regional level, are examined in more detail below.

(2) District Level

The primary objective of the Sub-Regional SDF and Structure Plan for Greater Kumasi is to provide the guideline for the spatial development of the area. Under Ghana’s decentralization agenda, the decisions on plans and programmes which are required must emanate from the district and local level. District-level SDFs and Structure Plans need to be prepared and approved which will form the basis of regulations for physical development and implementation of spatial plans.

Manuals for the preparation of district-level SDFs, Structure Plans and Local Plans were developed in Phase 1 of the Land Administration Project. Although these manuals will help town planners to learn the steps and procedures for formulating these plans, some of the technical skills necessary to prepare these plans can only be acquired through actual planning practice and experience. Hence, the capacity needs of district assemblies to be able to use the Greater Kumasi SDF and SP to make decisions and policies and to implement the SDF and SP are described below.

The primary objective of the Capacity Development Programme is, therefore, to identify measures, including training, which are needed in relation to translating the Sub-Regional SDF and SP into the district-level spatial plans (SDFs and SPs).

Other stakeholders, in particular Chiefs, but also community-level organisations and businesses as the users and developers of land and services will play a major part in ensuring that the sub-regional and district-level spatial plans are implemented, and therefore proposals are also made for working with these stakeholders.

(3) National Level

At the national level the individual sector agencies will be brought to Greater

Kumasi to contribute to the key thematic areas for implementation which have been identified, by the RCC. It will therefore be important that the connections which have already begun with MDAs during the preparation of the Plan should continue to develop and be fostered.

The National Development Planning Commission (NDPC) and the Land Use and Spatial Planning Authority (LUSPA) play the overall harmonizing and monitoring role across MDAs nationally.

Also at the national level, a similar role for investment agencies and the promotion of Greater Kumasi will be needed.

25.3.5 Organization and Capacity at Regional Level

At the regional level, the principal agency for implementing the Greater Kumasi SDF and SP will be the Spatial Planning Committee of the Regional Planning and Coordination Unit (RPCU). The RPCU encompasses both the development (social and economic) and the spatial aspects of planning.

For historical reasons, the regional office of TCPD is co-located more with the TCPD office of KMA than with the Development Planning office of the RPCU. For many years there have been almost no spatial plans above the local-level planning schemes (or local plans, in the new system) level. Hence, the necessity or basis for closer working between the regional office of TCPD and the development planners has not existed. The Greater Kumasi SDF and SP, and forthcoming SDF for Ashanti Region will challenge this separation. Indeed the NDPC and TCPD are working at the national level to integrate MTDPs and National-Level SDFs which will also mean a closer relationship between Development Planners and Physical Planners. A problem also exists in the current capacity at regional level, which is generally quite weak.

The existing and future capacity needs of the Physical Planning Department of the RPCU, therefore, need to be seen apart from other roles mentioned below (Section 24.2.3), in the context of their forthcoming role as secretariat for the Regional Spatial Planning Committee working on the implementation of the Greater Kumasi SDF and SP soon to be followed by the Regional SDF.

The breadth of stakeholder engagement at the regional level, connections to national ministries, departments and authorities (MDAs), which have arisen during the preparation of the Greater Kumasi SDF and SP, will need to be taken forward into its implementation.

25.4 Needs and Objectives and Requirements for Capacity Development Programme for Implementation of Greater Kumasi Sub-Regional SDF and Conurbation SP

The objectives and requirements for the Capacity Development Programme for implementing the Greater Kumasi SDF and SP are analysed from the perspectives of different administrative levels of roles and responsibilities in the previous sections.

Their summaries are given in Table 25.4.1.

Table 25.4.1 Needs and Objectives of Capacity Development Programme by Administrative Level

Administrative Level	Needs and Objectives of the Capacity Development Programme
<p><u>District Level:</u> Physical Planning Officers, Development Planning Officers, and Works Engineers, Information Services Officers of District Assemblies</p>	<p><Preparation of District SDFs, District-Level SPs and Local Plans> To be able to prepare District-Level SDF, SPs and local plans in conformity with the Greater Kumasi SDF and SP; <Enforcement of District SDFs, District-Level SPs and Local Plans> To enforce land use regulations in conformity with District SDFs, SPs and Local Plans; <Implementation of Civic Education> To educate and involve the stakeholders in implementing the Greater Kumasi SDF and SP, including understanding their roles and responsibilities at the local level.</p>
<p><u>Regional Level:</u> Physical Planning Officers, Planning Officers, Engineers, Information Services Officers of RCC and Regional Departments</p>	<p><Harmonization of District-Level SDFs and SPs with Greater Kumasi SDF and SP> To be able to harmonise district-level plans with the Greater Kumasi SDF and SP; <Review and Renewal of Greater Kumasi SDF and SP> To be able to prepare and revise/renew the Greater Kumasi SDF and SP through implementation, monitoring and evaluating the Greater Kumasi SDF and SP; <Promotion of Public Investment in Sub-Regional Infrastructures and Services> To be able to organize and run thematic implementation working groups to appeal to the needs for public investment in sub-regional infrastructures and services toward the national-level agencies; <Promotion of Private Investment> To be able to organize and run thematic implementation working groups to attract private investment in the economic sectors; <Implementation of Civic Education> To educate and involve the population including Traditional Chiefs in the Greater Kumasi SDF and SP for implementation including understanding their roles and responsibilities.</p>
<p><u>National Level:</u> Officers of NDPC, LUSPA and GIPC</p>	<p><Incorporation of Sub-Regional SDF and SP into National SDF, National MTDP and Sector MTDPs> To be able to understand and incorporate the Greater Kumasi SDF and SP into the National SDF and Sector Medium Term Development Plans, to ensure their conformity with the National Medium Term Development Plan; <Promotion of Public Investment in Sub-Regional Infrastructures and Services> To be able to promote public investment in sub-regional infrastructures and services proposed by the Greater Kumasi SDF and SP at the national and international levels; <Promotion of Private Investment> To identify and attract private investment in achieving the Greater Kumasi SDF and SP.</p>

Source: JICA Study Team

25.5 Composition and Scopes of Capacity Development Programme

25.5.1 Composition of Capacity Development Programme

The Capacity Development Programme is designed to target the following 5 groups:

- National-Level Planning Institutions
- Regional-Level Physical Planning Institutions
- District-Level Physical Planning Institutions
- Citizens including Traditional Chiefs
- Universities and Polytechnics

The Capacity Development Programme is composed of the following 12 sub-programmes:

National-Level Planning Institutions

- Sub-Programme for Capacity Development for Harmonising Sub-Regional SDFs and SPs with the National SDF and National Medium Term Development Plan

Regional-Level Physical Planning Institutions

- Sub-Programme for Planning Capacity to Formulate and Revise/Renew the Greater Kumasi Sub-Regional SDF and Conurbation SPs for Physical Planning Officers at RCC
- Sub-Programme for Coordination Capacity for Implementation of the Greater Kumasi SDF and Conurbation SP

District-Level Physical Planning Institutions

- Sub-Programme for Capacity Development for Formulating District SDFs and District SPs outside Greater Kumasi Sub-Region
- Sub-Programme on Capacity Development for Formulating District SDFs and District SPs inside Greater Kumasi Sub-Region including KMA
- Sub-Programme of Capacity Development for Monitoring and Enforcing the District SDFs and District SPs
- Sub Programme for Training Members of District, Municipal and Metropolitan Assemblies Spatial Planning Committees

Citizens including Traditional Chiefs

- Sub-Programme for Citizens' Education on Spatial Plans
- Sub-Programme for Chiefs' Education on Spatial Plans

Universities and Polytechnics

- Sub-Programme for Designing Courses for PC Skills Training for Spatial Planning Practice
- Sub-Programme for Designing Courses for GIS Skills Training for Spatial Planners
- Sub-Programme for Designing Courses for Development Planners on Spatial Planning

25.5.2 Sub-Programme: Capacity Development for Promoting the Implementation of Sub-Regional SDFs and SPs at National Level

(1) Sub-Programme for Capacity Development for Harmonising Sub-Regional SDFs and SPs with the National SDF and National Medium Term Development Plan

1) Objectives

The objective of this sub-programme will be to train Officers in LUSPA and sector agencies in the use and implementation of the Greater Kumasi Plan for some aspects which are of national significance, and some that to a greater or lesser extent require decisions at national level MDAs. Acknowledgement of the key themes and some specific projects will be necessary in the National Medium Term Development Framework, which is prepared by the NDPC, and the National SDF, which is prepared by the LUSPA. The necessary budget lines will also need to be recognised in the national budget, by working with the sector agencies, the NDPC and the Director of Budget at MOFEP.

The separate question of the organisation of investment funding by Banks, Development Partners and other financial institutions both in Ghana and internationally, and the accompanying promotion of investment opportunities also requires setting up and supporting.

2) Scope

a) Increased Capacity at LUSPA Head Office and at NDPC

At LUSPA (currently TCPD Head Office as above) the current complement of staff is well below the number which is needed. Hence, the placement of a staff member to oversee TCPD's involvement in implementation of the GK Plan is proposed⁴. This person may also work closely with the NDPC, where the staff compliment is currently at 16, compared with the required number of 52. Finally, they may also be responsible for organizing national level workshops as per the next item.

b) Capacity Development for other stakeholders at national level

Although the above structures are to some extent routine, it will be necessary to achieve the desired focus for Greater Kumasi by continuing a process which has been set in motion during the preparation of the Plan, of convening a joint meeting of the agencies at national level to comment on and later monitor the implementation, including the effective cross-sector working by agencies at national level. Hence,

⁴ It should be noted that the training needs assessment of Head Office, which was carried out in 2009 by LUPMP, funded under LAP1, identified the following issues: insufficient number of trained Professional Planning Staff; Training for TCPD technical staff including in ICT, GIS, GPS, AutoCAD, Project planning and implementation, budgeting, team building and networking; Training for TCPD administrative staff in TCPD administrative procedures, basic ICT, basic land use planning and management; Training in Local Plans update, Structure Plans and Spatial Development Framework Plans, Development Control and Planning Law; Logistical Support; Political Interference; Up-to-date Base Maps; Urban Sprawl; Illegal Planning Practice; Multiple Land Sales; Monitoring and Evaluation

the following is proposed:

At the beginning, a 2-day residential workshop and one day follow-up year one, batch 1; year two, two one-day follow ups, with the following agenda:

- Presentation of the SDF and SP/update on progress
 - Identification/update of actors at the national level
 - Roles of actors at the national level, actions to date
 - Programme for implementation of the SDF and SP, update
 - Activities needing to be done by each actor at the national level to implement the plan, updated
 - Programme of activities to be done at the national level, updated
 - Linkages and critical path in the joint programme of activities by actors at the national level, updated.
 - Relationship of the actors at Regional and District level, updated
 - Organisational and resource requirements, including training and capacity building for coordination and implementation of joint action by the actors at the national level, updated
 - Action plan for implementing the SDF and SP at the national level, updated
 - Commitment of actors at the national level to the action plan, reviewed.
 - Next steps, resources and schedule of meetings including preparation for ongoing mainstream funding for the national level in three years and subsequently.
- c) Capacity Development for the Investment and PR forum for Greater Kumasi at the National level

The scale of the necessary levels of investment that will be needed to implement the Greater Kumasi Plan is such that it will need to be well organized at the national and international level. It will be important for the linkages and synergy between investments in different sectors, building on each other, to be realized in order for funding to be committed in a timely manner.

Therefore, it is proposed that a National level investment, PR and communications workshop be held with the following agenda⁵:

- Presentation of the Plan
- Identification of investors at national and international level
- Discuss conditions under which investors will become involved
- Linkages between investors, the Project Plan and investment programme
- What activities need to be done to promote, attract and implement investment to realise the plan.

⁵ Identified national level investors and related agencies include Otumfuo; GIPC; Development Partners, IMF, ICFG; Investment Banks, Finance companies, Mortgage finance companies, SNIIT; Investors in manufacturing, commercial and residential property development, retailing, leisure and hospitality companies, GREDA; Ministry of Finance and Economic Planning; Ministry of Trade and Industry; Ghana Free Zones Board; KNUST Development Office ; Ghana Tourism Authority; Ghana Airports Company Ltd

- Linkages and critical path in a joint programme of activities by investors and other actors at the national, regional and district level
- Organisational and resource requirements, including training and capacity building for coordination and implementation of joint action by investors.
- Commitment of investment actors to the investment programme and necessary activities.
- Next steps, constitution, resources and schedule of meetings

3) Executive Agencies

LUSPA and at NDPC

4) Expected Effects

- Directors and planning officers of LUSPA and NDPA will be able to harmonize Sub-Regional SDFs and SPs with the National SDF and National MTDP.
- Directors and planning officers of LUSPA and NDPC will be able to promote to incorporate infrastructures proposed by Sub-Regional SDFs and SPs into Sector MTDPs
- Directors and planning officers of LUSPA and NDPC will be able to promote public investment from national agencies for the implementation of Sub-Regional SDFs and SPS

25.5.3 Sub-Programmes: Capacity Development for using the Greater Kumasi Plan at Regional level

(1) Sub-Programme for Planning Capacity to Formulate and Revise/Renew the Greater Kumasi Sub-Regional SDF and Conurbation SPs: for Physical Planning Officers at RCC

1) Background and Rationale

The Greater Kumasi SDF and SP represent a huge step forward in spatial planning methods from the current situation. The factors involved and complex linkages between different levels of agencies will take time to absorb. When the Plan is taken on by the districts and transformed into their individual district-level SDFs and SPs, there will also be necessary adjustment and iteration. The preparedness of existing physical planning officers, and newly appointed physical planning officers needs both classroom training and on-the-job training in order to achieve this task.

2) Objectives

To train physical planning officers of the Physical Planning Departments in the RPCU at the Regional Coordinating Council (RCC) in preparation, review and to adjust/revise/renew the Sub-Regional SDF and Conurbation SP through monitoring and evaluation of the plans in the course of utilizing the plans at the district, regional and national levels.

This sub-programme is designed for regional physical planning officers and technical officers to review the Greater Kumasi Sub-Regional SDF and Conurbation

SP and to adjust/ revise/renew them in 5 year intervals. This task for review/adjustment/revision/renew should be informed not only by the experiences of using the Greater Kumasi Sub-Regional SDF and Conurbation SP, but also by experiences of actual preparation and utilization of district-level SDFs and SPs within the Greater Kumasi Sub-Region.

This sub-programme can also be attended by those who are supposed to formulate sub-regional SDFs and conurbation SPs in other regions. The main trainers for the latter component of this sub-programme should be former TCPD counterparts who have actually experienced on-the-job training for the formulation of the SDF and SP in the JICA Project (JICA Study on Comprehensive Urban Development Plan for Greater Kumasi).

3) Scope

The training will regularly monitor the process of implementation, renew/review of the Greater Kumasi SDF and SP. It will discuss how to handle issues which have arisen.

This will be delivered through conducting monthly workshops for Physical and Development Planners and Officers of other agencies in the RPCU as appropriate for the first six months, quarterly for the rest of the first eighteen months and bi-annually thereafter (total 12 workshops). The workshops will review progress and discuss how to deal with challenges to the plan and methods of adjustment and review.

4) Executive Agencies

Regional Coordinating Council, Physical Planning Department

5) Expected Effects

The beneficiaries will be able to fully understand the Greater Kumasi SDF and SP and to carry out the methods of ongoing refinement and adjustment of them. The output will be a record of the training workshops and the processes of refinement which have been used.

6) Expert Personnel Inputs for Training

At least the input of the following experts is necessary to implement this sub-programme:

- Manager/Technical Advisor on Sub-Regional SDF and SP
- Short-Term Expert (Spatial Planning)
- Short-Term Expert (GIS)
- Short-Term Experts (Infrastructure)
- Short-Term Experts (Others)

7) Organizational Requirements

Staff Requirements

At least the following staff should be available at the regional-level physical

planning department of the RCC, not only for spatial planning but also for promoting the implementation of SDF and SP:

- Physical Planning Director
- Senior Physical Planning Officer
- Middle Physical Planning Officer
- Junior Physical Planning Officer
- Communication Officer
- GIS Technical Officer (Advanced)
- GIS Technical Officer (Junior)

ICT Requirements

- Wireless LAN Environment and Internet Connection
- 1 Photocopier
- 1 Inkjet Printer (A3-Color Printer)
- 1 Laser Printer (A4-Black & White Printer)
- 1 Desktop PC for Administrator
- 2 Desktop PCs for GIS Technical Officers
- 5 Laptop PCs for Physical Planning Director, Physical Planning Officers and Communication Officers

(2) Sub-Programme for Coordination Capacity for Implementation of the Greater Kumasi SDF and Conurbation SP

1) Background and Rationale

For achieving well-ordered physical development and thriving economic development for a large urban agglomeration like Greater Kumasi it is necessary for government agencies and private sectors to make a concerted effort at promoting public investment in large-scale infrastructures and private investment in the economic sectors.

The availability of a well-prepared integrated spatial development plan covering multi-sectors is essential for the concerted effort by various government agencies and private sectors.

2) Objectives

- To train the existing director, physical planning officers, technical officers and other administrative staff to become able to promote implementation of the Greater Kumasi SDF and SP by coordinating with relevant agencies and stakeholders
- To provide on-the-job training opportunities to promote the actual implementation process of the Greater Kumasi SDF and SP under the guidance of international experts/advisors by running a regional platform under the RPCU of the RCC
- To provide necessary logistics support to conduct activities for the implementation promotion

3) Scope

The Regional Platform, which will monitor and promote the implementation of the Greater Kumasi SDF and Conurbation SP, will be organized by the Physical Planning Department of the RCC.

The director, town planning officers and technical officers of the Physical Planning Department of the RCC need actual opportunities to promote implementation and to have on-the-job training, as well as logistics support in order to become able to conduct this task for implementation.

In the process of the implementation promotion, the Regional Platform will organize and operate working groups of key themes identified in the Implementation Plan for Greater Kumasi Sub-Regional SDF and Conurbation SP.

4) Executive Agencies

Regional Coordinating Council, Physical Planning Department

5) Expected Effects

The beneficiaries will be able to fully experience the opportunities and gain the capacity to coordinate with relevant agencies at the district, regional and national levels for promoting the implementation of the Greater Kumasi SDF and SP.

The beneficiaries will also understand how to utilize the Greater Kumasi SDF and SP for promoting the physical and economic development of the Sub-Region.

6) Expert Personnel Inputs for Training

At least the input of the following experts is necessary to implement this sub-programme:

- Manager/Technical Advisor on Implementation Promotion
- Short-Term Expert (Spatial Planning)
- Short-Term Expert (Investment Promotion)
- Short-Term Expert (Industrial Development)
- Short-Term Experts (Others)
- Basic support to organize workshops

7) Organizational Requirements

Staff and ICT Requirements

At least the staff and ICT equipment proposed for the above sub-programme for planning capacity should be available at the regional-level physical planning department of the RCC for carrying out this sub-programme for the coordination capacity for implementation.

25.5.4 Sub-Programmes: Capacity Development for Formulation and Enforcement of District SDFs and SPs at District Level

(1) Sub-Programme for Capacity Development for Formulating District SDFs and District SPs outside Greater Kumasi Sub-Region

1) Background and Rationale

Extensive urban sprawl, lack of public services in suburban areas and extreme traffic congestion in the city centre have been taking place in Kumasi city and its surrounding districts, resulting in deterioration of the urban environment. Additionally, changes in land use such as deforestation and increase of agricultural lands are happening, and urban land uses are also significant in and around the medium sized towns and small towns in Ashanti Region. Therefore, all the districts in Ashanti Region need to formulate district-level SDFs and Structure Plans immediately and conduct physical development and rezoning in a well-planned manner.

Because of the increase in the number of districts, the number of the Physical Planning and Development Planning Officers are also increasing. Since preparation for spatial plans has not made progress due to a lack of funds, the Physical Planning and Development Planning Officers don't have the opportunity to acquire the technical skills needed for preparing these plans.

2) Objectives

- To formulate a draft of the District-level SDFs and Structure Plans outside Greater Kumasi Sub-Region
- To develop the skills of the Physical Planning Officers of all the districts outside Greater Kumasi Sub-Region in the Ashanti Region
- To train trainers for this sub-programme

3) Scope

The scope of the sub-programme is summarized as described below;

- Two – year on-the-job training programme with 16 training workshops,
- Physical Planning Officers of all the districts outside Greater Kumasi Sub-Region in the Ashanti Region will take part in the programme,
- Drafts of the District SDFs and Structure Plans will be developed through the programme,
- Participants will be divided into two groups and the training workshop of the first group starts first. When preparation of the SDFs by the first group is completed, the training workshop of the second group will start,
- In the training workshops for the first group, the counterpart staffs concerned with this project will become trainers and training of trainers will be carried out at the same time. In the training workshops for the second group, the staffs of the first group will be trainers.

4) Executive Agencies

Ashanti Regional Coordinating Council (RCC) and Town and Country Planning Department (TCPD), Ministry of Environment, Science and Technology (MEST)

5) Expected Effects

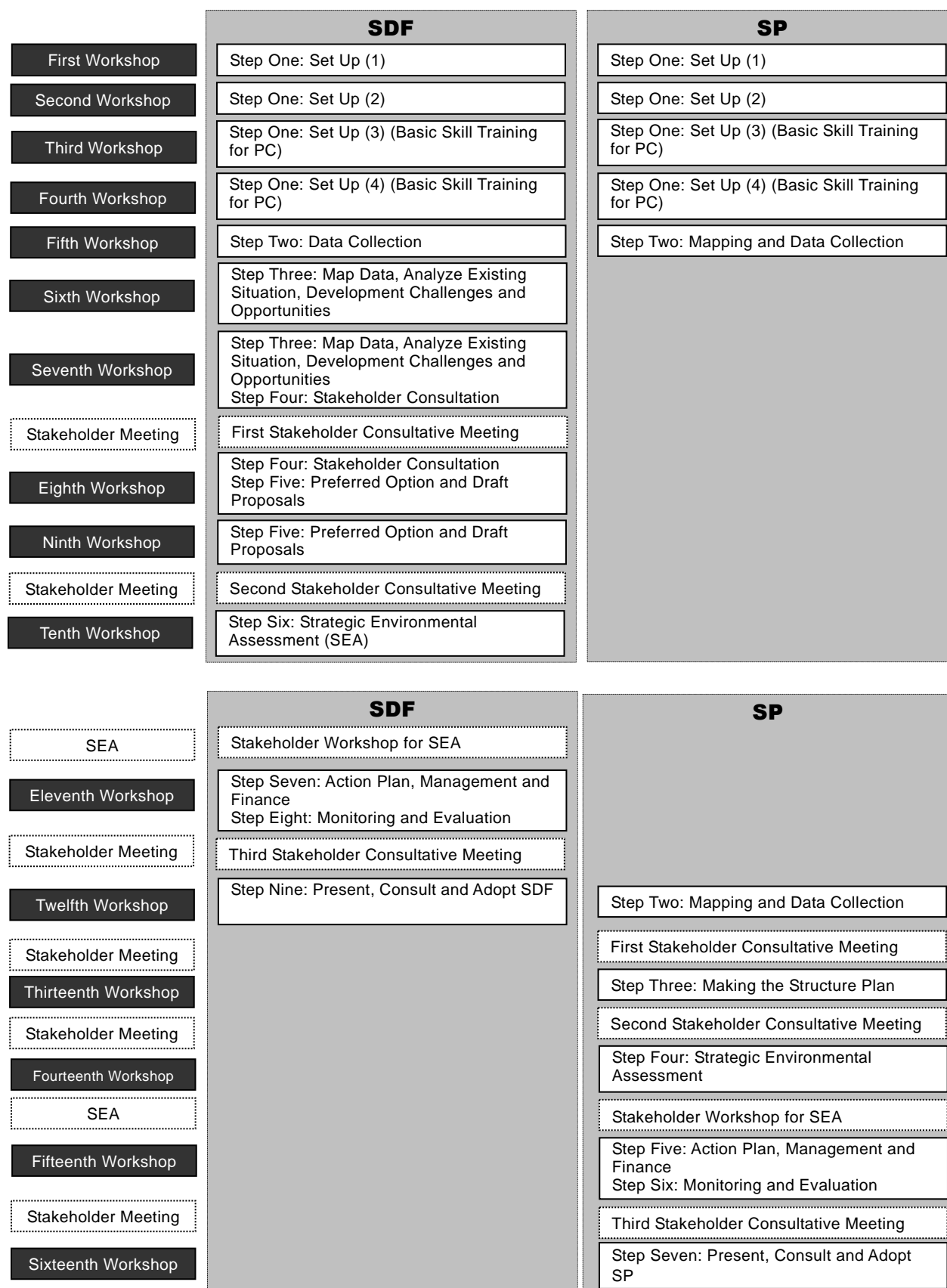
- The beneficiaries will be able to prepare drafts of the District SDFs and Structure Plans, without each district appointing a consultant individually.
- Among the districts which participate in this training programme, essential coordination on spatial planning will be carried out.
- It will be easy to implement, monitor, evaluate and review the plans, since the Physical Planning Officers themselves will formulate the spatial plans.

6) Necessary Inputs

- Manager/Technical Advisor on District-level SDF and SP
- Short-Term Expert (Spatial Planning)
- Short-Term Expert (ICT)
- Short-Term Expert (GIS)
- Short-Term Expert (Stakeholder Consultation)
- Short-Term Expert (Others)
- Computer software required
- Maps which are available (1:50,000 topographical maps, satellite photo maps or orthophoto maps)
- Basic support to organize workshops

7) Schedule for training workshops

The schedule for the training workshops is summarized in Figure 25.5.1.



Source: JICA Study Team

Figure 25.5.1 Schedule for Training Workshop

Table 25.5.1 Schedule for Training Workshop

Month	SDF	SF
1	First Workshop / Second Workshop	
2	Third Workshop / Fourth Workshop	
3	Fifth Workshop	
4	Sixth Workshop	
5	Seventh Workshop	
6	<i>1st Stakeholder Meeting</i>	
7	Eighth Workshop	
8	Ninth Workshop	
9	<i>2nd Stakeholder Meeting</i>	
10	Tenth Workshop	
11	<i>SEA Workshop</i>	
12	Eleventh Workshop	
13	<i>3rd Stakeholder Meeting</i>	
14	Twelfth Workshop	
15	<i>1st Stakeholder Meeting</i>	
16	Thirteenth Workshop	
17	<i>2nd Stakeholder Meeting</i>	
18	Fourteenth Workshop	
19	<i>SEA Workshop</i>	
20	Fifteenth Workshop	
21	<i>3rd Stakeholder Meeting</i>	
22	Sixteenth Workshop	

Source: JICA Study Team

Table 25.5.2 Programme for Training Workshops

First Training Workshop	Step One (SDF/SP) : Set Up (1)	<ul style="list-style-type: none"> - See the picture of the programme - Confirm preparing body of SDF/SP and organize an SDF/SP management team - Grasp the big picture of an SDF and a Structure Plan at District level - Get related legal systems and manuals ready - Decide all relevant stakeholders in detail
Second Training Workshop	Step One (SDF/SP) : Set Up (2)	<ul style="list-style-type: none"> - Download and Install necessary software on their own laptop computers (Microsoft Office Word, Excel and Power Point, Internet software, e-mail programme, printer driver, Google Earth, Map Maker, etc.) - Notify all relevant stakeholders of launching institution of SDF/SP - Temporarily define a Structure Plan area
Third Training Workshop	Step One (SDF/SP) : Set Up (3) (Basic Skill Training for PC)	<ul style="list-style-type: none"> - Learn how to prepare a document with Microsoft Office Word - Learn how to make a spreadsheet and a graph with Microsoft Office Excel - Learn how to access the Internet - Learn how to send and receive e-mail - Learn how to print out a document on a printer
Fourth Training Workshop	Step One (SDF/SP) : Set Up (4) (Basic Skill Training for PC)	<ul style="list-style-type: none"> - Learn how to make a presentation-slide with Microsoft Office Power Point - Learn how to view and process orthophotos of satellite images from Google Earth - Learn how to draw a map with Map Maker
Fifth Training Workshop	Step Two (SDF) : Data Collection / Step Two (SP) : Mapping and Data Collection	<ul style="list-style-type: none"> - Report the progress of the tasks to be set at the first workshop - Check the substance, availability and methods for obtaining data in accordance with a list of data required in the manual for the preparation of spatial plans - Allocate national/regional level data to the participants and request provision of data to each data source
Sixth Training Workshop	Step Three (SDF) : Map Data, Analyse	<ul style="list-style-type: none"> - Report the progress of the tasks to be set at the second workshop - Give out national/regional level data which have been obtained

	Existing Situation, Development Challenges and Opportunities	<ul style="list-style-type: none"> - Obtain physical data from maps and analyse obtained quantitative data - Analyse problems and identify needs and opportunities, the dynamics of change and ways forward
Seventh Training Workshop	Step Three (SDF) : Map Data, Analyse Existing Situation, Development Challenges and Opportunities / Step Four (SDF) : Stakeholder Consultation	<ul style="list-style-type: none"> - Report the progress on the tasks to be set at the third workshop - Draft the SDF report - Design the draft programme of the first stakeholder consultative meeting for SDF - Fix the date, venue, distribution list and group discussion's theme for the meeting - Prepare presentation materials and other arrangements for the meeting
First Stakeholder Consultative Meeting for SDF	Step Four (SDF) : Stakeholder Consultation	<ul style="list-style-type: none"> - Conduct the first stakeholder consultative meeting for SDF
Eighth Training Workshop	Step Four (SDF) : Stakeholder Consultation / Step Five (SDF) : Preferred Option and Draft Proposals	<ul style="list-style-type: none"> - Report the progress on the tasks to be set at the fourth workshop including the result of the first stakeholder consultative meeting for SDF - Develop the first draft proposals (Preferred Option) - Prepare a vision statement and a set of Guiding Principles - Write up the proposals (Spatial Strategies) - Draw a set of Key Diagrams
Ninth Training Workshop	Step Five (SDF) : Preferred Option and Draft Proposals	<ul style="list-style-type: none"> - Report the progress on the tasks to be set at the fifth workshop including the result of the Spatial Planning Committee meeting - Revise the draft proposals (Preferred Option), the vision statement, the set of Guiding Principles and the proposals (Spatial Strategies) as a result of the Spatial Planning Committee meeting - Define the Structure Plan Area - Design the draft programme of the second stakeholder consultative meeting for SDF - Fix the date, venue, distribution list and group discussion's theme for the meeting - Prepare presentation materials and other arrangements for the meeting
Second Stakeholder Consultative Meeting for SDF	Step Four (SDF) : Stakeholder Consultation	<ul style="list-style-type: none"> - Conduct the second stakeholder consultative meeting for SDF
Tenth Training Workshop	Step Six (SDF) : Strategic Environmental Assessment (SEA)	<ul style="list-style-type: none"> - Report the progress on the tasks to be set at the sixth workshop including the result of the second stakeholder consultative meeting for SDF - Make a report on the stakeholder consultative meetings - Define the SEA assessment methodology and criteria and draw up a draft scoping report - Design the draft programme of the stakeholder workshop for SEA of SDF - Fix the date, venue, distribution list and tools for the workshop - Prepare presentation materials and other arrangements for the workshop
Stakeholder Workshop for SEA of SDF	Step Six (SDF) : Strategic Environmental Assessment (SEA)	<ul style="list-style-type: none"> - Conduct the stakeholder workshop for SEA of SDF
Eleventh Training Workshop	Step Seven (SDF) : Action Plan, Management and Finance / Step Eight (SDF) : Monitoring and Evaluation	<ul style="list-style-type: none"> - Report the progress of the tasks to be set at the seventh workshop including the result of the stakeholder workshop for SEA of SDF - Map out an action plan for SDF including the management and financial structures - Develop a monitoring and evaluation plan for SDF - Design the draft programme of the third stakeholder consultative meeting for SDF - Fix the date, venue and distribution list for the meeting - Prepare presentation materials and other arrangements for the meeting
Third Stakeholder Consultative Meeting for SDF	Step Four (SDF) : Stakeholder Consultation	<ul style="list-style-type: none"> - Conduct the third stakeholder consultative meeting for SDF
Twelfth Training Workshop	Step Nine (SDF) : Present, Consult Over and Adopt SDF / Step Two (SP) : Mapping and Data Collection	<ul style="list-style-type: none"> - Report the progress on the tasks to be set at the eighth workshop including the result of the third stakeholder consultative meeting for SDF - Revise the SDF proposals as a result of the third stakeholder meeting and implement the procedure for adopting SDF - Create a map showing the physical data obtained regarding the Structure Plan Area and prepare present land use maps - Analyse the obtained quantitative data on the Structure Plan Area - Analyse the problems and existing situation challenges and opportunities - Set the development goals and guidelines - Draft the Structure Plan report - Design the draft programme of the first stakeholder consultative meeting for SP - Fix the date, venue, distribution list and group discussion's theme for the meeting - Prepare presentation materials and other arrangements for the meeting

First Stakeholder Consultative Meeting for SP	Step Two (SP) : Mapping and Data Collection	- Conduct the first stakeholder consultative meeting for SP
Thirteenth Training Workshop	Step Three (SP) : Making the Structure Plan	- Report the progress of the tasks to be set at the ninth workshop including the result of the first stakeholder consultative meeting for SP - Prepare the draft options for the Structure Plan - Design the draft programme of the second stakeholder consultative meeting for SP - Fix the date, venue, distribution list and group discussion's theme for the meeting - Prepare presentation materials and other arrangements for the meeting
Second Stakeholder Consultative Meeting for SP	Step Three (SP) : Making the Structure Plan	- Conduct the second stakeholder consultative meeting for SP
Fourteenth Training Workshop	Step Four (SP) : Strategic Environmental Assessment	- Report the progress on the tasks to be set at the tenth workshop including the result of the second stakeholder consultative meeting for SP - Make a report on the stakeholder consultative meetings - Define the SEA assessment methodology and content of the environmental assessment - Design the draft programme of the stakeholder workshop for SEA of SP - Fix the date, venue, distribution list and tools for the workshop - Prepare presentation materials and other arrangements for the workshop
Stakeholder Workshop for SEA of SP	Step Four (SP) : Strategic Environmental Assessment	- Conduct the stakeholder workshop for SEA of SP
Fifteenth Training Workshop	Step Five (SP) : Action Plan, Management and Finance / Step Six (SP) : Monitoring and Evaluation	- Report the progress of the tasks to be set at the eleventh workshop including the result of the stakeholder workshop for SEA of SP - Map out an action plan for SP including the management and financial structures - Develop a monitoring and evaluation plan for SP - Design the draft programme of the third stakeholder consultative meeting for SP - Fix the date, venue and distribution list for the meeting - Prepare presentation materials and other arrangements for the meeting
Third Stakeholder Consultative Meeting for SP	Step Seven (SP) : Present, Consult Over and Adopt SP	- Conduct the third stakeholder consultative meeting for SP
Sixteenth Training Workshop	Step Seven (SP) : Present, Consult Over and Adopt SP	- Report the progress on the tasks to be set at the twelfth workshop including the result of the third stakeholder consultative meeting for SP - Revise the SP proposals as a result of the third stakeholder meeting and implement the procedure for adopting SP

Source: JICA Study Team

(2) Sub-Programme on Capacity Development for Formulating District SDFs and District SPs inside Greater Kumasi Sub-Region including KMA

1) Background and Rationale

Background and rationale for the Sub-Programme are identical with those outside Greater Kumasi Sub-Region.

2) Objectives

- To formulate drafts of the District-level SDFs and Structure Plans inside Greater Kumasi Sub-Region
- To develop the skills of the Physical Planning Officers of all the districts inside Greater Kumasi Sub-Region
- To train trainers for this sub-programme

3) Scope

The scope of the sub-programme is summarized below;

- One – year on-the-job training programme with 16 training workshops,
- Sub-Regional SDF and SP formulated in this project and relevant data can be

utilized,

- Physical Planning Officers of all the districts inside Greater Kumasi Sub-Region in the Ashanti Region will take part in the programme,
- Draft of the District SDFs and Structure Plans will be developed through the programme,
- In the training workshops, the counterpart staffs concerned with this project will become trainers and training of trainers will be carried out at the same time.

4) Executive Agencies

Ashanti Regional Coordinating Council (RCC) and Town and Country Planning Department (TCPD), Ministry of Environment, Science and Technology (MEST)

5) Expected Effects

- The beneficiaries will be able to prepare drafts of the District SDFs and Structure Plans, without each district appointing a consultant individually.
- Among the districts which participate in this training programme, essential coordination on spatial planning will be carried out.
- It will be easy to implement, monitor, evaluate and review the plans, since the Physical Planning Officers themselves will formulate the spatial plans.

6) Necessary Inputs

- Manager/Technical Advisor on District-level SDF and SP
- Short-Term Expert (Spatial Planning)
- Short-Term Expert (ICT)
- Short-Term Expert (GIS)
- Short-Term Expert (Stakeholder Consultation)
- Short-Term Expert (Others)
- Computer software required
- Maps which are available (1:50,000 topographical maps, satellite photo maps or orthophoto maps)
- Basic support to organize workshops

7) Schedule for training workshops

The schedule and the programme for the training workshops are identical with those outside Greater Kumasi Sub-Region.

(3) Sub-Programme of Capacity Development for Monitoring and Enforcing the District SDFs and District SPs

1) Background and Rationale

One of the mandates of the Physical Planners at district level is to ensure that physical development within their district conforms to the District SDF and Structure Plans. For this purpose, they have to be able to enforce the Plans through Development Control measures, and to be able to regularly conduct monitoring, make records and take actions when necessary.

Another mandate of Physical Planners at the district level is to prepare local plans by themselves or examine the local plans prepared by developers, making sure that the planned development and land use conforms to the District Structure Plan and serves the public interest.

However, the final authority of using the power to conduct necessary actions for enforcement lies with the chief executive, as well as with the assembly of the district. Therefore, it is also necessary to train district chief executive officers and district coordinating directors on the above aspects.

2) Objectives

Based on the above recognition, a sub-programme for the capacity development for monitoring and enforcing the District SDF and Structure Plan will be developed with the following objectives and beneficiaries.

- To develop the capacities of physical planners and works engineers to put into practice the standard procedures for monitoring and enforcing the District SDF and Structure Plan Scope
- To develop physical planners' capacities to guide and check the preparation of local plans in accordance with approved district-level SDFs and SPs
- To inform district chief executive officers and district coordinating directors with the system of spatial planning and enforcement and necessary actions for enforcement

3) Scope

The training will encompass Development Control systems and measures, current practice, laws, roles and responsibilities and new practices and laws under the forthcoming Land use and Spatial Planning Bill.

The training will also cover how to examine Local Plans to make sure that the planned development and land use conforms to the District Structure Plan and serves the public interest

The training will also encompass the necessary methods of monitoring and evaluation, which should align with those laid down by the NDPC in its Guidelines for regional Monitoring and Evaluation and for district level Monitoring and Evaluation of MTDPs.

This will be delivered through conducting monthly workshops for Physical and Development Planners and Officers of other agencies in the RPCU as appropriate for the first six months, quarterly for the rest of the first eighteen months and bi-annually thereafter (total 12 workshops). The workshops will review progress and discuss how to deal with challenges to the plan and methods of adjustment and review.

4) Executive Agencies

Regional Physical Planning Department

5) Expected Effects

Physical Planners of the districts and RCC of the Ashanti Region and Physical Planners in other regions will be able to effectively control unauthorized development, and to be able to Monitor and Evaluate the implementation of the Greater Kumasi SDF and SP.

It is expected that Physical Planners will subsequently conduct the training for Physical Planners in other regions utilizing the skills acquired through this Capacity Development Programme.

6) Inputs

- Manager/Technical Advisor on Development Control, Monitoring and Evaluation
- Short-Term Expert (Monitoring and Evaluation)
- Short-Term Expert (Development Control and Local Plans)
- Short-Term Experts (Planning Law and Enforcement)
- Basic support to organize workshops

(4) Sub Programme for Training Members of District, Municipal and Metropolitan Assemblies Spatial Planning Committees

1) Background and Rationale

The District Assembly staff cannot carry out their proper duties without direction and involvement from those Assembly Committees (whose composition is outlined above), which are responsible for the preparation and implementation of local development plans.

2) Objectives

The objective of the training will be to prepare Assembly Spatial Planning Committee members for the proper and effective exercise of their duties, committee procedures for implementing the Greater Kumasi SDF and SP and consequent further detailed Spatial Plan preparation and implementation.

3) Scope

The scope of the training will be:

- Roles and responsibilities of the Committees and members
- Practical (on the job) issues in the implementation of the Greater Kumasi SDF and SP
- Management of Plan Preparation arising from the Greater Kumasi SDF and SP. This will be delivered through conducting monthly workshops for key members of Planning Committees bi-monthly in synch with the Planning committee meetings, as appropriate for the first six months, quarterly for the rest of the first eighteen months and bi-annually thereafter (total 12 workshops). The workshops will review progress and discuss how to deal with the challenges of implementing the Greater Kumasi SDF and SP.

4) Executive Agencies

Physical Planning department of the RCC and Districts

5) Expected Effects

By carrying out their proper duties with knowledge of the complexities involved, the Greater Kumasi SDF and SP will be successfully implemented

6) Inputs

- Manager/Technical Advisor on Local Government and Physical Planning
- Short-Term Expert (Local Government and Spatial Planning procedures)
- Short-Term Expert (Other)
- Basic support to organize workshops

25.5.5 Sub-Programmes: Citizens Education and Chiefs Education on Spatial Plans

(1) Sub-Programme for Citizens Education on Spatial Plans

1) Background and Rationale

2) Objectives

To train and equip Physical Planning Officers, regional Directors and District Directors of the Information and National Council for Civic Education staff to organize Exhibitions and Radio Broadcasting for Greater Kumasi Sub-Regional SDF and SP to disseminate and promote the implementation of the Greater Kumasi SDF and SP.

3) Scope

The exhibitions will be at the Regional Policy Fair and travel to all eight MMDAs with a month in each District Assembly Office. Before, during and after the exhibition in each place there will be a series of six programmes that will be presented on local radio stations, including phone-in from each locality, and dissemination by the District Information Officers using speaker vans and local fora. Prior to and after each District exhibition, a workshop will be held to prepare and debrief, assess impact and learn how to sustain the education through understanding cost and benefits and how to include these in the department budget (Total eighteen workshops).

4) Executive Agencies

Regional Coordinating Council, Physical Planning Department working with Regional and District Directors of Information, National Council of Civic Education and Media.

5) Expected Effects

Physical planners will learn how to work with information officers and NCCE to disseminate Plans, the importance of this, how to work with media and information

systems on an ongoing basis.

6) Inputs

- Manager/Technical Advisor on Physical Planning Communications
- Short-Term Expert (Communications)
- Basic support to organize workshops, exhibitions and radio programmes

(2) Sub-Programme for Chiefs Education on Spatial Plans

1) Background and Rationale

Land ownership is vested with the Traditional Authorities (including Chiefs) according to a system of customary law (unwritten) which co-exists with the Romano-British Law. Traditionally, land use was determined by chiefs when apportioning land. The draft New Planning Law gives the power to determine land use to the Assemblies. In practice, chiefs are selling land for development without regard to land use plans. This process needs to be stopped (see Development Control, above), but Chiefs also need to understand how the spatial planning system can work to their benefit. Hence, there is a need for education or training for Chiefs. The need includes “on the job” training using actual cases which take place to show how chiefs are acting to either support or work counter to the implementation of the Greater Kumasi SDF and SP in real situations.

There are a number of training issues concerning involvement of traditional authorities in land use planning and management which have been identified including the following:

- Information dissemination and involvement of traditional authorities in land use planning and management;
- Consultation, co-operation and collaboration between traditional authorities and relevant land agencies concerning land use planning and management;
- Support for land use planning and management from traditional authorities; and
- Lack of discipline among traditional authorities concerning development control and adherence to planning laws.

2) Objectives

To train chiefs during the ongoing implementation of the Greater Kumasi SDF and SP based on their actual involvement as it is implemented, to understand the spatial planning system, their roles and responsibilities, the costs and benefits of compliance versus non-compliance.

To create ownership of traditional authorities of the Greater Kumasi SDF and SP leading to effective and smooth implementation

3) Scope

The scope of this input will include:

- Public interests and spatial plans (sub-regional and district)

- Obligation of chiefs as land owners
- Purposes of preparing layout plans (local plans)

This will be delivered through conducting monthly workshops for Chiefs as appropriate for the first six months, quarterly for the rest of the first eighteen months and bi-annually thereafter (total 12 workshops). The workshops will review progress and discuss how to deal with challenges for Traditional Authorities in implementing the Plan.

4) Executive Agencies

The Ashanti Regional House of Chiefs with the Regional Physical Planning Office.

5) Expected Effects

Chiefs as land owners will become compliant with, and support the implementation of the Greater Kumasi SDF and SP, and understand that to do so will be to their benefit.

6) Inputs

- Manager/Technical Advisor on Traditional Authorities and the Spatial Planning System
- Short-Term Expert (Customary Land Ownership and new roles and responsibilities under forthcoming laws)
- Short-Term Expert (Spatial Planning implementation and Traditional Authorities)
- Basic support to organize workshops

25.5.6 Sub-Programmes of Capacity Development Programme for Improvement of Planning School Curriculum on Practical Skills for Spatial Planning

(1) Sub-Programme for Designing Courses for PC Skills Training for Spatial Planning Practice

1) Background and Rationale

There is an identified need for the training of physical planning officers and technical officers in the use of PCs for: basic administration related to physical planning; data handling and storage; communications including internet usage (data collection, communications, Google Earth).

Moreover, there is a need for training of university students and polytechnic students in the use of PCs necessary for spatial planning practice.

In actuality, these skills have been neither previously taught in the university degree level physical planning courses nor in the polytechnic physical planning courses.

2) Objectives

To design courses which will teach to university students/polytechnic students the basic PC skills which are needed to perform their job of planning and implementing

sub-regional SDFs/SPs and district-level SDFs/SPs; and

To design courses which will teach these skills to current physical planning officers and technical officers who will be responsible for planning and implementing sub-regional and district-level SDFs and SPs.

3) Scope

University teachers (planning teachers and IT teachers) will conduct two or three pilot studies to formulate district-level SDFs and SPs in actual districts together with actual town planning officers and technical officers for the purpose of experiencing and understanding the actual needs for spatial planning and PC skills.

University teachers (planning teachers and IT teachers) will design the following courses:

- Course for basic PC skills for spatial planning for university students of physical/spatial planning and socio-economic development planning
- Course for basic PC skills for spatial planning for polytechnic students of physical/spatial planning and socio-economic development planning
- Course for basic PC skills for current town planning officers
- Course for basic PC skills for current technical officers

After finishing these course designs, the university teachers (planning teachers and IT teachers) will provide the courses experimentally for university students, polytechnic students, current town planning officers and current technical officers to get feedback regarding the course designs.

4) Executive Agencies

Planning School of KNUST

Relevant Departments of Kumasi Polytechnic

5) Expected Effects

- Planning School of KNUST and Departments of Polytechnic will finish course designs to teach basic PC skills necessary for spatial planning (sub-regional and district-level SDFs and SPs).
- Planning School of KNUST and Departments of Polytechnic will be able to provide courses to teach basic PC skills necessary for spatial planning (sub-regional and district-level SDFs and SPs).

6) Inputs

- Manager/Technical Advisor on Physical Planning IT training
- Short-Term Expert (Spatial Planning Course IT Teacher)
- Basic support to supervise and monitor training

(2) Sub-Programme for Designing Courses for GIS Skills Training for Spatial Planners

1) Background and Rationale

There is an identified need for training of Physical Planning Officers and Technical Officers in use of GIS for Spatial Planning for the Greater Kumasi SDF and SP. These skills have not been taught to most existing Physical Planners. A training needs assessment and course design are required, plus ongoing monitoring of its effectiveness.

2) Objectives

To carry out a GIS training needs assessment of Planning Officers and Technical Officers who will be responsible for implementing the greater Kumasi SDF and SP. To design courses which will teach the GIS skills which are needed to perform their jobs in implementing the greater Kumasi SDF and SP.

3) Scope

The Assessments and course design, including setting up of short courses for Physical Planning staff should entail a two months assignment. This will be followed by regular quarterly visits to course sessions and teachers and students to monitor progress over one year.

4) Executive Agencies;

KNUST

5) Expected Effects

Physical Planning staff in the RCC and Districts will be able to use GIS to carry out their duties in implementing the Greater Kumasi SDF and SP

6) Inputs

- Manager/Technical Advisor on Physical Planning IT training
- Short-Term Expert (GIS for Spatial Planning Course IT Teacher)
- Basic support to supervise and monitor training

(3) Sub-Programme for Designing Courses for Development Planners on Spatial Planning

1) Background and Rationale

There is an identified need for training of Development Planning Officers in the new spatial planning system, which will in the future be combined with the MTDPs for which the development Planners are responsible. These skills were not taught to most of the practicing development Planners in the Greater Kumasi Districts. A training needs assessment and course design are required, plus ongoing monitoring of its effectiveness.

2) Objectives

To carry out a training needs assessment of the Development Planning Officers who will be responsible for implementing the Greater Kumasi SDF and SP. To design courses which will teach the basic Spatial Planning skills which are needed to perform their roles in implementing the Greater Kumasi SDF and SP.

3) Scope

The Assessments and course design, including setting up of short courses for Development Planning staff should entail a two months assignment. This will be followed by regular quarterly visits to course sessions and teachers and students to monitor progress over one year.

4) Executive Agencies

KNUST

5) Expected Effects

Development Planning staff in the RCC and Districts will be able to carry out their duties of implementing the Greater Kumasi SDF and SP, and relating to MTDPs

6) Inputs

- Manager/Technical Advisor on Development Planning training
- Short-Term Expert (Development and Spatial Planning Course IT Teacher)
- Basic support to supervise and monitor training



PART IX

Strategic Environmental Assessment on SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation



Chapter 26 Strategic Environmental Assessment on Greater Kumasi Spatial Development Framework (SDF) for Greater Kumasi Sub-Region and Structure Plan (SP) for Greater Kumasi Conurbation

26.1 Framework for Strategic Environmental Assessment on SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation

26.1.1 Legal Basis and Objectives of SEA Study

According to the National Development Planning Commission (NDPC) Act (1994), the NDPC has authority to determine what kinds of policies and plans should be prepared for managing and developing the country.

The National Development Planning System Act No. 480, 1994 prescribed that:

District Planning Authority carries out study on development planning matters in the district including studies on economic, social, spatial, environmental, sector and human settlement issues and policies.

Section 2 (2), Act No. 480, 1994 "National Development Planning System"

The Ghana Shared Growth and Development Agenda (GSGDA I) 2010-2013", which was published in October 2011, recommends the streamlining of the environment into policies and development plans and the implementation of Strategic Environmental Assessment (SEA).

Following the GSGDA I, the "Guidelines for the Preparation of the District Medium-Term Development Plan" were prepared to instruct district assemblies to conduct SEA studies. "Step 13: Application of Sustainability Tools" recommends the points in the following box:

The District Assemblies ensure that their identified programmes and projects are:

- Initially consistent (supporting each other to achieve the objectives of the District)
- Sustainable (thus supporting conservation of the natural environment, addressing social-cultural, economic and institutional issues) by applying the following sustainable tools:
 - Risk and opportunities matrix
 - Compound matrix (poverty and environmental dimension)
 - Internal consistency matrix

Guidelines for the Preparation of District Medium-Term Development Plan under the Ghana Shared Growth and Development Agenda (GSGDA I) 2010 - 2013 (Revised)

In Ghana, it is considered by the NDPC and EPA that the mandatory implementation of Strategic Environmental Assessment for public policies and development plans is stipulated by interpreting the above law, policy document and guidelines in a combined way.

26.1.2 Target of the Strategic Environmental Assessment Study

Based on the above reason, the JICA Study on Comprehensive Urban Development Plan for Greater Kumasi will include the undertaking of an SEA study, which targets two of the significant outputs of the Study as follows:

- Spatial Development Framework (SDF) for Greater Kumasi Sub-Region
- Structure Plan (SP) for Greater Kumasi Conurbation

The above outputs from the JICA Study will be evaluated based on the identified environmental and sustainability issues and shall be incorporated into the Study. The prediction and evaluation of environmental impacts caused by the adoption of the SDF and SP will be the main focus of the study. Furthermore, environmental mitigation measures shall be recommended in order to minimize the impacts. The results of the SEA study will hopefully support decision-makers and will provide guidance for decision-making.

26.1.3 Contents for the Strategic Environmental Assessment Study Report

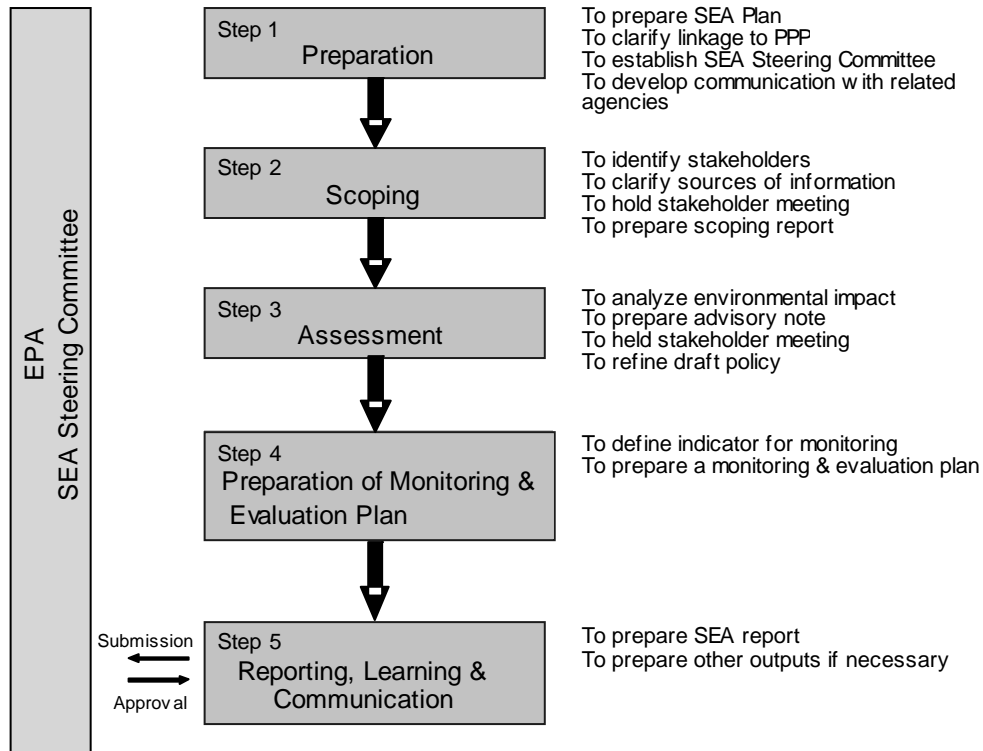
The SEA, as prescribed in the Manual for the Preparation of a Spatial Development Framework (Town and Country Planning Department, Ministry of Environment, Science and Technology, 2010) and the Manual for the Preparation of a Structure Plan (Town and Country Planning Department, Ministry of Environment, Science and Technology, 2010), will target SDF and SP as important outputs of the JICA Study. The evaluation procedure as well as the prescribed elements contained in the Manual will also be followed in the implementation of the SEA Study.

26.1.4 Process of Strategic Environmental Assessment Study

The process of the SEA study for the SDF and SP consists of five steps based on the “Review of Strategic Environmental Assessment in Ghana” (Environmental Protection Agency) including Preparation, Scoping, Assessment, Monitoring and Evaluation, and Reporting, Learning and Communication as shown in Figure 4.1.1.

During the implementation of Step 2: Scoping and Step 3: Assessment, there will be a series of key stakeholder meetings to be held using a workshop format in order to validate various activity outputs including scoping and assessment results. Various stakeholder meetings (larger number of participants) will also be held during implementation of Steps 2 and 3 in order to validate the scoping and assessment results. Different opinions and comments will be collected during these activities to improve the scoping and assessment reports.

The TCPD should submit and explain the Scoping Report and SEA Report to the Environmental Protection Agency (EPA) with technical support by the JICA Study Team.



Source: JICA Study Team based on “Review of Strategic Environmental Assessment Practice in Ghana” prepared by Kessler, Amoyaw-Osei, Darko-Mensah and Larmie in collaboration with the Environmental Protection Agency (EPA), 2009

Figure 26.1.1 Process of the SEA Study

(1) Step 1: Preparation

This step is the starting point of the SEA study. A plan for the SEA study is prepared.

It contains the background and purposes of the project for the SEA study, and implementation structure.

(2) Step 2: Scoping for the SEA Study

The scoping contains the clarification of background information and outputs of the JICA Study, identification of impacts caused by the adoption of the SDF and SP, and methodology and the tools used in evaluating those impacts. The significant objective of the Scoping Workshop is to collect ideas and opinions about the significant environmental elements and their impacts and incorporate them in the related topics below:

- Clarification of sources of information and base condition
- Identification of potential stakeholders in the assessment
- Identification of possible environmental impacts

Those collected ideas and opinions are reflected into the Scoping report.

The TCPD and JICA Study Team identified the stakeholders who should participate in the scoping workshop for the above matters. The following stakeholders are to be invited:

Table 26.1.1 Stakeholder Participants for Scoping Workshop

Stakeholders in Scoping Workshop	
●	SEA Unit, EPA
●	NDPC
●	National TCPD
●	District level (Representatives of Traditional Council)
➤	Kumasi Metropolis
➤	Afigya-Kwabre District
➤	Kwabe East District
➤	Ejisu-Juaben Municipality
➤	Bosomtwe District
➤	Atwima-Kwanwoma District
➤	Atwima-Nwabiagya District
➤	Asokore Mampong Municipality
●	Regional TCPD
●	Regional Government Offices
➤	Regional Coordinating Director
➤	Regional Economic Planning Officer
➤	Ghana Highway Authority
➤	Ghana Tourist Board
➤	Ghana Water Company Limited
➤	Electricity Company Limited Ashanti West
➤	Environmental Protection Agency
➤	Department of Feeder Roads
➤	Forestry Commission
➤	Minerals Commission
➤	Commerce and Industry
➤	Food and Agriculture, MOFA
➤	Geological Survey Department
➤	Survey and Mapping, Lands Commission
●	District Government Offices
➤	Town Planning Officer
➤	Development Planning Officer
➤	Environmental Health Unit
➤	Information Unit
➤	Urban Roads
➤	District Feeder Roads
●	Others
➤	KNUST
➤	Ghana Private Road Transport Unit
➤	NGOs
➤	Ghana News Agency
●	JICA Study Team

Source: JICA Study Team

(3) Step 3: Assessment

The assessment of important environmental impacts caused by the adoption of the SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation will be carried out. Table 4.1.2 shows the targets of assessment.

Table 26.1.2 Targets of Assessment in the SEA Study

Spatial Development Framework	Structure Plan
<ul style="list-style-type: none"> ● Options of basic urban structure ● Policy of SDF 	<ul style="list-style-type: none"> ● Options of structure plan ● Guidelines of future land use plan ● New urban areas including industrial areas, infrastructure

Source: JICA Study Team

Given the above, the following outputs of the SDF and SP will be assessed:

- Policy conflict between the SDF/SP and Ghana Government policy
- Legal conflict between the SDF/SP and national, regional and provincial regulations
- Impact on the natural environment including habitat and biodiversity and living environment caused by the adoption of the SDF and SP
- Impact on social structure, and people's lives caused by the adoption of the SDF and SP
- Impact on the economic structure and/or economic growth caused by the adoption of the SDF and SP

The assessment of any significant environmental impacts will be carried out based on the professional expertise, knowledge and experience of the JICA Study Team and shall be validated or revised through the Assessment Workshops. Improvement and revision will be conducted after the workshops.

(4) Step 4: Monitoring and Evaluation Plan

During the conduct of Step 4, a Monitoring and Evaluation Plan will be prepared. The Plan aims to ensure that the identified environmental impacts caused by the adoption of the SDF and SP are efficiently monitored. A study on the comparison of these impacts and the actual conditions will be evaluated and corrective measures will be undertaken where significant results vary.

The Monitoring and Evaluation Plan consists of the following:

- List of indicators to monitor the impacts of the proposed SDF and SP
- Methodology of measurements on indicators used
- Format of Monitoring and Evaluation Reports

The monitoring and evaluation plan will be contained in the SEA Report.

(5) Step 5: Reporting, Learning and Communication

The JICA Study Team and TCPD will prepare the Draft SEA Report. The Draft SEA Report will be distributed to members of the review meeting for evaluation of the SEA results. Upon receipt of the comments, the Draft SEA Report will be finalized.

26.2 Stakeholder Analysis

26.2.1 Purposes

Stakeholder analysis is the first step to conduct a stakeholders' consultation which is

one of the major activities and interactions involved in engaging the stakeholders into the mainstreamed of policy decision-making processes. It provides a valuable opportunity to influence public perception and getting their ideas and opinions on the policies in the SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation.

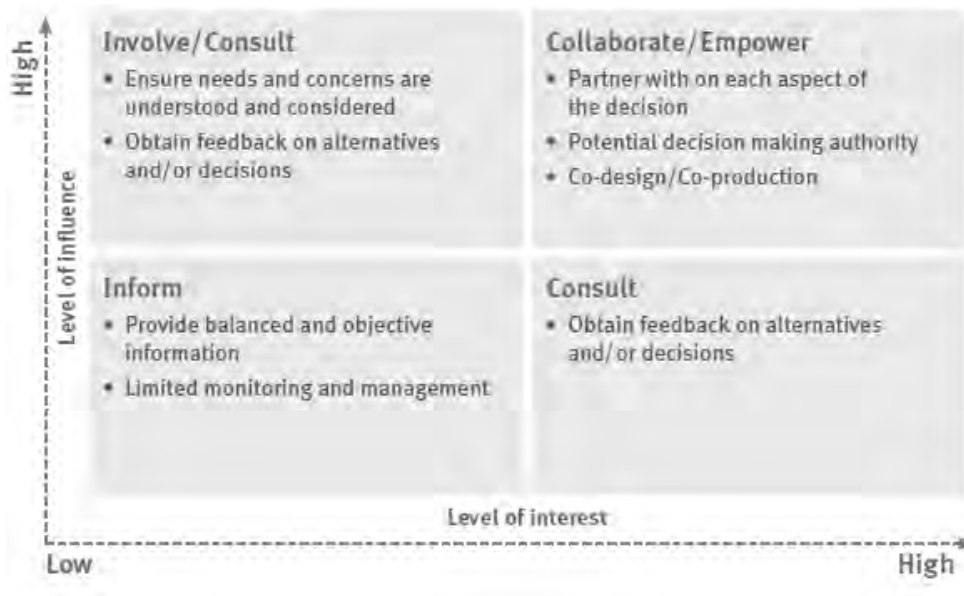
The major objectives of the stakeholder consultation are as follows:

- To inform the stakeholders regarding the policies and framework of the SDF and SP;
- To obtain stakeholders' views, opinions, and ideas on the policies and plans in the SDF and SP;
- To involve the stakeholders in the overall planning and decision making processes;
- To collaborate with the stakeholders in terms of achieving informed decisions about the changes brought about by the policies and plans in the SDF and SP;
- To empower stakeholders in terms of enabling them to foster ownership of the plan and policies.

In order to engage stakeholders in the planning and decision making processes, it is important to select stakeholders who will be sufficiently involved in the consultation.

A stakeholder analysis is used in order to map out and identify the interests and needs of various stakeholders. The figure below is typically used for a stakeholder analysis which aims to reflect and determine the level of engagement and involvement (inform, involve, consult, collaborate or empower).

Table 26.2.1 Mapping for Stakeholder Analysis



The level of interest and influence of stakeholders will depend on a range of issues, such as the nature of the policy, the timing and extent of their involvement and their potential ability to impact on the effectiveness of the outcomes. It is important to keep in mind that the interest or influence of a stakeholder may change as the SDF

and SP progresses. Therefore, continuous reassessment and identification of new stakeholders and the level of stakeholder engagement at different stages are necessary.

26.3 Validation of Baseline Condition

The main purpose of validation of the baseline condition is to identify the environmental baseline (current environmental aspects) for clarifying environmental impacts possibly caused by the implementation of the SDF and SP. The environmental baseline condition widely covers the environment, which is not only the natural environment and pollution but also shall cover the social environment, economic condition, etc.

The environmental baseline condition is summarised in the following viewpoints:

- Natural Environmental and Resource Conditions
- Institutional Framework (Environmental Policies)
- Socio-cultural Conditions
- Economic Situations

The natural environmental and resource conditions and environmental policies are summarised in SEA Report. Those conditions are also indicated in the Supporting Document of the Final Report.

26.4 Scoping

26.4.1 Purposes of the Scoping

The scoping contains the clarification of background information and outputs of the Comprehensive Urban Development Plan, identification of impacts caused by the adoption of SDF and SP, and the methodology and tools used in evaluating impacts and organisation of a scoping workshop. The objective of the Scoping Workshop is to collect ideas from the potential stakeholders for the assessment and significant environmental impacts.

For this purpose, a scoping workshop was held by inviting 85 persons (as shown in Table D.1 in Appendix D) from national agencies, RCC and regional departments of Ashanti Region, various officers of KAM and district assemblies and universities, private sectors and NGOs. Firstly the JICA Study Team and SEA local consultant selected the 85 invitees for the scoping workshop considering the nature of the plans.

At the scoping workshop, a discussion session on identifying stakeholders for this SEA Study was organized and as a result, 58 stakeholders (as shown in Table D.3 in Appendix D) were identified considering the scope identified in the scoping workshop, for the purpose of inviting to the assessment workshop.

26.4.2 Results of the Scoping

The outputs of scoping workshop are summarised below:

(1) Stakeholder Identification

Stakeholder identification was discussed in each sector as explained in the above section. Stakeholders are categorized as Primary or Secondary Stakeholders and their features (ex. roles, interest) are examined.

1) Land Use

The results of stakeholder identification are summarised in the tables below:

Table 26.4.1 Stakeholder Identification (List of Stakeholders)

Primary Stakeholders	Secondary Stakeholders
<ul style="list-style-type: none"> • Town and Country Planning Department • Traditional Authority • Lands Commission • District Assembly • Farmers • Forestry Commission • Minerals Commission • Geological Survey Department 	<ul style="list-style-type: none"> • Environmental Protection Agency • Office of the Administrator of Stool Lands • Ministry of Food and Agriculture • Utility Providers (GWCL, ECG, etc.) • Parks and Garden • Wood Industries • Road Agencies

Table 26.4.2 Stakeholder Identification (Features of Institutions)

Institutions	Roles/Responsibilities	Interests in the Plan	Types
Traditional authorities	Hold land in trust for the people Release land for development	High	Land Owners
TCPD	Land use planning and management.	High	Service provider
Lands Commission	Land administration documentation. Survey mapping and registration of titles	High	Regulators
District assemblies	Planning Authorities	High	Enforcement
Farmers	Supply of food and raw materials to food industries	High	Service providers
Forestry Commission	Management of Forest Reserves	High	Regulators

2) Transportation

The results of stakeholder identification are summarised in the tables below:

Table 26.4.3 Stakeholder Identification (List of Stakeholders)

Primary Stakeholders	Secondary Stakeholders
<ul style="list-style-type: none"> • Ghana Highway Authority (GHA) • Department of Urban Roads (DUR) • Department of Feeder Roads (DFR) • Ministry of Roads and Highways • Ministry of Transport • Ghana Civil Aviation • Ghana Airport Company Limited • Ghana Railway Development Authority • Ghana Ports and Harbours Authority 	<ul style="list-style-type: none"> • Driver Vehicle License Authority (DVLA) • Ghana Private Road Transport Union (GPRTU) • Ghana Road Fund • MTTU of Ghana Police Service • Ghana Ambulance Service • Building and Road Research Institute (BRRI) • Ghana Shippers Council • Ghana National Fire Service (GNFS)

Table 26.4.4 Stakeholder Identification (Features of Institutions)

Institutions	Roles/Responsibilities	Interests in the Plan	Types
Ministry of Transportation	Formulation and Implementation of transport policies and programmes Provide efficient transport systems.	High	Policy makers
Ghana Road Transport Coordinating Council	Coordinate all road transport associations Ensure provision of efficient services to the general public	High	Regulators
Ministry of Roads and Highways. (DFR,GHA, DUR)	Implement road transport programs Construction of Roads	High	Service providers

3) Water and Waste

The results of stakeholder identification are summarised in the tables below:

Table 26.4.5 Stakeholder Identification (List of Stakeholders)

Primary Stakeholders	Secondary Stakeholders
<ul style="list-style-type: none"> • Traditional and opinion leaders • District Water & Sanitation Teams • Ministry of Water Resources, Works and housing (MWRWH) • Water Resources Commission (WRC) • Community Water and Sanitation Agency (CWSA) • Ghana Water Company Limited (GWCL) • Ministry of Local Government and Rural Development (MLGRD) • Community members • Environmental Protection Agency (EPA) 	<ul style="list-style-type: none"> • Private borehole and well contractors • NGOs • Landlord Associations • The Media • Religious bodies • Forestry Commission • Water consumers • Private Waste Management Contractors • Law enforcement agencies

Table 26.4.6 Stakeholder Identification (Features of Institutions)

Institutions	Roles/Responsibilities	Interests in the Plan	Types
Traditions leaders	Custodians of the land Provision of lands for water supply projects. Establishment of laws and bans to protect water bodies. Punishment of persons who violate the laws	High	Regulators
Ministry of Water Resources Works and Housing	Provide policies to protect water resources Provide funding for water supply projects Collaborate with other bodies Stakeholders in law enforcement.	High	Policy makers
MLGRD	Provide policies to improve sanitation.	High	Policy Makers

Institutions	Roles/Responsibilities	Interests in the Plan	Types
	Provide funding for sanitation projects. e.g. funds for building waste treatment plants.		
MMDAs	Plan and implement small scale water supply projects Enforcement of laws Provide funding and expertise for small water supply projects Regulate rates for sale of water in the small communities	High	Regulators Service providers Implementation agency Enforcement
Water Resources Commission	Provide policy for the protection and use of water resources. Regulate the use of water to prevent its depletion. Issue permits for water use.	High	Policy makers Regulators
Ghana Water Company Limited (GWCL)	Plan and implement water supply projects Produce water for the end users (consumers).	High	Service provider
Community Water and Sanitation Agency	Plan and implement water supply projects Produce water for the end users (consumers).	High	Service provider
Community members	Ensure proper disposal of waste Construct buildings with adequate sanitary facilities.	High	

4) Energy

The results of stakeholder identification are summarised in the tables below:

Table 26.4.7 Stakeholder Identification (List of Stakeholders)

Primary Stakeholders	Secondary Stakeholders
<ul style="list-style-type: none"> • Volta River Authority (VRA) • Grid Company Limited (GRIDCo) • Electricity Company of Ghana (ECG) • Independent Power Producers (IPP) • Energy Commission (EC) • Oil Marketing Companies (OMC) • Association of Ghana Industries (AGI) • Ministry of Energy • Retailers Associations • Ghana National Gas Company Limited • Bulk Oil Storage and Transportation (BOST) • Public Utility Regulator Company (PURC) 	<ul style="list-style-type: none"> • Oil haulage Association • Electricity Contractors • Town and Country Planning Department (TCPD) • Environmental Protection Agency (EPA) • National Security

Table 26.4.8 Stakeholder Identification (Features of Institutions)

Institutions	Roles/Responsibilities	Interests in the Plan	Types
VRA and other IPPS	Generation of electricity Ensure power generation	High	Producers
GRIDCO	Transmission of electricity Ensure safe and good quality power transmission	High	Service provider
ECG	distributors Ensure safe and reliable power supply	High	Service provider
Consumers	Utilization Payment of electricity bills	High	Consumers
AGI	Advocate for reliable power supply	High	Consumer
PURC	Ensure quality delivery of supply	High	Regulator
Ministry of Energy	Policy making, monitoring and evaluation. Formulate policies Monitor progress of energy supply	High	Policy maker
Energy Commission	Implementation of Energy Policies and programmes	High	Policy implementers
Consumer Association	Advocate for reliable supply of energy	High	Consumers
Oil marketing companies	Ensure reliable energy supply	High	Service provider
Retailer Association	Ensure reliable energy supply	High	Service provider
Ghana National Gas Company	Ensure reliable energy supply	High	Implementers
BOST	Distributors of Fuel in bulk to the rest of the country Ensure Safe Fuel storage and supply	High	Distributors
Oil Haulage Association	Advocacy	High	Advocacy
Electricity contractors and dealers	Installation works Ensure good energy installation works	Moderate	Service provider
TCPD	Land use planning Ensure adequate Right Of Way for energy projects	Moderate	Planning Monitoring and evaluation
EPA	Law enforcement Ensuring compliance with environmental laws	Moderate	Regulators

(2) Environmental Issues

1) Land Use

The Group identified the key environmental issues likely to be related to land use planning as below:

Table 26.4.9 Environmental Key Issues

Environmental Key Issues	Degree of Impacts	Area of Impacts
Non-compliance with planning schemes amongst stakeholders	Long term	Local
Weak Enforcement of planning Laws	Long Term	Local to national
Environmental pollution	Long term	Global
Indiscriminate dumping of refuse	Short term	Local
Development of unauthorised structures	Long term	Local

The following planning interventions were proposed to address the above issues:

- Harmonisation and coordination among all stakeholders by designing with minimizing conflict of interest among the stakeholders and coordination including public announcement
- Law enforcement to prohibit illegal structures and occupations, and also environmental pollution
- Education and enlightenment of public to control illegal structures and environmental pollution

2) Transportation

Environmental key issues in the transportation sector are summarised below:

Table 26.4.10 Environmental Key Issues

Environmental Key Issues	Degree of Impacts	Area of Impacts
Noise from horns of vehicles	Immediate	Local
Traffic congestion – Increased travel time – Low productivity among workers – Increased expenditure on transport	Immediate –short term	Local
Fumes from exhausts of vehicles – Bad health conditions – Air pollution	Long term	Global
Dust from unpaved roads – Air pollution – Respiratory diseases such as coughs and colds	Short term	local
Lack of discipline on the roads – Accidents	Immediate	local

The following planning interventions were proposed to address the above issues:

- Implementation of Bus Rapid Transit System
- Increased number of toll collection points
- Construction and rehabilitation of arterial roads
- Penalty for undisciplined road users

3) Water and Waste

Environmental key issues related to water and waste are summarised below:

Table 26.4.11 Environmental Key Issues

Environmental Key Issues	Degree of Impacts	Area of Impacts
Pollution	Short to Long Term	National/ Global
Destruction of Wetlands	Long Term	National
Drying up small streams	Long Term	Regional
Deforestation	Short Term	Local
Findings – Improper dumping of refuse. – Outbreak of diseases. – Destruction of water bodies. – Odour nuisance – Littering of the environment with polyethylene bags and water sachets	Immediate	National
Lack of availability of final disposal sites – Multiple small dumping sites in the communities. – Outbreak of disease – Severe air pollution. – Clogging of drains after heavy rainfalls. – Indiscriminate burning of refuse can cause bush fires. – Land pollution. – Pollution of water bodies.	Immediate	National
Insufficient Trained Sanitation Officers – Improper handling of waste	Long Term	National

The following planning interventions were proposed to address the above issues:

- Education and public enlightenment
- Prosecution and enforcement of existing laws
- Reforestation
- Penalty for undisciplined road users
- Introducing the Polluter Pays Principle
- Funding for sanitation projects by the Central Government and traditional Authorities
- Release of land for sanitation projects
- Employing more trained sanitation officers

4) Energy

Environmental key issues related to the energy sector are summarised below:

Table 26.4.12 Environmental Key Issues

Environmental Key Issues	Degree of Impacts	Area of Impacts
Inadequate power generation	Long term	Local
Wrong billing	Long term	Local
Theft of electricity cables	Long term	Local
Non-payment of bills	Long term	Local
Illegal connection	Long term	Local
Challenges for the Right of way for the installation works	Long term	Local
Frequent power cuts	Long term	Local

The following planning interventions were proposed to address the above issues:

- Encourage IPPs to increase energy generation
- Installation of prepaid meters to eliminate the human factor
- Education and sensitisation of the general public on the dangers of illegal connections

26.5 Assessment

26.5.1 Purposes of the Assessment

The assessment of important environmental impacts caused by the adoption of SDF and SP in Greater Kumasi Sub-region was carried out. Table 25.4.1 shows the targets of the assessment.

Table 26.5.1 Target of Assessment

Spatial Development Plan	Structure Plan
<ul style="list-style-type: none"> • Options for the basic urban structure • Policy of SDF 	<ul style="list-style-type: none"> • Options for the structure plan • Guidelines for the future land use plan • New urban areas including industrial areas and infrastructure

26.5.2 Selection of SEA Assessment Tools

The SEA workshop was also undertaken with active involvement in group discussion. The Ghana SEA system has some assessment tools which are useful for the participants who do not know about SEA assessment. The following are typical tools.

(1) Compound Matrix

The compound matrix is used, principally at national level to evaluate individual Policies, Plans and Programmes (PPPs) against a range of criteria, which serve as indicators of the conditions affecting poverty. The way in which the PPP will interact with each criterion in the matrix is discussed by the review group and a view is taken as to whether or not the PPP is likely to alleviate the conditions of poverty, result in negative effects or be largely neutral. Table 25.4.2 shows an example of a compound matrix.

Table 26.5.2 Example of Compound Matrix

Policies/Plans/Programmes/ Activities	Pollution resulting from chemical spillage, mining, bad practices, agro chemical washed from farms etc.	Destruction of wetlands	Deforestation	Indiscriminate sand winning	Bush burning	Flooding
Dredging of Barekese and Owabi Dam Reservoirs	-	0	-	0	0	+
Feasibility Study on New Water Sources	0	0	0	0	0	0
Consolidation of Hydrological Monitoring	+	0	0	+	0	+
Enhancement of Rural Water Supply	+	-	-	-	0	0
Construction of Dams	-	-	-	-	0	-

Source: JICA Study Team

(2) Compatibility Matrix

The compatibility matrix is used to compare the way in which different policies inter-react with each other. Sometimes policies are mutually supportive, but at other times policies can work against each other; for example, a policy to develop small farm dams to store surplus water for crop irrigation may be strongly sustainable in its own right, but may run counter to another equally valid health policy of zero-ponding designed to eliminate mosquitoes as the vector of malaria. The aim of the compatibility matrix is to determine the degree to which policies support or work against each other – in other words how compatible they are.

Table 26.5.3 Example of Compatibility Matrix

No	Whole Sub-Region Plan Objectives	Objectives							
		1	2	3	4	5	6	7	8
1	To promote manufacturing industries and agro processing and knowledge based sector as against existing commerce and small scale industries		?	?	?	?	0	?	?
2	To promote multiple nucleus spatial structure rather than current mono-centric spatial structure			?	0	?	?	?	?
3	To set urban growth boundaries to contain urban sprawl- Large Urban Growth Boundary (UGB-L)				x	0	?	?	0
4	To set urban growth boundaries to contain urban sprawl- Small Urban Growth Boundary (UGB-S)					?	?	?	?
5	To set structure plan areas outside Greater Kumasi Conurbation – layout plans / structure plans should be prepared only within this area against current wholesale plan preparations, which is without any guidance						0	?	?

Source: JICA Study Team

(3) Sustainability Test

The purpose of a sustainability test is to subject each activity to a simple test of the overall sustainability of the policy, plan or programme.

Table 26.5.4 Example of Sustainability Test

Sustainability Test Example 1

Description of Activity: Existing Situation: Water Drawn from local rivers and streams by hand		
CRITERIA – BASIC AIMS AND OBJECTIVES	INDICATORS	PERFORMANCE ASURE
EFFECTS ON NATURAL RESOURCES		
Protected Areas and Wildlife: should be conserved, and these resources should be enhanced where practical.	Sensitive areas shown on maps	(0) 1 2 3 4 5
Degraded Land: Areas vulnerable to degradation should be avoided, and already degraded land should be enhanced.	Vulnerable areas shown on maps	(0) 1 2 3 4 5
Energy: The Activity should encourage efficient energy use, and maximize use of renewable rather than fossil fuels.	Quantity and type of fuel/energy to be identified	(0) 1 2 3 4 5
Pollution: Discharges of pollutants and waste products to the atmosphere, water and land should be avoided or minimised.	Quantity /type of pollutants and waste to be identified	(0) 1 2 3 4 5
Use of Raw Materials: All raw materials should be used with maximum efficiency, and recycled where practical.	Quantity and type of materials	(0) 1 2 3 4 5
Rivers and Water bodies: should retain their natural character.	Minimum flows/ water levels to be set	(0) 1 2 3 4 5
EFFECTS ON SOCIAL AND CULTURAL CONDITIONS		

Source: SEA Training Manual, EPA, 2012

(4) Environmental Risks and Opportunity Matrix

This matrix is used principally to assess the environmental risks and opportunities associated with individual PPPs.

Table 26.5.5 Example of Environmental Risks and Opportunity Matrix

No	Plan Intervention	Anticipated Risks	Proposed Mitigation/ Implementation Guidelines - pre-construction stage - construction stage - operation stage	Responsible Institution(s)	Remarks
1	Construction of Hand-dug wells with hand pumps	<p>NATURAL RESOURCES</p> <ol style="list-style-type: none"> clearing of flora and fauna washing of excavated matter (siltation) Erosion <p>Socio-Cultural</p> <ol style="list-style-type: none"> Risk of people and animals falling into the well. Siting conflicting with traditional beliefs <p>Economic</p> <ol style="list-style-type: none"> Inability/refusal to pay for the maintenance of the water. Risk of the well yielding little or no water. <p>Institutional</p> <ol style="list-style-type: none"> Lack of capacity to operate and manage Interference with management by opinion leaders Quality of water 	<p>NATURAL RESOURCES</p> <ol style="list-style-type: none"> Regrassing/landscaping Convey to a safe place. Provision of drains and pavement <p>Socio-Cultural</p> <ol style="list-style-type: none"> Fencing and education Proper consultation/ community involvement <p>Economic</p> <ol style="list-style-type: none"> Pro poor rate/ exemptions Geophysical investigation <p>Institutional</p> <ol style="list-style-type: none"> Forming and training of WATSAN committee Education, by-laws and enforcement i. Grouting of areas where there could be possible pollutant ii. Testing and treating of water where necessary. 	CWSA, MMDAs WATSANs, Ministry of Water and Natural Resources	

Source: JICA Study Team

26.5.3 Results of SEA Assessment Workshop

(1) Introduction

The stakeholders understood the purposes of the SEA Workshop, utilization of SEA tools, and discussed assessment of the SDF and SP.

According to the presentations and discussion among the participants, the following are highlighted:

- Demand for an Integrated Water Resources Management (IWRM) Study of the greater Kumasi area was stressed.
- Emphasis was also put on the necessity of a proper resettlement programme for the Project Affected Persons (PAPs). The resettlement programme shall indicate not only monetary compensation but also social support (ex. job opportunity, income recovery).
- The financial sources, “how various programmes proposed in the SDF and SP are to be implemented”, and “how implementation of the plan intervention related to environmental monitoring and evaluation is to be secured” were indicated as concerns.

At the end of the workshop, participants had:

- Developed an appreciation of, and understanding of SEA ;
- Acquired sufficient information to enable them to contribute towards the successful implementation of the SEA for the Study; and
- Identified and appreciated the critical role of each individual and organisation in the Master Plan.

As regards the assessment tools, the compatibility matrix revealed that there were no inconsistencies between the various objectives while the compound matrix and the opportunities/ risk matrix provided various issues to assist in the development of recommendations and guidelines for implementation of the plan interventions.

(2) Results from the Group Works

1) Feedback from the Workshop Results

Comments and suggestions from the group works are summarised in the following table:

Table 26.5.6 Comments / Suggestions from the Group Works

Comment /Suggestion and Responses
<p>Group 1: Plan Objectives (see Compatibility Matrix in Table 25.4.8) All objectives for the plan are compatible. Sub regional Objectives 1, 2 and 3 can be classified as the major objectives for the project and all the others go to support them. Also Sub Regional Objectives 5 and 8 communicate the same thing so they should be looked at again. Objective 4 under the Sub region talks about the small urban growth boundary but that boundary has not been set yet so its compatibility with the other objectives could not be tested.</p>

Comment /Suggestion and Responses
<p>Urban Area Objective 4 is neutral to all the other objectives thus it has no impact on any of them. Objective 5 under the Urban area is very important to all the other objectives both rural and urban. Thus to establishing vibrant housing, market development and instituting monitoring systems for the sector will enhance the whole project.</p> <p>Generally, Rural Objectives are very Strong therefore their implementation should be highly promoted.</p> <p>Rural Area objective 7 is more of an activity than an objective therefore it should be rephrased.</p> <p>Under Rural Area Objectives 2 and 4, the group was torn between the positive and negative aspects of their implementation. One of the positive effects is that, when farm lands are identified and protected there will be the need for well-constructed feeder roads to help transport food stuffs to the urban and sub urban centres.</p> <p>Negatively, once feeder roads are constructed, residences may begin to spring up along these roads, therefore there should be by laws to prevent dwellers from sprawling into the protected areas after the feeder roads have been constructed.</p>
<p>Group 2: Land use</p> <p>There will be the need to enforce the children’s Act to ensure that children of school going age are in school and not subjected to any labour such as trading.</p>
<p>Group 3: Transportation</p> <p>The Road between Suame and Kodie is one of the congested corridors, but its plan was not specifically indicated:</p> <ul style="list-style-type: none"> – At this stage, the plan has been looking at the strategic level. <p>Many of the activities under the transport sector will impact on properties as well as activities along the road. Developing arterial roads will equally cause displacements, so what will be done to curb this situation:</p> <ul style="list-style-type: none"> – Affected persons and properties shall be compensated. – Small businesses along these routes should be factored into the design such as allocating points along the road for such business activities. <p>All compensations will have to be paid fully to affected persons and for their properties before displacement.</p> <p>The lands in the ring road and other route construction areas have been occupied and sold for residential purposes. If land acquisition will not properly be put in place, huge sums of monies that could be invested into the project will have to be used to pay compensations:</p> <ul style="list-style-type: none"> – TCPD with the Study Team has briefed the Asantehene on the study/ projects and the team is looking forward to meeting with other traditional Authorities. – As of now, the routes for the ring roads are not yet established. Urban roads are now coming out with suggestions for the ring roads. <p>The Land Valuation division under the Lands Commission should be listed as a major stakeholder in this project because there will be many displacement and resettlement issues which will call for valuation of properties for compensation payments.</p>
<p>Group 4: Water Resources, Water Supply and Electricity</p> <p>The establishment of Private Power Producing companies should be encouraged as it is being done in other countries so as to create competition in the energy sector as a means to ensure efficiency on the part of service providers.</p> <p>All programmes outlined under both water resources and water supplies as well as electricity are doable.</p> <p>It is more economical to drill a few bore holes, mechanised and pumped into overhead tanks instead of drilling many bore holes for one location.</p> <p>Rainwater usage should be encouraged to reduce the reliance on surface and ground water sources and this should be reflected in the study plans.</p>

Comment /Suggestion and Responses
<p>According to the JICA study team, the available ground water resource may not be sufficient, therefore it is suggestible to monitor ground water sources to determine the quantities of groundwater available.</p> <p>It is recommended that surface water be utilized for now so that groundwater is preserved for future usage.</p>
<p>Group 5: Waste Management and Drainage</p> <p>The major issue associated with the construction of drains was identified to be funding, which also affects implementation of the plan interventions. Hence the funding sources and estimated the programmes and plans shall be indicated in the report.</p> <p>Drainage network shall be properly designed so that portions are not isolated.</p> <p>Drains should be constructed alongside road constructions:</p> <ul style="list-style-type: none"> – Drains could be constructed as standalone projects and an example was given as the construction of the subin drain without any connection to road construction.

Table 26.5.7 Compatibility Matrix among Policies/Plans (Sub-Regional Plan)

No	Whole Sub-Region Plan Objectives	To promote manufacturing industries and agro processing and knowledge based sector as against existing commerce and small scale industries	To promote multiple nucleus spatial structure rather than current mono-centric spatial structure	To set urban growth boundaries to contain urban sprawl- Large Urban Growth Boundary (UGB-L)	To set urban growth boundaries to contain urban sprawl- Small Urban Growth Boundary (UGB-S)	To set structure plan areas outside Greater Kumasi Conurbation – layout plans / structure plans should be prepared only within this area against current wholesale plan preparations, which is without any guidance	To ensure that future urban areas are contained within the Greater Kumasi Conurbation in the Greater Kumasi Sub-region	Having set urban growth boundaries, approval of layout plans/ local plans should be restricted/ prohibited	To determine spatial structure plan areas outside Greater Kumasi conurbation if urban areas extend or allowed beyond the conurbation
		1	2	3	4	5	6	7	8
1	To promote manufacturing industries and agro processing and knowledge based sector as against existing commerce and small scale industries		√	√	?	√	0	√	√
2	To promote multiple nucleus spatial structure rather than current mono-centric spatial structure			√	0	√	√	√	√
3	To set urban growth boundaries to contain urban sprawl- Large Urban Growth Boundary (UGB-L)				×	0	√	√	0
4	To set urban growth boundaries to contain urban sprawl- Small Urban Growth Boundary (UGB-S)					?	?	?	?
5	To set structure plan areas outside Greater Kumasi Conurbation – layout plans / structure plans should be prepared only within this area against current wholesale plan preparations, which is without any guidance						0	√	√
6	To ensure that future urban areas are contained within the Greater Kumasi Conurbation in the Greater Kumasi Sub-region							√	0
7	Having set urban growth boundaries, approval of layout plans/ local plans should be restricted/ prohibited								0
8	To determine spatial structure plan areas outside Greater Kumasi conurbation if urban areas extend or allowed beyond the conurbation								

√ : Where two plan objectives are mutually supportive with each other.
X: Where two plan objectives have the potential to conflict with each other.
O: no significant interaction.

Table 26.5.8 Compatibility Matrix among Policies / Plans (Rural Area)

No	Rural Areas Plan Objectives	Plan Objectives								
		1	2	3	4	5	6	7	8	9
1	to promote suburban agriculture producing fresh vegetable and fruits, targeted at the increasing number of middle-income urban dwellers in Greater Kumasi Conurbation		√	√	√	√	√	√	0	√
2	to identify and protect good agricultural lands from uncontrolled urban sprawl			√	√	√	√	0	0	√
3	to designate and develop key rural towns so that they could play roles of not only rural service centres but also agricultural centres				√	√	√	√	√	√
4	to designate and improve key feeder roads connecting key rural towns and District Centres/Suburban Centres for stronger integration between rural areas and Greater Kumasi Conurbation					√	√	√	0	√
5	to designate "Rural Planning Areas" for promoting integrated rural development with diversified economic sectors including agriculture, tourism, mining and agro-processing industries						√	√	√	√
6	to promote private investment in both agro-processing industries and agriculture							0	0	√
7	to develop recreational and leisure centers for domestic tourists and visitors								√	√
8	to establish information centres at rural towns for domestic tourists and urban visitors									0
9	to enforce laws and regulations for promoting development of mining activities and management of the environment									

√ : Where two plan objectives are mutually supportive with each other.
X: Where two plan objectives have the potential to conflict with each other.
0: no significant interaction.

Table 26.5.9 Compatibility Matrix among Policies/Plans (Urban Area)

No	Urban Plan Objectives	to develop and strengthen the functions and amenities of Kumasi City Center	to provide high class infrastructure for Kumasi City Center including new roads- BRT route and terminals	to redevelop the city using mid-rise and high-rise buildings	to ensure new towns development along outer ring road	to establish vibrant housing market development and to institute monitoring systems for the sector
		1	2	3	4	5
1	to develop and strengthen the functions and amenities of Kumasi City Center		√	√	0	√
2	to provide high class infrastructure for Kumasi City Center including new roads- BRT route and terminals			√	0	√
3	to redevelop the city using mid-rise and high-rise buildings				0	√
4	to ensure new towns development along outer ring road					√
5	to establish vibrant housing market development and to institute monitoring systems for the sector					
√ : Where two plan objectives are mutually supportive with each other.						
X: Where two plan objectives have the potential to conflict with each other.						
O: no significant interaction.						

2) Environmental Opportunities and Risks

Environmental opportunities and risks matrixes addressed environmental impacts on both positive and negative aspects. The results can be incorporated in the monitoring and evaluation plan, and also recommend identified issues to be reflected into the SDF and SP. The results of analysis of environmental opportunities and risk matrixes are shown in Appendix D.

26.6 Recommendation from SEA Study to the Planning Study for SDF and SP

26.6.1 Introduction

The implementation of the Greater Kumasi Sub-Regional SD and Conurbation SP as recommended by the JICA Study will offer a number of opportunities for the beneficiary communities to improve their livelihoods. However, this must be done with greater consideration for sustainable development. The spatial development plan must satisfy the requirements of the four pillars of sustainable development, which include: natural resources, socio-cultural, economic and institutional issues. The SEA has been done with the aim of mainstreaming sustainable development principles into the preparation of SDF and SP, as well as sub-regional infrastructure

sector plans.

As explained in the previous sections, three main SEA tools were applied to evaluate various interventions in each sector and a number of specific recommendations for each of the plan interventions have been made. Advisory notes have also been developed as a separate document to aid the implementation of the SDF and SP.

This chapter presents general and sector specific recommendations made by the SEA Study. Most aspects of these recommendations have been reflected or considered in the spatial development planning. However, it may be difficult to implement all of the proposals of the SDF/SP and sub-regional infrastructure sector plans. Therefore, it is very important to monitor and evaluate the course of implementation of the SDF/SP and sub-regional infrastructure sector plans for the purpose of paying wide attention to various programs and projects implemented in order to achieve sustainable development.

26.6.2 General Recommendations Made by the SEA Study

(1) Sustainability of the Plan

To ensure sustainability of the SDF and SP for Greater Kumasi, it is recommended that the citizenry should be constantly educated on the JICA Study through forums workshops, public meetings and presentations to the general public.

Acquire and Protect Right-of-Ways for Road Construction and Other Infrastructure Provision Including Waste Management and Water Supply Expansion Interventions

To ensure that all lands earmarked for projects under the JICA Study are secured, the processes for land acquisition and compensation payment should commence as soon as possible. These will require the conduct of a Resettlement Policy Framework (RPF)/ Resettlement Action Plan (RAP) for compensation payment to PAPs.

Protection of Environmentally Sensitive Areas

The design and implementation of the JICA Study should identify and protect environmentally sensitive areas as prescribed in the Environmental Assessment Regulation 1999, LI 1652. Some of the measures that can be introduced may include:

- Support for and enhancement of designated nature conservation sites
- Promotion of biodiversity and sustainable land use management
- Prioritisation for landscaping and sustainable land planning
- Monitoring of development to prevent encroachment of such areas

(2) Partnerships with Traditional Authorities

The traditional authorities have a huge influence on land use and development in Greater Kumasi and are therefore critical in the implementation of the SDF and SP. Conscious efforts must be made to develop partnerships with them. The JICA Study Team has already paid a courtesy call to the Kumasi Traditional Council, and some traditional leaders have taken part in meetings and workshops organized as part of

the SEA process and in the preparation of the SDF and SP. These meetings with the Traditional Authorities should be regularized and supported to ensure their total support for the JICA Study.

(3) Protection of Water Resources

Appropriate measures must be put in place to protect and enhance the aquatic environment, promote sustainable water consumption and reduce water pollution including groundwater sources in and around the Greater Kumasi Sub-Region.

In this light, there will be need for Integrated Water Resources Management (IWRM) planning within the context of generating adequate knowledge for management of the water resources in Greater Kumasi. In addition, the buffer zone policy must be implemented, which will require enactment of regulations and bylaws, demarcation, acquisition and enforcement of buffer zones along water bodies.

(4) Human Protection and Security

The Greater Kumasi Sub-Region is strategically located to attract people from all parts of Ghana and also serves as a major centre for commerce. This increases the potential for crime and other social vices. Therefore, the JICA Study should make provisions for adequate security measures to be put in place and integrated into all plan interventions to ensure protection of life and property.

(5) Gender and Vulnerable Groups

The SDF and SP implementation would have varying impacts on different groups of people especially the vulnerable and excluded. The JICA Study should therefore take into account the needs of the vulnerable groups and be gender sensitive in the design of the various infrastructures.

(6) Use of Local Skills and Raw Materials

Traditionally, construction works attract a lot of migrant workers, which has the potential to disadvantage the local workforce. Recruitment of labour for the implementation of the SDF and SP should consciously consider the use of both local skilled and unskilled labourers and raw materials, where necessary. This can be accomplished through clear recruitment policy and contracts.

(7) Cross-Sectoral Collaboration

The implementation of the JICA Study cuts across sectors and would involve a number of institutions. This could generate conflicts and duplication of roles and responsibilities. Effective structures should be established to promote cross-sectoral collaboration and dialogue among all sector agencies with bearing on the JICA Study to ensure that all challenges/bottlenecks with implementation of any plan intervention are swiftly resolved.

(8) Integration and Synergies

The JICA Study must integrate all the various sector interventions in such a way that

there will be linkages and synergies among the interventions such that a by-product from one sector can serve as a raw material for another. For example, treated water from a wastewater treatment plant can be used to irrigate agricultural land; compost from solid waste can also be used as soil conditioner; and methane from landfill sites can be used to generate electricity.

(9) Conduct of EIA for Individual Projects

This SEA was done on a strategic level and therefore it is not meant to identify and address location and site-specific environmental impacts. It has, however, provided guidelines and a framework for the conduct of the subsequent EIA. During the implementation of the various plan interventions, specific individual project-level assessments must be done to address project-specific and site-specific impacts in accordance with LI1652. Some of the plan interventions, such as construction of dams and creation of reservoirs and roads, have the potential to generate significant site-specific environmental impacts and must therefore be subjected to a detailed EIA in order to make them environmentally sound, socially acceptable and technically feasible.

(10) Institutional Framework for Environmental Management and Compliance

The environmental issues that may be associated with the implementation of the JICA Study will be enormous and cannot be treated as a secondary issue or in a fragmented manner. It will require a lot of planning and collaboration through an integrated approach. There should be a central institution within the administrative structure of the various MMDAs to coordinate and monitor all the environmental issues with clear roles, adequate budgetary allocation, as well as well-trained human resources and logistics.

26.6.3 Specific Sector Recommendations

(1) Solid Waste

In order to ensure effective waste management, it is important to promote the following:

- Waste Recycling and Reuse – waste segregation and sorting at the source of generation must be promoted. This will improve the quality of the waste and encourage its reuse.
- Composting – Waste segregation and sorting at the source will result in a high quality of organic waste, which may be used to produce compost/manure for agricultural activities.
- Waste-to-Energy – The project planning phase should consider the option of waste-to-energy through methane recovery from landfill and incineration.

(2) Liquid Waste

Proposals have been made to rehabilitate existing waste treatment facilities at Asafo. However, a community-based wastewater treatment facility may also be considered.

This should be designed in such a way that energy can be generated from the gas build up (biogas technology). The treated wastewater should also be considered for agricultural production.

The right-of-way for sewerage systems and infrastructure must be secured and protected immediately after the approval of the plan.

(3) Drainage

Drainage systems must be covered to prevent the practice of dumping refuse in them.

Drainage works must be done before/ahead of other infrastructure such as industrial and housing developments in new areas.

(4) Land Use

Land use plans must be strictly enforced and implemented.

In order to achieve a harmonious development across the region, it is important to extend the experiences from the JICA Study to cover the whole of the Ashanti Region.

(5) Transport

1) Climate Change Issues

Some of the problems associated with transportation have direct linkage to climate change, especially considering that the type and nature of the fuel used for transportation determines the levels of emissions. Therefore, the following should be considered in the JICA Study to deal with the impact of transportation on climate change:

- Traffic planning and demand management
- Inter-modalism
- Improvement in non-motorized transport
- Maintenance strategies to reduce emissions from vehicles

2) Traffic planning and demand management

The JICA Study must critically consider an integrated traffic planning and demand management approach that will combine land use and transport planning, travel demand management, transport systems management and regulation. These elements should be supported by appropriate policies and actions on resource mobilization, taxation, pricing, and subsidies; institutional and legal aspects; as well as education and awareness creation.

3) Inter-modalism

The transport plan aspect of the JICA Study puts emphasis on only road transport and neglects other transport modes resulting in a lack of interconnection with other modes of transportation. An inter-modal transportation system should be promoted to connect all the elements in a seamless system that is efficient, safe, flexible, and

environmentally sound.

4) Improvement in non-motorized transport

Non-motorized transport has the potential to improve the health status of those who patronize it. It also helps reduce emissions that contribute to climate change. The infrastructure for this sub-sector must be an integral part of transport planning in the JICA Study.

5) Maintenance strategies to reduce emissions from vehicles

Emission levels naturally continue to increase significantly as combustion-powered vehicles deteriorate with age and usage. Good maintenance practices are required to keep the levels low. A conscious effort must be made to introduce targeted inspection and maintenance (I/M) programs, which can identify problem vehicles and ensure that they are repaired. This will contribute substantially to lower emissions and improved air quality. Research has shown that vehicles perform better and have reduced emissions after maintenance.

6) Improvement of arterial roads

The other arterial roads within communities outside the BRT must be improved to serve as link roads for the displaced transport operators.

7) Rehabilitation of the rail network to Boankra to facilitate the inland port programme

The development of the inland container port at Boankra is a laudable idea that must be implemented fully. However, the use of the road for container transport from Tema and Takoradi Ports to the inland port at Boankra will create congestion on the road as well as accidents. It will also result in the early deterioration of the road. It is therefore recommended that the railways from Tema Port to Boankra and from Takoradi to Boankra are rehabilitated to facilitate quick transport of containers to the Boankra inland port.

8) Sustainability of the BRT

Experience in Ghana has shown that previous attempts to promote BRT and high occupancy buses were not sustained. Adequate measures should therefore be put in place to sustain the proposed BRT and the high capacity transport system. This will require commitment from all stakeholders.

(6) Energy

1) Alternative fuels

There is an urgent need to consider the use of alternative transport fuels such as compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gas (LPG). For the long term, the use of other fuel alternatives such as bio-diesel, methanol, ethanol, and vegetable oils; synthetic liquid fuels derived from coal and

various fuel blends, such as gasohol; electricity; and hydrogen should be considered. These alternative fuels are more environmentally friendly due to the low level of emissions.

2) Alternative energy sources

Traffic management at intersections where traffic light signals are used to manage vehicular movements continue to face problems as a result of frequent power failures. It is therefore important that consideration is given to the use of alternative power sources such as solar energy to control traffic lights at intersections.

26.7 Monitoring and Evaluation Plan from the Perspective of SEA

26.7.1 Introduction

In this section, indicators are proposed from the perspective of SEA. This section deals with the following aspects in relation to the Monitoring and Evaluation Plan:

- List of indicators to monitor the impacts of the proposed SDF and SP
- Methodology of measurements of indicators used

A Monitoring and Evaluation Plan for Implementing Greater Kumasi SDF and SP is presented in Chapter 24. The Monitoring and Evaluation Plan incorporates the indicator proposed and methodology for measurements of indicators proposed in this section.

26.7.2 Types of Indicators

A series of simple biophysical and socioeconomic environmental indicators are developed to assist in the periodic monitoring and evaluation of the implementation of the plan interventions. These include:

- Ecological indicators
- Economic indicators
- Social indicators
- Sustainability or composite indicators

In selecting suitable indicators, both scientific and policy requirements must be met. The requirements typically include the following considerations:

- Robust, well-founded basis in scientific knowledge
- Representativeness, describing the state or quality of an issue or subject, giving significant and precise information
- Clearly and consistently defined so as to be unambiguous or lend themselves to various interpretations, or give inconsistent results in different situations
- Anticipatory, early warning, signaling, capable of an indication of degradation before serious harm has occurred
- Broadly applicable to many stressors and sites, and usable in various situations
- Simple, easily interpretable and appealing to society in order to ease communication between policy makers and society
- Data should be readily collectable, thereby lowering the technical and collection

costs

- Having a target or threshold against which to compare or an explicit scale ranging from undesirable states to desirable states (along with specific weightings) in order to assess the significance of the information.

The detailed baseline data and statistics for comparison would be obtained from the Medium Term Development Plans of the MMDAs, health statistics of the District Health Management Teams (DHMTs) of Ghana Health Service (GHS), electricity from ECG and GRIDCo, water resources from WRC, water supply from GWCL and CWSA, information on education from Ghana Education Service (GES), information on agriculture from MoFA, and transport information from the Department of Feeder Roads, Department of Urban Roads and Ghana Highways Authority.

The indicators shown in Table 25.4.7 are provided as guide based on the sectors proposed for interventions in the JICA Study formulation. It is anticipated that additional inputs will be made into developing the proposed indicators further in order to ensure effective monitoring and evaluation of the plan interventions.

Table 26.7.1 Proposed Indicators

Sector	Proposed Indicators
Land Use Changes	(1) Percentage of land preserved as open spaces for recreation purposes (2) Percentage of agricultural areas that have changed to built-up areas (3) Number of established industrial areas on designated road corridors and designated towns (4) Percentage biodiversity/habitat loss (5) Level of soil erosion and fertility (6) Percentage of land used for other infrastructure e.g., roads, landfills, utilities
Water Resources	(1) Water resources utilization by dams, reservoirs (2) Pollution indicators of water bodies, coliforms, trace metals, nitrates, pesticides, and salinization (3) Water pollution in terms of nutrient build-up and organic loading (4) Surface and groundwater level, flows and quality (5) Water consumption and costs
Drainage	(1) Extent of control of flooding in low lying areas (2) Extent of control of erosion in roadways
Transport	(1) Level of atmospheric pollution due to quality of emissions to air (air and noise) (2) Number of improved road networks by category (3) Number of BRT terminals and extent of use (4) Number of signals installed and functioning (5) Level of use of improved public transport system
Solid Waste	(1) Number of sanitary landfills established and functioning (2) Level of high calibre staff employed into solid waste management (SWM) units at the MMDAs
Liquid Waste	(1) Coverage of hygienic toilets and level of access to their use (2) Number of households with toilet facilities (3) Coverage of sewerage systems and functioning (4) Number of functional sewage treatment facilities

Electricity Supply	<ol style="list-style-type: none"> (1) Number of good quality transformers installed and functioning (2) Number of transmission and sub transmission systems installed and functioning (3) Number of communities served with electricity that hitherto had not been the case (4) Level of commercial losses as against the established minimum acceptable level
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Source: JICA Study Team

26.7.3 Composite Indicators Proposed

In order to ensure sustainability, the following composite indicators are also proposed as shown in Table 26.7.2 Since the environment basically represents a complex integration of living and non-living ecological components, composite environmental indicators help to ensure planning, implementation and monitoring of a development plan/programme in an environmentally and economically sustainable way. Thus, a combination of air, water, land/soil, solar radiation under non-living (abiotic) components and an aggregation of plants, animals, micro-organisms and humans under living (biotic) components, as well as the human factor, also feature several dimensions: socio/cultural/economic and legal/political/administrative/institutional aspects, which are important for monitoring and evaluation during implementation of the development plan.

Table 26.7.2 Proposed Composite Indicators

Composite Indicator	Features
<u>Water Balance</u>	Freshwater represents a most useful but increasingly scarce resource. One of the parameters of living standards is based upon the per capita consumption rate of fresh water. Composite indicator data on water balance requires integration of different databases such as watershed areas, deforestation, landslides, human density, soil type, water supply/demand situation, and groundwater extraction status from a watershed approach. Information on conservation status such as flood protection, bioengineering, plantations, water user group formation, wetland conservation, and rainwater harvesting is also required. Additionally, gaps in formulation and implementation of regulations relevant to sustainable use of water are important for proper implementation.
<u>Carrying Capacity</u>	A popular but generally poorly understood concept is the goal of sustainable development, which places stress on inter-generational equity for resource use. Exploitation of any resource exceeding its carrying or ecological capacity leads to extinction or degradation beyond restoration. Hence, for sustainable utilization of a resource, it is essential to estimate its carrying capacity. Formulating a database on carrying capacity requires information on biomass, primary production, natural stock regeneration potential, resource flow dynamics and human pressure. It places emphasis on consumption rate not exceeding production rate. Through the use of appropriate technology and conservation practices, carrying capacity can also be increased.
<u>Pollution Composite Indicator</u>	Due to growing industrialization, urbanization and consumerism across the globe, environmental pollution is on the increase in the absence of adequate waste recycling mechanisms. The pollution composite indicator requires a database on the pollution status of air, water, land, solid waste, noise and even thermal and radioactive waste pollution along with their impact on human health, flora and fauna.

<p><u>Land Use Composite Indicator</u></p>	<p>Agriculture is a major land use type having high socio-economic impacts relating to food as a basic need of the human population. Environmentally unsustainable agricultural practices, such as farming on steep slopes, and haphazard application of chemical fertilizers and pesticides, have led to the degradation of the agro-ecosystem and have led to a vicious cycle of poverty. Sustenance of farming systems relates to forest cover and integrated pest and manure management with an emphasis on application of organic matures and biopesticides. For land use planning of an area, a database is required on habitat types and ratio of land use types such as forest, grassland, farmland, barren area, water bodies, wetlands and settlements. Environmentally sustainable land use planning of an area requires zonation of settlement areas, industrial areas, waste management areas, institutional/market areas and park/open spaces and conservation zones for any environmentally sensitive areas and rare or endangered species. Information on soil types, permeability, forests, agriculture land ratio and growth pattern of urban areas, loss of forest cover, wetlands, loss of open spaces and increase in pollution load in land use maps indicate trends and areas of high levels of human disturbance. The land use composite indicator helps to provide a basis for intervention to check further environmental degradation and sustenance of the environmental quality of life.</p>
<p><u>Amenity Composite Indicator</u></p>	<p>There is a growing trend of urbanization and consumerism on a worldwide scale in search of better facilities in urban areas. This has resulted in environmental stress particularly in urban areas in terms of high generation of wastes, such as plastics and urban pollution load. From a sustainable development and future perspective, it is necessary to control high consumerism and promote environmentally friendly practices/products such as clean technologies and biodegradable plastics. To monitor the amenity level, there is a need for maintaining information on facilities such as safe drinking water, nourishing food, health, sanitation, education, and job facilities in urban centres. In addition, data on the availability of parks, open spaces, recreation centres, hotels, business enterprises and facilities of drainage, waste treatment, and waste recycling plants are necessary. This will help meet the demand of the burgeoning population in an environmentally sound way. Indicators will help monitor the environmental quality of life and check deterioration of public health and productivity, which directly correlates with environmental deterioration.</p>
<p><u>Sustainability Indicator</u></p>	<p>A composite database on overall environmental status and environmental planning comprises stock and flow of natural resources. This also involves the practices of sustainable harvesting of non-renewable resources and level of public environmental awareness for sustainable resource utilization. A focused composite indicator should cover basic environmental factors such as conservation of soil, water, air, biodiversity, habitats, and social welfare. Consistency in study methodology, field techniques and monitoring standards should be maintained. Monitoring may be carried out by private sector institutions related to environmental research/monitoring, environmental management and sustainable development projects. This will ensure better quality unbiased results with a high professional standard. Indicators on environmental quality such as air quality provide information on the status on level of pollution. It may also reveal the hidden cost of pollution such as an increase in the number of medical expenses corresponding to cases related to respiratory disease. Environmental economics will provide useful information on natural resource accounting. Such information on databases/indicators may also reveal the direction of future trends on pollution problems, which is valuable data for future planning from a sustainable development perspective.</p>

Source: JICA Study Team

26.7.4 Methods for Monitoring Indicators

The methods for monitoring the indicators shall include interviews, questionnaire administration, direct observations, sampling and physical and laboratory measurements. Use of the Geographical Information System (GIS) would also provide factual information on interrelated environmental components and the changes that have occurred during a monitoring period.



APPENDICES

Specific Strategies for Each District /
District Planning Study Activities /
Records of Stakeholder
Consultation Meetings and
SEA Process



Appendix A Specific Strategies for Each District

A.1 Introduction

The strategies for development which are implied by the Sub-Regional SDF for each district are summarized here, as a guide to the necessary inputs to district level SDFs and Medium Term Development Plans.

A.2 Kumasi Metropolis

Kumasi Metropolis is set to more than double its population by 2033, despite the outward expansion of Greater Kumasi, and densities will therefore substantially increase. The SDF proposes that the Kumasi City Centre be reconfigured into one befitting a modern city of over 5 million inhabitants. This will involve moving neighborhood-level services and markets to move to suburban centres, a BRT system to efficiently link the Centre with suburbs, and land assembly for larger city scale commercial, government and corporate institutions in Kumasi City Centre.

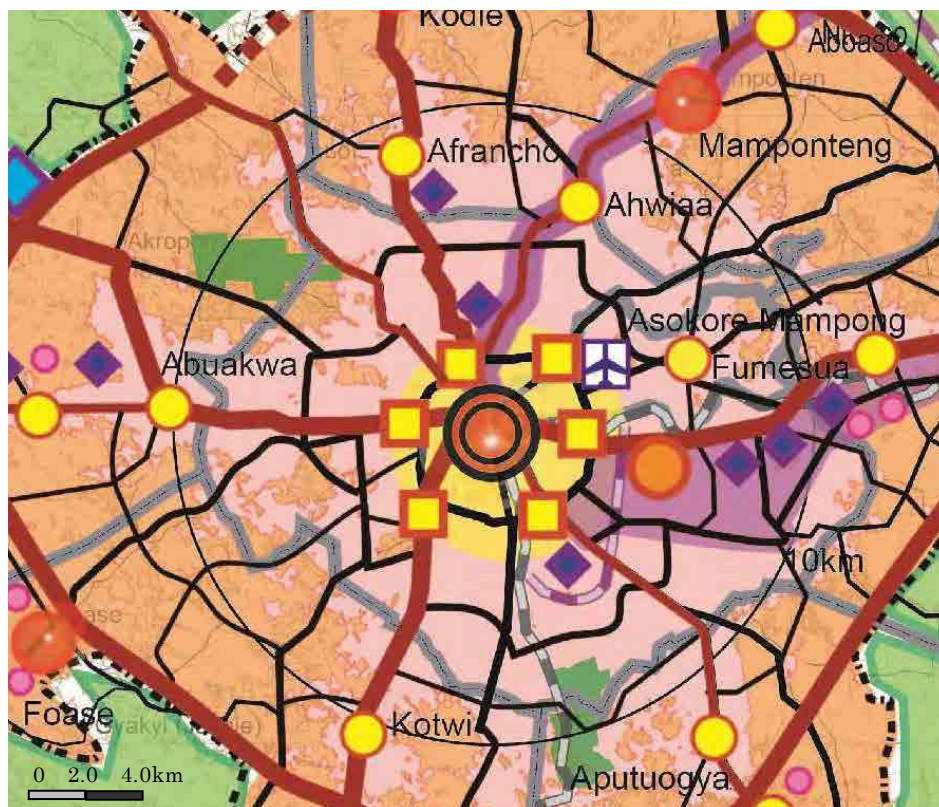


Figure A.1 Kumasi Metropolis within the Greater Kumasi SDF

(1) Settlements

The Sub-Regional SDF predicts that, the population of KMA will be more than double by 2033, despite the spreading of the city into Greater Kumasi. Lack of further space for development within KMA means that there can only be a small percent increase (19%) in residential areas of 2,300 ha, so the density is projected to have to rise from 159 people per hectare (in 2010) to 279 per hectare in 2033.

In the City Centre this will mean providing middle rise and high density, mixed with the already increasing commercial uses. This type of development is also recommended around the inner ring road, and in new urban centres at the junctions of radial roads with the inner ring road, which are part of the plans for decongesting the City Centre. At the same time overcrowding will have to be controlled in the already high density slum areas, where further mixed use high density redevelopment is proposed. Then between the inner ring road and the middle ring road, medium densities can sustain population rise by plot subdivision and higher rise development in the many existing low density areas.

On this basis the MTDP could link with the KMA SDF and SP to identify a twenty year phased programme of development of its settlements and services, which will be the basis for amending existing Planning Schemes, and provide a guide for investors and developers as to where and when provision of improved roads and services are planned.

(2) Economy

The projections for the economy of KMA are that the 72% in the tertiary (services) sector will reduce to 66%, manufacturing will increase from 23% to 34% and agriculture will reduce from 5% to less than 1% by 2033. Nevertheless the overall numbers working in the city are predicted to rise very substantially due to the increasing amount of commuting from dormitory residential areas outside of KMA.

One of the main problems which are recognized in the KMA MTDP is “the large size of the active labour force constituting the informal private sector, the dominance of small scale businesses and petty trading activities...and inadequate capital formation to establish large or medium scale enterprises....and (hence) low mobilization of internally generated funds by the Assembly”¹. Hence a major goal of the SDF is to support the conditions for investment and growth in the larger scale, formal economy.

The proposals which address this are the decongestion of the City Centre by establishing suburban centres in Greater Kumasi with good transport links, expansion of the CBD and assembly of suitable sites for larger scale commercial, civic and leisure uses; preparation for and promotion of industrial investment at Kaase by provision of reliable power and water services; and creation of mixed use commercial and residential development corridors on the Ejisu and Mampong Roads.

¹ KMA MTDP 2010-13

(3) Open Space, Pedestrian and Cultural Areas

The SDF maintains existing green spaces in KMA, calls for pedestrianized areas in the CBD and pedestrian/cycling routes, and the enhancement of the City's historic and cultural heritage areas.

(4) Transportation Sector

The following are the priority transport projects

- The implementation of the BRT system, establishment of its City Centre circulation system and four stations is essential for easy access and effective realisation of a decongested and modernized City Centre.
- Implementation of a Middle Ring Road, based on selecting and upgrading existing main roads, to improve connectivity and attract movement away from and outside of the City Centre
- Creation of Rapid Transit urban corridors: a "knowledge corridor" between Kumasi City Centre and Boankra to access the new high density/high growth areas and secondary city Centre at Ejisu; a corridor along the Mampong Road linking new urban centres on the route to the New Kumasi Airport. These and the Offinso Road will be crucial links between the Centre and the proposed priority Outer Ring Road, starting with Phase 1, from Boankra to Kodie.

(5) Water and Water Resources

- Immediate improvements to the Barakese reservoir and immediate preparation for a new dam site to improve and maintain water supplies
- Renewal, repair and extension of the piped water system

(6) Solid Waste management and Liquid Waste Treatment

- The six outer districts comprising Greater Kumasi are to identify and implement waste disposal and liquid waste treatment sites on a commercial basis partly to solve the long term shortage of land fill and septage treatment for KMA.
- The objective of the whole of KMA being on a piped sewerage system by 2033.

(7) Electricity

- There is a proposed 33kv Ring Main approximately on the route of the Outer Ring Road which will ultimately enhance the existing grid in KMA and elsewhere.
- The revised estimates of demand for KMA in the SDF are being taken up by GridCo and the Electricity Generating Companies

A.3 Asokore Mampong Municipality

Asokore Mampong is a new Municipality on the east side of the City Centre, which has been newly created out of part of the former Kumasi Metropolitan Assembly area.



Figure A.2 Asokore Mampong in the Sub-Regional SDF

(1) Settlements

The Greater Kumasi SDF and SP make proposals for:

- Redeveloping and increasing the densities in the city centre areas.
- Establishing high rise commercial and residential buildings along the inner ring road
- Increasing the density of housing up to and beyond the proposed middle ring road.
- Establishing one of the conurbation's main urban centres at Asokore Mampong.

The Greater Kumasi Plan also asks that Asokore Mampong MTDP should include for preparation of Structure Plans for the areas within the UGB and for Barekese in its Action Plan and Budget. These can identify a twenty year phased programme of development of settlements and services, which will be used to amend and extend existing Planning Schemes, and guide developers as to planned provision of services.

(2) Economy

Since the first MTDP is yet to be prepared, it is not yet possible to distinguish the economic profile of this district from that of KMA, which is outlined in the above section. However it should be noted that the District lies parallel to the proposed Kumasi-Ejisu mixed-use knowledge corridor which will provide commercial and light industrial opportunities. In addition, the Kumasi Airport will be developed over the next five year period. Improved transport links to Boankra via the corridor BRT, and to Kaase via the middle ring road, should impact on the employment pattern for the district.

A.4 Atwima Nwabiagya District

Atwima Nwabiagya District covers a substantial arc on the western side of Greater Kumasi, and contains the City's two main dams and water works. The routes to Cote D'Ivoire via Sunyani, capital of BA, Bibiani and the north of the western region go through the district. Urbanization has taken place mostly along these routes.

(1) Settlements

Atwima Nwabiagya is a combined agricultural and urban district, with Nkawie as its capital, and it has more than 9 towns with population over 5,000, most of which are part of the emerging conurbation.

The Sub-Regional SDF and Conurbation SP ask the District to plan for development over a twenty year period. The continued expansion of Greater Kumasi will further change the hierarchy of settlements, which means that current development objectives should be re-examined.

The Urban Growth Boundary (UGB) shown in the Greater Kumasi Conurbation SP reaches beyond the Outer Ring Road near the junction with the Bibiani, Sunyani and Barekese Roads, and four new towns are designated.

Within the UGB, Urban Centres are identified at Abuakwa, Sepaase and Nkawie, to concentrate and attract basic services and relieve increasing pressure on Kumasi City Centre.

Outside of the UGB, the projected continuing decline of rural settlements underlies the policy of concentrating services in the key rural towns of Amankyea, Asakraka and Barekese at the centre of the agricultural area, with improved access from surrounding villages. Other towns in these areas should not be developed other than where planning schemes have already been approved.

The Greater Kumasi Plan also asks that Atwima Nwabiagya MTDP should include for preparation of Structure Plans for the areas within the UGB and for Barekese in its Action Plan and Budget. These can identify a twenty year phased programme of development of settlements and services, which will be used to amend and extend existing Planning Schemes, and guide developers as to planned provision of services.

(2) Economy

Atwima Nwabiagya is at present has the average level for primary production (agriculture)

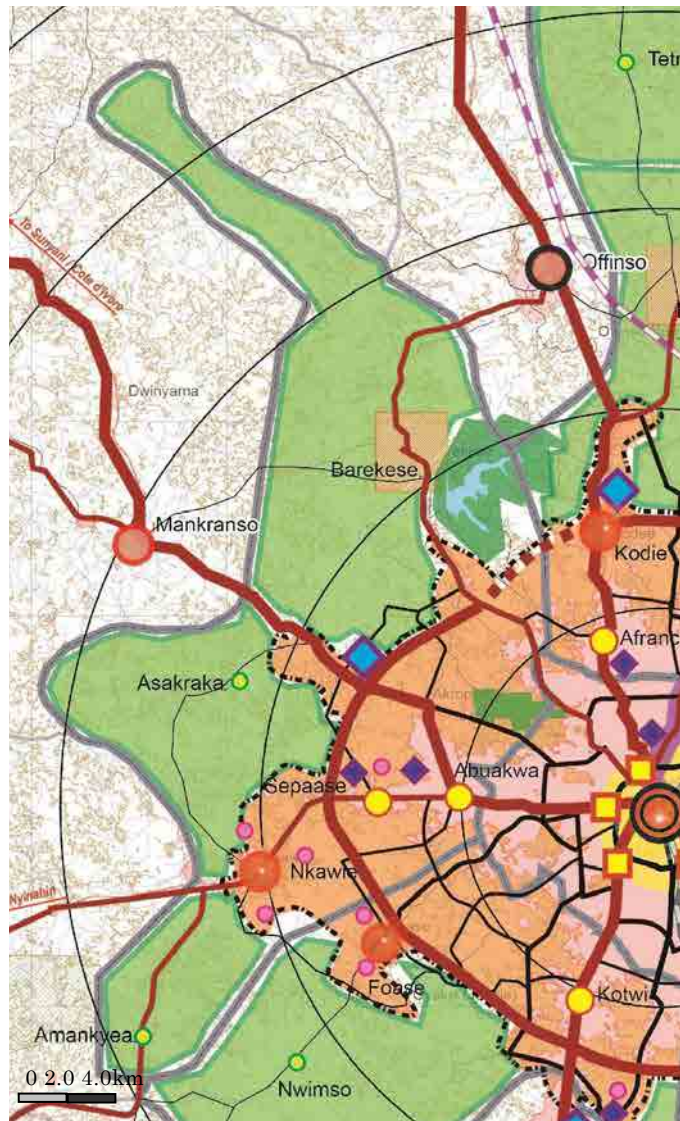


Figure A.3 Atwima Nwabiagya in the Greater Kumasi SDF

in the sub-region outside KMA, secondary (industry), and tertiary (Trading and Service).

The SDF projects that the share of primary production (mostly agriculture) will continue to decrease, with declining populations in rural settlements, and likely concentration and mechanization of what is now a predominantly small holder farming economy, as also called for in the 2009-13 MTDP. This also identifies the large scale production of Citrus and Ginger in the District which need facilities for agri-processing to reduce post-harvest losses.

The 2009-13 MTDP indicates that the manufacturing is mostly in micro and small scale enterprises, for which the lack of serviced industrial space is a problem. There are two substantial quarrying businesses near Barekese.

Atwima Nwabiagya should see an increase in its manufacturing and services sector employment. It is likely that some of this will be within KMA, and that it will have an increasing “dormitory” role, which is already recognized. However, the SDF recognizes the District’s call for industrial and commercial sites with designation of industrial sites between Abuaka and Sepaase on the Bibiani Road, and a major logistics centre on the junction of the Outer Ring Road with the Sunyani Road. Space for commercial activities should be created in the above proposed Urban Centres, supported by better roads and transport systems.

The goal is to transform manufacturing and commercial economies which are composed mostly of small scale or individual enterprises into larger and more formal employment in well capitalized and serviced commercial and industrial areas, by attraction of new investment which can benefit from existing skills. These potentials could be recognised by the MTDP.

(3) Agricultural and Rural Areas

The following strategies are proposed for agricultural and rural areas:

- Promoting agricultural production and development of agro-processing industries using citrus and ginger
- Nkawie is the district centre with government administration functions and locations for agricultural market places and agro-processing industries.
- Promotion of Tourism to conservation areas at dam sites, in other forest reserves and other visitor attractions.

(4) Transportation Sector

- The second phase of the proposed Outer Ring Road (the south /western portion) runs through the District, as far as the Barekese Road, but thereafter its route is recommended to be created but planted and afforested to provide a much needed barrier to protect the Barekese Dam.
- The route between the Barekese Road and Offinso, on the road to the north, should be upgraded to dual carriageway to provide the necessary connection.
- The district will be part of the Local Road Upgrade in future urbanized areas of Greater Kumasi (2 lane)
- The currently proposed BRT on the Sunyani Road needs to extend to the logistics area at the junction of the Outer Ring Road.

(5) Water Resources, Solid Waste management and Liquid Waste Treatment

- Proposals are made for increasing the capacity of Owabi and Barekese Dams, whose catchment areas must be protected (eg no development should be allowed along the new road from Barekese to Offinso). This will help to create piped water supply to the conurbation, use of boreholes rural areas should continue.
- A land fill site is proposed for near Nkawie, which needs to be identified. This should include the construction of septage treatment ponds for eventual pipe-borne sewage system in all urban areas within the UGB and liquid waste from septic tank systems elsewhere in the district.

(6) Electricity

The District conurbation is fed by the PSS at Abuakwa and a new one is proposed on Bibiani Road at Sepaase, fed by a 33 KV Ring Main approximately on the route of the outer ring road scheduled for 2028-2033, which will also secure the future supply to the industrial area.

A.5 Atwima Kwanwoma District

Atwima Kwanwoma District is in the south westerly quarter of Greater Kumasi, a new district which was formerly combined with Bosomtwe. The main area of urbanization is along the radial main route from Kumasi to Obuasi and Cape Coast, passing through Kotwi, the Bekwai Road.

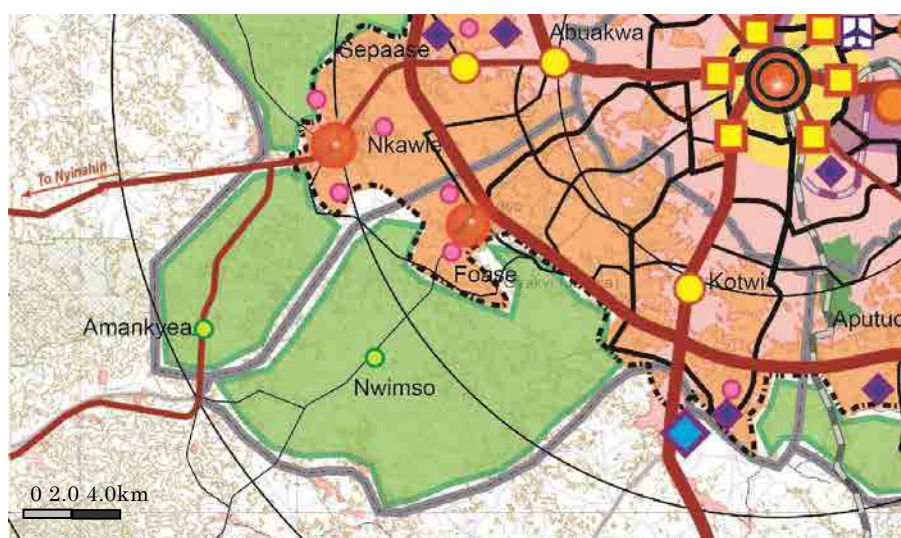


Figure A.4 Atwima Kwanwoma in the Greater Kumasi SDF

(1) Settlements

Atwima Kwanwoma is still a predominantly agricultural district, with Foase as its main, and only first order town. Following this in order is Trede, on the Bekwai Road and Twedie, one of the towns nearest to Kumasi. The quantities and proximity of undeveloped land to Kumasi City Centre in the district means that this is likely to be one of the faster urbanizing areas of the conurbation.

The Sub-Regional SDF and Conurbation SP ask the District to plan for development over a twenty year period. The continued expansion of Greater Kumasi will further change the hierarchy of settlements, which means that current development objectives should be re-examined in the next MTDP.

The Urban Growth Boundary (UGB) shown in the Greater Kumasi Conurbation SP reaches beyond the Outer Ring Road near the junction with the Bekwai Road around Trede, where a new town, logistics centre and industrial area are planned, and in the area around Foase, the District Capital, where two new towns are designated. Within the conurbation, Kotwi on the Bekwai Road is also designated as an urban centre for the expanding residential areas of Greater Kumasi, to relieve pressure on the City Centre.

Outside of the UGB, the projected continuing decline of rural settlements underlies the policy of concentrating services in the key rural town of Nwineso, at the centre of the agricultural area, with improved access from surrounding villages. Towns in these areas should not be developed other than where planning schemes have already been approved.

The Greater Kumasi Plan also asks that Atwima Kwanwoma MTDP should include for preparation of a Structure Plan for the areas within the UGB in its Action Plan and Budget. These can identify a twenty year phased programme of development of settlements and services, which will be the basis for amending and extending existing Planning Schemes, and guide developers as to planned provision of services.

(2) Economy

Atwima Kwanwoma is at present a mostly agricultural district with above the average level for primary production (agriculture) in the sub-region outside KMA, a little less of the average amount for secondary, and one third less than the amount of tertiary.

The 2009-13 MTDP indicates that the manufacturing is mostly artisanal, wood based and metal based in nature, but there is likely to be an amount of employment in the quarrying, stone and sand winning, mining and timber extraction industries because these resources are quite extensive in the district.

The SDF projects that the share of primary production (mostly agriculture) will continue to decrease, with declining populations in rural settlements, and likely concentration and mechanization of what is now a predominantly small holder farming economy.

On the other hand Atwima Kwanwoma should see an increase in its manufacturing and services sector employment. It is likely that some of this will be within KMA, and that it will have an increasing “dormitory” role, which is already recognized. However, the junction of the Outer Ring Road with the Bekwai Road in the area around Trede is identified as a site for a logistics centre (including warehousing and bulk breaking) and industrial area. The goal is to transform manufacturing and commercial economies which are composed mostly of small scale or individual enterprises into larger and more formal employment in well capitalized and serviced commercial and industrial areas, by attraction of new investment which can benefit from existing skills. These potentials could be recognised by the MTDP.

(3) Agricultural and Rural Areas

The following strategies are proposed for agricultural and rural areas:

- Transform agricultural practice and product by targeting the urban and suburban markets emerging in Greater Kumasi Conurbation and by improving feeder roads
- Promote private investment in agro-processing industries by ensuring stable supply of water and electricity (near New Bekwai Road)
- Modernize and upgrade metal work currently practiced in Ampeyoo and Krofrom
- Promote development of wood carving currently popular in Foase, Trabuom and Nweneso, aimed at domestic tourists and urban visitors
- Seek feasibility of gold mining in Adwuampong, Ampabame No. 1, Ahenema Kokoben, Nkoraza, Trede, Trabuom, Keykyebon and Aduwamse and protect them from illegal mining activities
- Regulate operators of sand winning to minimize negative environmental impacts in Konkori, Trabuom, Twedie, Adumwamse, Dida, Gyekye, Afrancho and Asago

(4) Transportation Sector

- The second phase of the proposed Outer Ring Road (the south western portion) runs through the District
- The district will be part of the Local Road Upgrade in future urbanized areas of Greater Kumasi (2 lane)
- The currently proposed BRT on the Bekwai Road needs to extend to the industrial and logistics area at Twedee.

(5) Water Resources, Solid Waste management and Liquid Waste Treatment

- No specific proposals were made for the District in term of water resources with the exception of proposed boreholes constructions in the rural areas which would be based on population size.
- A land fill site is proposed for near Foase, which needs to be identified. This should include the construction of septage treatment ponds for eventual pipe-born sewage system in all urban areas within the UGB and liquid waste from septic tank systems elsewhere in the district.

(6) Electricity

The District conurbation is fed by the PSS in Kumasi at Edwenase, and a new one is proposed on the Bekwai Road at Trede, fed by a 33 kV Ring Main approximately on the route of the outer ring road scheduled for 2028-2033, which will secure the future supply to the industrial area.

A.6 Bosomtwe District

Bosomtwe District's most distinctive feature is the Bosomtwe Lake, the largest meteoric lake in Africa and potentially one of Ghana's main leisure attractions. It is otherwise agricultural, and apart from the growing conurbation, it comprises mostly small rural towns and villages. This is changing as Greater Kumasi arrives.

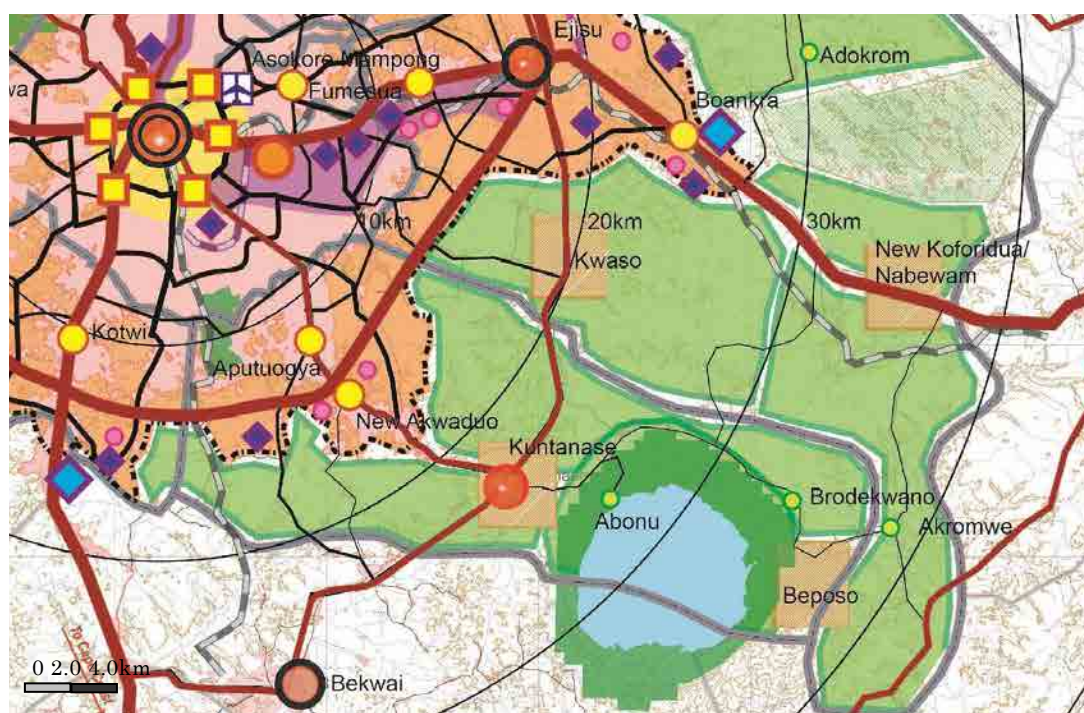


Figure A.5 Bosomtwe within the Greater Kumasi SDF

(1) Settlements

Whereas at present Bosomtwe had only two settlements which could be classified as “urban” in the 2000 Census (Jachie and Esereso), Greater Kumasi will substantially change the hierarchy of settlements. The Sub-Regional SDF and Conurbation SP ask the District to consider development a twenty year period.

The Urban Growth Boundary (UGB) shown in the Greater Kumasi Conurbation Structure Plan reaches beyond the Outer Ring Road on the “Lake Road” as far as Pramso. Within the UGB, the SDF identifies Apotogua, and New Akwado, on either side of the Outer Ring Road as Urban Centres, and two new towns.

Outside of the UGB, the projected continuing decline of rural settlements underlies the policy of concentrating services in the District Capital, Kuntanase and the key rural towns of Beposo and Abonu, with improved access from surrounding villages.

The Greater Kumasi Plan also implies that the Bosomtwe MTDP should include for the preparation of a Structure Plan for the areas within the Urban Growth Boundary and for Kuntanase, Abonu and Beposo in its Action Plan and budget. These can identify a twenty year phased programme of development of the settlements and services, which will be the basis for amending and extending existing Planning Schemes, and guide investors and developers as to planned provision of services. No new Planning Schemes should be permitted outside of these areas.

(2) Economy

Bosomtwe is at present a mostly agricultural district with twice the regional percentage for primary production, two thirds of the amount for secondary, and almost down to one third of the amount for tertiary. The projection for the Sub-Region is for the primary to reduce to less than one third of its current level by 2033, with secondary and tertiary taking its place.

Bosomtwe's MTDP shows high primary production in 2000, which could reduce to one third of its current levels by 2033 if it follows the average for Districts in Greater Kumasi outside KMA. The figure for Secondary (including industry) indicates that Bosomtwe does relatively well in that sector (as is acknowledged in the MTDP). So the higher figure in Primary is offset by a much lower Tertiary (services) sector.

The implication is that employment in primary production (mostly agriculture) will rapidly decrease due to a combination of ageing of the population and the potential for increasing yields by mechanization and better farming methods. A small decrease in the absolute numbers employed, large decrease in percentage employed, but increasing output (more directly linked to agro-processing) is projected for this sector.

There is the potential for Bosomtwe to increase its manufacturing and services sector employment. In the Greater Kumasi SDF, Bosomtwe District has a designated industrial area by the Outer Ring Road near to Dedesua. The manufacturing economy is currently mostly artisanal in nature, but the aim is to transform this into larger and more formal employment in well serviced industrial areas, along with attraction of new manufacturing which can benefit from existing skills. The District is also located on the radial road which leads directly to the Kaase Industrial area of KMA, with the potential to act as the residential area for industry at Kaase.

In the service sector, there is scope for expansion based on Bosomtwe Lake. But this will depend on conservation around the Lake, as below. In terms of commercial development, the identified Urban Centres, new towns and key rural towns will also warranting commercial uses, possibly with a strong leisure focus.

(3) Conservation Area

The major conservation area is the Lake and its surrounding hills. The importance of implementing conservation policies and actions, which will need to be done in partnership with the neighbouring district, cannot be overstated.

(4) Agricultural and Rural Areas

Beyond the UGB, the following actions are proposed:

- Conduct inventory of agricultural land and put measures in place to protect good agricultural land from suburbanization and illegal mining, sand winning and quarrying activities (e.g by establishing agricultural protection zones)
- Promote development of gardens, children's play grounds, and golf courses for promoting recreational activities and attracting urban dwellers
- Organize events for traditional holidays and traditional food as part of tourism

(5) Transportation Sector

The following are the key elements of transport:

- The main link road is proposed from Boankra/Ejisu to Bekwai, a priority project
- The south-eastern portion of proposed outer ring road, due completion 2028- 2033,
- Part of the Local Road Upgrade in future urbanized areas of Greater Kumasi (2 lane)
- The proposed BRT on the Lake Road extending to Kuntense and Abonu.

(6) Water Resources, Solid Waste management and Liquid Waste Treatment

- The Dedesua Dam, one of the candidate dams, on the Oda River falls within the District, and would be the basis of piped water supply within the conurbation areas.
- Outside the designated priority areas, it is necessary to supply water by individual use of groundwater. In order to satisfy the increasing water demand, new boreholes will be needed.
- There is a proposed final solid waste disposal site for the District at Oti which should also include the construction/extension of septage ponds for liquid waste treatment. Ultimately these will be fed by a piped sewerage system for the conurbation and take sewerage from septic tanks in rural areas and towns.

(7) Electricity

- There is a proposed PSS at Kuntense, fed by 33KV line from Ejisu due in 2014.
- The suburban areas are fed from Kaase PSS which is planned to be upgraded in 2023
- There is a proposed 33kv Ring Main on the route of the outer ring road 2028-2033

A.7 Ejisu-Juaben Municipality

Ejisu Juaben Municipality's most distinctive feature is its location on the main route from Kumasi to Accra, the gateway to the city from the south. It is a large district with substantial agricultural areas, and apart from the growing conurbation, comprises many other rural towns and villages.

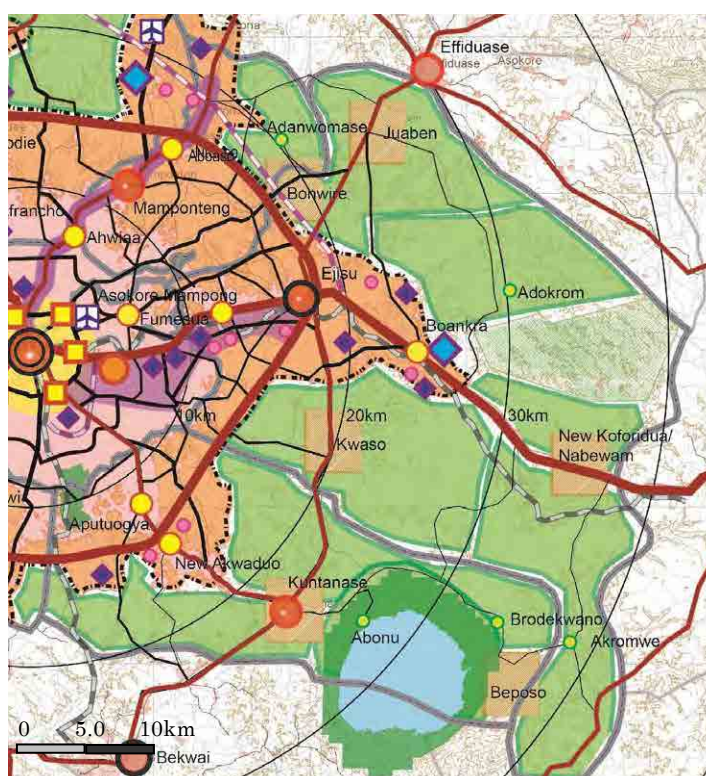


Figure A.6 Ejisu-Juaben within the Greater Kumasi SDF

(1) Settlements

Ejisu-Juaben has several major towns which are outside of the Greater Kumasi conurbation including the largest, Juaben. Ejisu is the second largest, and is becoming absorbed into Greater Kumasi along with the other major settlements along or close to the Kumasi-Accra Road including Kwamo, Fumesua and Besease. The proposed Greater Kumasi SDF will reinforce the increase in these urban towns, and make Ejisu itself as a secondary city centre for Greater Kumasi and Boankra an urban centre. Over time this will substantially change the hierarchy of settlements.

The Sub-Regional SDF and Conurbation SP ask the District to include the development of urban areas over a twenty year period in its MTDP. The Urban Growth Boundary (UGB) shown in the Greater Kumasi Conurbation Structure Plan reaches beyond the Outer Ring Road along the Accra Road to Boankra. Within the UGB, the SDF identifies the Ejisu Kumasi City Centre Corridor as a priority project which will impact on all of the towns along the Accra road between Boankra and Kwamo, on the boundary with KMA. Outside of the UGB, the projected continuing decline of rural settlements underlies the SDF policy of concentrating services in key rural towns, Juaben, Bonwire, Nabewam, Nyme Yaede and Kwaso, with improved access from villages to these.

The Greater Kumasi SDF also asks that the Ejjisu-Juaben MTDP should include in its Action Plan and budget for the preparation of a Structure Plan for the areas within the UGBoundary (partly by revision of the existing SP) and for Juaben, Bonwire, Yaede and Kwaso. These can identify a twenty year phased programme of development for the settlements and services, which will be the basis for amending and extending existing Planning Schemes,

and provide a guide for investors and developers as to where and when provision of services is planned. No new Planning Schemes should be permitted outside of these areas.

(2) Economy

The 2010-2013 MTDP shows that Ejisu-Juaben is at present still mostly an agricultural district with over 80% in that industry (some part time), far more than the average for districts of Greater Kumasi outside KMA. The secondary sector is as low as 4% and the tertiary at 23%, mainly involving government service or retailing and petty trading.

The Greater Kumasi SDF projection is that employment in primary production (agriculture) will decrease due to an ageing of the farming population and the potential for mechanization and better farming methods. A small decrease in the absolute numbers employed, large decrease in percentage employed, but increased output, due to mechanization more directly linked to agro-processing is projected.

In the SDF, Ejisu-Juaben holds the key sites for the intended transformation of the Greater Kumasi economy into more formal employment in well serviced industrial areas, along with attraction of new manufacturing investment. At Boankra, the inland port will extend to a logistics, manufacturing and export processing zone with reliable power and water supplies. This will be at the junction of the first phase of the new Outer Ring Road, effectively a north-south Kumasi by-pass, with Ejisu's "Gateway" function being strengthened by rapid transport to the City Centre.

This will be part of a Kumasi Ejisu mixed use Knowledge Corridor, intended to create the environment in which BRI, CSIR, KNUST and others can be encouraged to open up and for graduates to want to stay and create new business. A mix of apartments, 24 hr leisure facilities, a culture in which investors can meet innovation, knowledge and ambition, has been proven to underpin economic growth.

These elements will build on the growth of Ejisu that has already started. It will hasten transformation of the Municipality from its current traditional, subsistence and agricultural nature and should greatly increase employment in the other sectors.

(3) Agricultural and Rural Areas

The following actions are proposed:

- Promote vegetable and fruit production for urban residents in Ejisu and Juaben, as well as in Kumasi City
- Expand further oil palm production and agro-processing of oil palm
- Promote tourism attraction of oil palm plantations and palm oil factories, forest reserves and the wildlife reserve.
- Promote Juaben as a tourist attraction, which is a town with charm for tourism attraction and agro-processing industries

(4) Transportation Sector

- The north-eastern portion of the Outer Ring Road, which is due for completion 2023 runs through the Municipality.

- The upgrading of the Boankra-Bekwai road link is a priority
- The district will be part of the Local Road Upgrade

(5) Water Resources and Water, Solid Waste Management and Liquid Waste Treatment

- The proposed construction of a new pipeline to Ejisu is a priority project and would be the basis of piped water supply within the conurbation areas.
- Outside the designated priority areas, it is necessary to supply water by individual use of groundwater, and new boreholes will be needed.
- A final disposal site is needed which should include the construction of septage treatment ponds. Ultimately these will be fed by a piped sewerage system for the conurbation and take sewerage from septic tanks in rural areas and towns.

(6) Electricity

- There are PSS at Ejisu and Boankra fed by 33KV line from Kumasi, which will eventually be linked to a proposed 33kv Ring Main approximately on the route of the outer ring road 2028-2033.

A.8 Kwabre East District

Kwabre East District is on the Mampong Road and contains the major access route to the New Kumasi Airport area. It is already quite urbanized, a process which will become more intense as Greater Kumasi continues to expand.

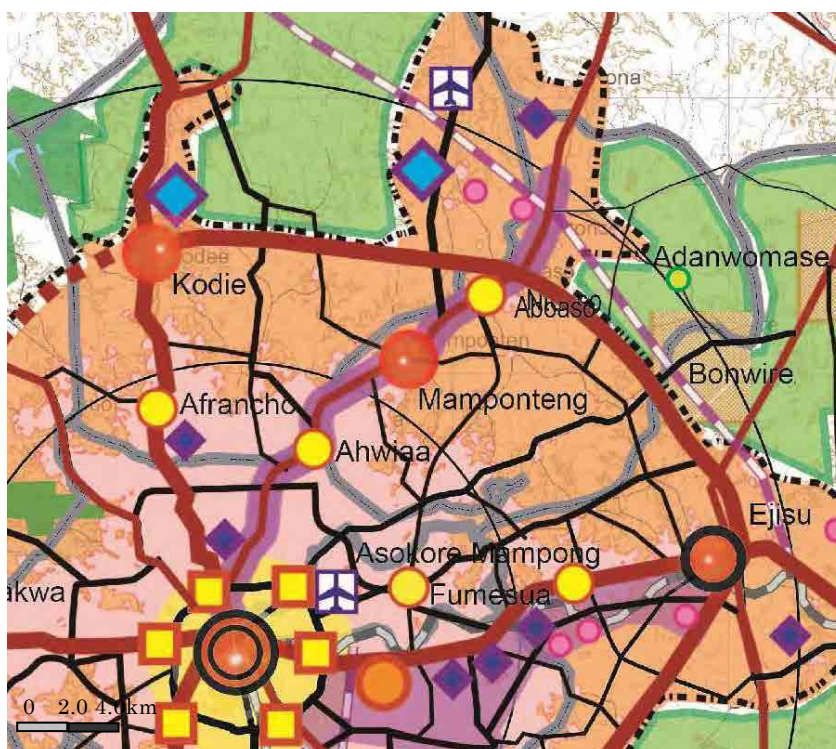


Figure A.7 Kwabre East in the Greater Kumasi SDF

(1) Settlements

As noted in the MTDP 2010-13 MTDP, Kwabre East is already getting above average migration, which is seen to be coming from Kumasi, due to the fact that settlements such as Ahwiaa and Mampong have high concentrations of social amenities and economic activities.

The Sub-Regional SDF and Conurbation SP ask the District to plan for development over a twenty year period. The continued expansion of Greater Kumasi will further change the hierarchy of settlements, a future growth pattern which should be planned.

The Urban Growth Boundary (UGB) shown in the Greater Kumasi Conurbation Structure Plan reaches beyond the Outer Ring Road on the Mampong Road into the New Kumasi Airport Area. Within the UGB, the SDF identifies Ahwiaa, Mampong and Aboaso as needing to be developed as major Urban Centres.

Outside of the UGB, the projected continuing decline of rural settlements underlies the policy of concentrating services in the currently identified urban areas and the key rural town of Bonwire (also in Ejisu Juaben), with improved access from surrounding villages.

The Greater Kumasi Plan also asks that Kwabre East MTDP should include for preparation of a Structure Plan for the areas within the UGB in its Action Plan and Budget. These can identify a twenty year phased programme of development of settlements and services, which will be the basis for amending and extending existing Planning Schemes, and guide investors and developers as to planned provision of services. No new Planning Schemes should be permitted outside of these areas.

(2) Economy

Kwabre East is at present a mostly urban district with less than the regional percentage for primary production (agriculture), half of the amount for secondary, and already nearly twice the amount of tertiary.

The figures for industry would indicate that the district does not do well in the secondary, industrial sector, compared to the service sector which in the 2009-13 MTDP included “trading, in a range from agricultural produce to industrial products (food and non food items), transportation, postal services, hair dressing” and others.

The share of primary production (mostly agriculture) will continue to decrease, with further pressure from non-agricultural uses for green space outside the UGB.

On the other hand Kwabre East should see an increase in its manufacturing and services sector employment. It is likely that some of this will be within KMA, and that it will have an increasing “dormitory” role, which is already recognized. However, the scope for expansion of the Mampong Corridor with its three Urban Centres on the main route to the New Kumasi Airport area, and an industrial area associated with the Airport which is also designated at the end of this Corridor in the extreme north of the District, have to be some of its key development opportunities in the future. These potentials could be recognised by the MTDP.

The manufacturing and commercial economies are mostly artisanal and single person retailing in nature, but the aim is to transform this into larger and more formal employment in well capitalized and serviced commercial and industrial areas, by attraction of new investment which can benefit from existing skills.

(3) Agricultural and Rural Areas

Kwabre East District has almost no rural areas within the District. However, the following strategy is useful in the context of suburbanization:

- Promote suburban agriculture (even at small-scale) taking advantage of proximity to urban residential populations
- Promote and expand traditional textile industry (kente weaving and wood carving)
- Improve and promote tourist attraction of Adanwomase Tourism Management Organisation, Adinkra Craft Village and tourist information centre at Ntonso

(4) Transportation Sector

- The district will be part of the Local Road Upgrade in future urbanized areas of Greater Kumasi (2 lane)
- The first phase of the proposed Outer Ring Road, (that is; the north-eastern portion) which is due for completion 2013- 2023, runs through the District
- There is a proposed railway link from Ejisu-Boankra through Kwabre East District to the proposed New Kumasi Airport.
- The currently proposed BRT on the Kumasi-Mampong Corridor will service the New Kumasi Airport.

(5) Water Resources, Solid Waste Management and Liquid Waste Treatment

- No specific proposals were made for the District in term of water resources with the exception of proposed boreholes constructions in the rural areas which would be based on population size. That is; one (1) borehole for every 300 persons in communities up to 2,000 persons.
- A land fill site is identified at Adesena and should be confirmed. This should include the construction of septage treatment ponds for eventual pipe-born sewage system in all urban areas within the UGB.

(6) Electricity

There is an existing PSS at Fawode fed by 33KV line from the KMA ring and later the 33 KV Ring Main approximately on the route of the outer ring road scheduled for 2028-2033, which will secure the future supply to the New Kumase Airport and its industrial area.

A.9 Afigya-Kwabre District

Afigya Kwabre District is on the main northern route out of Kumasi, the Offinso Road, and contains most of the site of the New Kumasi Airport. It is otherwise agricultural, and apart from the growing conurbation, it comprises mostly small rural towns and villages. This is changing as Greater Kumasi arrives.

(1) Settlements

The 2010-13 MTDP, Afigya Kwabre recognised Atimatim, Heman, Nkukua Buoho, Nkwantakese, Ahenkro, Kodie and Afrancho as settlements growing within the Greater Kumasi conurbation, and the potential for increased revenue from these urban areas. The Sub-Regional SDF and Conurbation SP ask the District to plan for development a twenty year period (projections for population growth. The continued expansion of Greater Kumasi will further change the hierarchy of settlements, a future growth pattern which should be planned for.

The Urban Growth Boundary (UGB) shown in the Greater Kumasi Conurbation Structure Plan reaches beyond the Outer Ring Road on the Offinso Road as far as Kodie, and in the New Kumasi Airport Area. Within the UGB, the SDF identifies Afrancho and Kodie as Urban Centres, and two new towns near Ankaase associated with the New Airport..Outside of the UGB, the projected continuing decline rural settlements underlies the policy of concentrating services in the key rural towns of Boaman and Tetrem, with improved access from surrounding villages .

The Greater Kumasi Plan also asks that the Afigya Kwabre MTDP should include for the preparation of Structure Plans for the areas within the Urban Growth Boundary and for Boaman in its Action Plan and budget. These can identify a twenty year phased programme of development of the settlements and services, which will be the basis for amending and extending existing Planning Schemes, and guide investors and developers as to planned provision of services. No new Planning Schemes should be permitted outside of these areas.

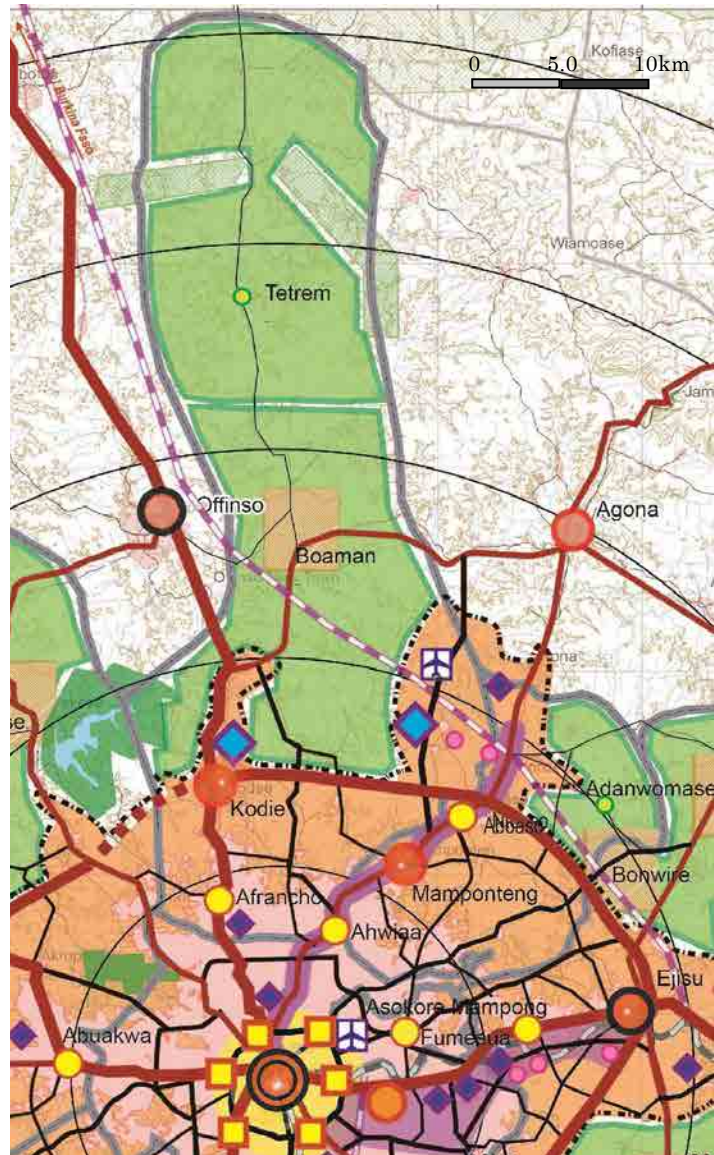


Figure A.8 Afigya Kwabre in the Greater Kumasi SDF

(2) Economy

Afigya Kwabre is at present a mostly agricultural district with twice the regional percentage for primary production, one third of the amount for secondary, and three quarters of the amount of tertiary. The figures for industry would indicate that the district does not do well in the industrial sector, and its higher figure in Primary is offset by this and a slightly lower than average (for the conurbation) service sector.

The implication is that employment in primary production (mostly agriculture) will decrease due to a combination of ageing of the population and the potential for increasing yields by mechanization and better farming methods. A small decrease in the absolute numbers employed, large decrease in percentage employed, but increasing output (more directly linked to agro-processing) is projected for this sector.

There is the potential for Afigya Kwabre to increase its manufacturing and services sector employment, but it is likely that some of this will be within KMA, and that its increasing “dormitory” role needs to be recognized. However, the scope for expansion of industrial and commercial activities at the airport, and at the Outer Ring Road junction at Kodie, where logistics centres are designated, plus the designated industrial area at Afrancho have to be some of its key development opportunities in the future. In fact the logistics, bulk-breaking and cargo role of Afigya Kwabre which contains two key sites at Kodie and the New Airport (which is planned to have a strong cargo element), could become its main focus for economic development. These aims could be reinforced by the MTDP.

The manufacturing and commercial economies are mostly artisanal and single person retailing in nature, but the aim is to transform this into larger and more formal employment in well capitalized and serviced commercial and industrial areas, by attraction of new investment which can benefit from existing skills. The MTDP needs to recognize and support this in terms of the longer term vision of the Greater Kumasi SDF.

(3) Conservation Areas

The major conservation areas are the Forest Reserves at the extreme north of the District, but these are under threat from illegal logging and incursion of farming.

(4) Agricultural and rural areas

Beyond the UGB, the following actions are proposed:

- Promote agricultural investment and agro-processing industries in the northern part of Afigya-Kwabre.
- Protect Forest Reserves and make accessible for leisure uses.
- Strengthen enforcement of laws and regulations against illegal and informal mining activities for protecting good agricultural land from such mining activities.

(5) Transportation Sector

The following are the key elements of transport:

- The first phase, the north eastern portion of proposed Outer Ring Road, which is due for completion 2023, runs through the District

- Part of the Local Road Upgrade in future urbanized areas of Greater Kumasi (2 lane)
- The currently proposed BRT on the Offinso Road would need to get to the Ring Road service centre north of Kodie and from the Mampong Road to the New Airport area.

(6) Water Resources, Solid Waste Management and Liquid Waste Treatment

- The Barakese dam and proposed Fufuo Dam are close to the District, making the extension of pipe-borne water by GWC to the heavily urbanizing areas a possibility.
- Afigya Kwabre forms the greater part of the water shed for Barakese, hence the importance of good sanitation and pollution control.
- Outside the designated priority areas, individual use of groundwater is necessary. In order to satisfy the increasing water demand, new boreholes will be needed.
- There is a proposed final solid waste disposal site for the District north of Boaman which should also include the construction/extension of septage ponds for liquid waste treatment. Ultimately these will be fed by a piped sewerage system for the conurbation and take sewerage from septic tanks in rural areas and towns.

(7) Electricity

There is a proposed PSS at Afrancho, fed by 33kV line from the KMA ring and later the 33 KV Ring Main approximately on the route of the outer ring road 2028-2033, which will secure the future supply to the airport, and Kodie junction of the Outer Ring Road.

Appendix B Planning Study Activities

B.1 Planning Study Activities in Phase 1

The period of Phase 1 is from the commencement of the Project (early January) until the submission of the Progress Report (the end of June).

In Phase 1, a variety of activities were conducted as shown in the following sections.

(1) Project Launch

1) Courtesy Visits to National Government Agencies in Accra

The JICA Study Team made courtesy visits to the following organizations on 17th and 18th January, 2012:

- National Development Planning Commission
- Ministry of Local Government and Rural Development
- Ministry of Finance and Economic Planning
- Ministry of Environment, Science and Technology

2) Preparatory Meeting with Relevant Government Agencies

The JICA Study Team held a meeting with the following members of the Steering Committee for preparing the kicking off of this JICA Study Project in the late afternoon on 17th January, 2012:

- National Development Planning Commission
- Urban Development Unit of the Ministry of Local Government and Rural Development
- Town and Country Planning Department (TCPD)
- External Resources Department of the Ministry of Finance and Economic Planning

3) Courtesy Visits to Regional Level Government Agencies in Kumasi

The JICA Study Team made courtesy visits to the following organizations on 23rd January, 2012:

- Regional Minister of Ashanti Region
- Chief Executive of Kumasi Metropolitan Assembly (KMA)
- Regional Director of the Town and Country Planning Department of Ashanti Region
- Metropolitan Director of the Town and Country Planning Department of Kumasi Metropolitan Assembly

4) First Steering Committee Meeting

The first steering committee meeting was held for the purpose of kicking off the JICA Project at a conference room of the Regional Coordinating Council (RCC) on 26th January,

2012. In the meeting, the Inception Report was presented and discussed by the members of the Steering Committee for the Project.

In the course of discussions held at the First Steering Committee Meeting, the importance of stakeholder consultation and sub-regional spatial development planning were emphasized and agreed.

5) First Technical Committee Meeting

The first technical committee meeting was held at the conference hall of the Kumasi Metropolitan Assembly (KMA) on 9th February, 2012. The Inception Report was presented and discussed by the members of the Technical Committee.

In the course of discussions held at the First Technical Committee Meeting, various questions were asked and answered, and the importance of public awareness was particularly emphasized. Moreover, during the meeting, the list of participants that should be invited to the first stakeholder meeting was discussed and decided.

6) First Stakeholder Meeting

The first stakeholder meeting was held to launch the project, as well as to discuss issues in Greater Kumasi Sub-Region at Kumasi Polytechnic Great Hall on 23rd February, 2012. In the meeting, preliminary findings on the Greater Kumasi Sub-Region were presented by the JICA Study Team and discussed by the participants of the stakeholder meeting. Group discussions were also held in the afternoon sessions of the meeting with the following six themes:

- a) Urban Planning and Land Use Planning
- b) Economic Development
- c) The Natural Environment and Urban Environment
- d) Transportation and Electricity Supply
- e) Water Resources, Water Supply, Sewerage and Solid Waste
- f) Communication

A total of 196 participants were registered for the meeting excluding the Study Team members. Out of the 222 invitees 162 participants attended the meeting.

7) Emergency Steering Committee Meeting

An Emergency Steering Committee Meeting was held to review the first stakeholder meeting at the conference hall of RCC on the 5th March, 2012. In the meeting, the number of participants and the assessment by the participants of the stakeholder meeting were presented. Means of sustainable stakeholder meetings for sub-regional level spatial planning were discussed not only for this Study Project, but also for the review and revision of the Greater Kumasi Sub-Region SDF and SP in the future.

In the course of discussions held at the Emergency Steering Committee Meeting, the districts of the Greater Kumasi Sub-Region agreed to hold decentralized stakeholder meetings at each district.

(2) Data Collection

1) Data Collection and Hearing Conducted by JICA Study Team Members

In February, March and April 2012, the JICA Study Team Members conducted hearings and data collection for their own technical areas. Digital and paper forms of data and information were collected.

2) Data Collection Conducted by TCPD Counterparts

In addition to JICA Study Team Members' data collection, TCPD counterparts conducted data collection from the following regional departments:

- Tourism,
- Geological Survey,
- Agriculture,
- Health,
- Education,
- Parks and Gardens,
- Religious,
- Civil Aviation,
- Telecommunications
- House of Chiefs, and
- Lands Commission

TCPD counterparts also conducted systematic data collection from KMA and 6 districts covering a variety of technical areas by using a questionnaire (a list of data to be collected), which was prepared by following the "Manual for the preparation of a Spatial Development Framework". For this district-level data collection, TCPD counterparts worked with District Town Planning Directors and District Development Officers.

(3) Data Compilation and Analysis

The data collected from the districts was compiled on a common format and shown on a base map. TCPD counterparts presented key spatial characteristics based on their data collected from the districts in workshops.

(4) Technology Transfer

1) Design of Technology Transfer during the Project

The JICA Study Team designed the technology transfer during the Project covering the following aspects:

- Identified Targets for Technology Transfer (Training)
- Objectives of Training
- Contents of Training
- Modes of Training

Targets of the skill transfer are categorized into two groups as follows:

- 1st target: Core Counterparts working for sub-regional planning
- 2nd target: Officers working for urban planning and socio-economic development

planning at the district or the regional levels

The objectives of the technology transfer and the outputs to achieve the objectives are shown in Table B.1.

Table B.1 Objectives and Outputs of Technology Transfer

Objectives	Outputs
1) To enhance the capacity to formulate spatial plans at the sub-regional level and to implement the plans	Target counterparts are expected: <ul style="list-style-type: none"> • To acquire vision/viewpoints of the region and sub-region. • To understand what a sub-regional plan is and what the plan decides. • To understand the difference between sub-regional plans and district plans. • To obtain knowledge of concrete methods to formulate sub-regional plans. • To understand the necessity of integration of socio-economic development with spatial plans, and the methods of how to integrate them. • To obtain basic knowledge on infrastructure sector plans, and to understand the relationship between land use plans and infrastructure sector plans, and the methods of coordination between them. • To be able to formulate and revise a sub-regional level Spatial Development Framework (SDF) and Structure Plan (SP) by obtaining the knowledge and skills mentioned above.
2) To enhance the capacity to coordinate with various stakeholders in formulation and implementation of sub-regional plans	Target counterparts are expected: <ul style="list-style-type: none"> • To understand the necessity of coordination at the sub-regional level in formulation of sub-regional spatial plans and understand the methods of coordination. • To understand the methods of coordination with various stakeholders for project implementation according to sub-regional plans.

2) Implementation of Technology Transfer

Phase 1 (A)

February 13 (Mon):

- Spatial Planning for Ashanti Region and Greater Kumasi Sub-Region (Mr. Tanaka)

February 20 (Mon):

- Spatial Dimensions of Ashanti Region and Greater Kumasi Sub-Region (Mr. Tanaka)
- Survey of the Central Market (Mr. Mori)
- Relationship between Spatial Planning and Transportation planning (Mr. Ono)

February 22 (Wed):

- Facilitation for Group Discussions (Mr. Opong Peprah and Dr. Cripps)

February 27 (Mon):

- District Profiles in Ashanti Region (Mr. Tanaka)
- Relationship between Urban Planning and Water (Mr. Asakura)

March 2 (Fri):

- Socio-Economic Framework and Sub-Regional Spatial Planning (Mr. Tanaka)
- Transport Demand Forecasting and Sub-Regional Spatial Planning (Dr. Nash)

March 12 (Mon):

- Results and Findings of Market Survey at Central Market (Mr. Mori)

March 19 (Mon):

- Urban Planning Areas in Japan (Ms. Nakashima)
- Land Use and Urban Environment Problems (Mr. Morimoto)

March 26 (Mon):

- Relationship between Urban Planning and Solid Waste Management for Greater Kumasi (Mr. Ito)

Phase 1 (B) (for TCPD Regional Director, Metro Director and Core Counterparts)

May 21 (Mon) 2-3pm:

- Discussion on Training Achievement through Participation in the First Stakeholder Meeting (Mr. Sasaki)

May 21 (Mon) 3-4:30pm:

- Lecture and Discussion on GIS and Spatial Planning (Mr. Takahashi)

May 31 (Thu) 2:30-5pm:

- Planning Workshop on Options for Ashanti Socio-Economic Development Policies and Options for Greater Kumasi Sub-Region Spatial Structure

June 5 (Mon) 2:30-5pm:

- Planning Workshop (Continued Discussions) on Options for Ashanti Socio-Economic Development Policies and Options for Greater Kumasi Sub-Region Spatial Structure

June 6 (Tue) 2:30-5pm:

- Workshop for Presentation at District-based Stakeholder Meetings (Mr. Sasaki)

June 7 (Thu) 9:30am-12pm:

- Workshop for Preparing Presentation for District-based Stakeholder Meetings (Mr. Sasaki and Ms. Rosamund)

June 14 (Thu) 2-4pm:

- Workshop on Setting Future Socio-Economic Frameworks (Mr. Ohashi)

(5) Preparation of the Progress Report

The technical study results based on the progress made in the planning study were compiled in the Progress Report.

B.2 Planning Study Activities in Phase 2

Phase 2 is to cover the following main tasks:

- Formulation of Spatial Development Framework for Greater Kumasi Sub-Region,

- Formulation of Structure Plan for Greater Kumasi Sub-Region, and
- Formulation of Infrastructure Sector Plans for Greater Kumasi Sub-Region

There are many tasks for achieving these main tasks. In this section, the activities which were conducted for the tasks are described.

(1) Preparation for Presentation and Group Discussions for the Second Stakeholder Meetings

In order to organize the Second Stakeholder Meeting, the following planning and training sessions were held with the participation of TCPD counterparts (consisting of the Regional Director, Metro Director and Town Planning Officers):

Planning Session

The same type of group discussion was held among TCPD counterparts on 31st May, 2012. Options on socio-economic development policies were discussed by the group. Options on spatial structure for Greater Kumasi Sub-Region were discussed by the group.

Training Session for Presentation

The JICA Study Team prepared a relatively longer version of presentation material (Power Point Slides) for presenting different options on socio-economic development policies and options on spatial structures in English and showed an actual presentation in English on 4th June, 2012.

Based on the presentation material, TCPD counterparts selected and arranged the slides for their own presentation in Twi language for District-Level Stakeholder Meetings. One by one TCPD counterparts practiced making a presentation on 5th June, 2012.

(2) Second Stakeholder Meeting

A series of District-Based Stakeholder Meetings were designed and held for formulating the Greater Kumasi Sub-Regional Spatial Development Framework (SDF) on the following dates:

District-Based Meetings

- Kwabre East District : Fri. 8th June, 2012 (31 participants)
- Bosomtwe District: Tue. 12th June, 2012 (32 participants)
- Ejisu-Juaben Municipality: Wed. 13th June, 2012 (59 participants)
- Afigya Kwabre District: Wed. 13th June, 2012 (53 participants)
- Atwima Nwabiagya District: Fri. 15th June, 2012 (132 participants)
- Kumasi Metropolis: Mon. 18th June, 2012 (67 participants)
- Atwima Kwanwoma District: Wed. 20th June, 2012 (41 participants)

Regional Meeting

- Regional Meeting: Thu. 21st June, 2012 (37 participants)

The total number of participants was 452 participants.

The series of District-Based Stakeholder Meetings were organized for the purpose of discussing the following options:

- Options on Socio-Economic Development Policies for Ashanti Region and Greater Kumasi Sub-Region
- Options on Spatial Structure of Greater Kumasi Sub-Region

(3) Second Technical Committee Meeting

On 25th June, 2012, the Second Technical Committee Meeting was held for the following purposes:

- Presentation and Discussion on the Progress Report
- Presentation and Discussion on the Results of the Second Stakeholder Meeting

The committee members of the Technical Committee generally and technically accepted the Progress Report. The comments pointed out were recorded for revising the Progress Report and also for Presenting to the Steering Committee Meeting.

(4) Second Steering Committee Meeting

On 26th June, 2012, the Second Steering Committee Meeting was held for the following purposes:

- Presentation and Discussion on the Progress Report
- Presentation and Discussion on the Results of the Second Stakeholder Meeting
- Presentation of Comments to the Progress Report from the Technical Committee Meeting
- Confirmation on Ways Forward (Directions of Planning Study) including the following aspects:
 - Visions for Ashanti Region and Greater Kumasi Sub-Region
 - Selected Option on Socio-Economic Development Policies for Ashanti Region and Greater Kumasi Sub-Region
 - Selected Option on Spatial Structure for Greater Kumasi Sub-Region

The committee members of the Steering Committee generally agreed on the directions of further planning study (visions and selected options).

(5) Technical Discussion Meeting between TCPD Head Office and JICA Study Team

On 14th August and 16th August, 2012, technical discussion meetings were held between TCPD Head Office and the JICA Study Team on the following aspects:

- Sub-Regional Level Spatial Development Framework (SDF) and Structure Plan (SP)
- Planning Area for SDF and SP for Greater Kumasi Sub-Region
- Contents of SDF and SP
- Target Years for SDF and SP
- SEA Process

A Technical Note was prepared and signed for recording the discussion results by Acting National Director (Mr. Poku) and Team Leader of the JICA Study Team (Mr. Sasaki) witnessed by the JICA Advisor (Mr. Suzuki).

(6) Planning Discussion Meetings on Concepts of Greater Kumasi Sub-Regional SDF

For preparing for the Third Stakeholder Meeting, a series of planning discussion meetings were held by TCPD counterparts and JICA Study Team on the following dates:

- 21st August, 2012
- 27th August, 2012
- 29th August, 2012
- 30th August, 2012
- 3rd September, 2012
- 4th September, 2012

In these meetings, various strategies which could compose the SDF for Greater Kumasi Sub-Region were presented and discussed.

(7) Third Stakeholder Meeting

On 5th September, 2012, the Third Stakeholder Meeting was held in Kumasi. The main purpose of the meeting was as follows:

To present and discuss the Draft Spatial Development Framework (SDF) for Greater Kumasi Sub-Region including the following strategies:

- Industrial Development Strategies
- Urban Centre Development Strategies
- Housing Development Strategies
- Strategies for Urban Growth Management in Suburban Areas
- Open Space and Recreation Strategies
- Conservation Area Strategies
- Other Strategies

Many questions were raised on the proposed ideas for clarification and also for discussion both at the plenary session and at group discussion sessions. However, in general, participants agree to the concepts of the Spatial Development Framework which was based on the multi-nucleus spatial structure combined with an urban corridor connecting Kumasi and Ejisu along Accra Road.

(8) Review Meeting regarding the Third Stakeholder Meeting

On 6th August, 2012, a review meeting was held for discussing the results of the Third Stakeholder Meeting with the participation of TCPD counterparts and JICA Study Team members. TCPD counterparts and JICA Study Team members expressed their own observations and discussed problems and ways for solving identified problems.

Major issues are concerning the shortage of time for discussion on spatial planning and preparing for the stakeholder meetings. This is because TCPD counterparts needed to answer various questions from participants in group discussion sessions. However, the aspects to be covered are very wide not only in spatial development but also solid waste management and water supply. Therefore, TCPD counterparts felt the need for assistance from sector experts, who left Ghana on the date for the stakeholder meeting.

The other issues include the need to prepare plans for Rural Areas within Greater Kumasi Sub-Region. The rural areas are located outside the conurbation area of Greater Kumasi. Since the rural areas are also an important part of Greater Kumasi Sub-Region, it is necessary to deal with development strategies for rural areas.

(9) Land Use Field Survey

In September and October 2012, TCPD counterpart staffs were engaged in field surveys for checking actual land uses along major roads by using the orthophoto based on aerial photographs. This is part of the training for land use planning.

(10) Third International Seminar on Urban Development in Asia and Africa

From 8th October until 10th October, 2012, an international seminar was held in Kumasi regarding the theme on urban development problems in Asia and Africa. The participants in the seminar came from Vietnam, the Ivory Coast, Senegal and Ghana.

Ghana and Kumasi were the hosts of this seminar. TCPD counterparts made a presentation on the scope of the Spatial Planning Project for Greater Kumasi Sub-Region (JICA Spatial Planning Study Project) and some outputs from the Planning Project.

Delegations from these countries made presentations on their cities and problems on urban planning.

The Ghanaian delegation emphasized the importance of the stakeholder consultative process and meetings for spatial planning.

In April 2013, the next seminar will be held again in Ghana for discussing issues concerning the implementation of plans.

(11) Land Use Planning Training Sessions

On 23rd October and 31st October, 2012, land use planning sessions were held for training. The first meeting (23rd October) was held for technical discussion on key points on land use plans.

The second meeting (31st October) was the continuation of the first meeting and was also followed by the practical training session on “How to Use Google Earth for Land Use Planning”.

Google Earth can be used as a tool for land use planning if GIS data are converted to kmz files, which can be used by Google Earth.

(12) Technical Stakeholder Meetings

A series of technical stakeholder meetings were organized for different sectors/ aspects on the following dates:

- 11th October, 2012: Solid Waste Management
- 18th October, 2012: Transportation
- 25th October, 2012: Water Resources, Water Supply, Liquid Waste Treatment and Drainage
- 31st October, 2012: Electricity

- 7th November, 2012: Land Use Plan

In each meeting, technical officers from relevant government organizations and private consultant firms participated together with TCPD counterparts.

(13) Courtesy Call to Asantehene

On 9th November, 2012, the JICA Study Team made a courtesy call at Asantehene at Manhiya Palace of Kumasi, together with Mr. Poku, Acting National Director of TCPD, Mrs. Edusei, Regional Director of TCPD Ashanti Region, Mr. Inamura, Chief Resident Representative of JICA Ghana Office.

The project scope and spatial planning outputs were presented by TCPD and the JICA Study Team. Then Asantehene made comments regarding the Spatial Planning and the importance of involving Asantehene and the Chiefs for preparing viable spatial plans and implementing spatial plans.

(14) Fourth Stakeholder Meeting

Two District Stakeholder Meetings and one Regional Stakeholder Meeting were held for presenting the revised Greater Kumasi Sub-Regional SDF and the Greater Kumasi Conurbation SP on the following dates:

- 20th November, 2012: Afigya Kwabre, Kwabre East, Atwima Kwanwoma and Atwima Nwabiagya (joint meeting for four districts)
- 21st November, 2012: KMA, Ejisu-Juaben and Bosomtwe (joint meeting for three districts)
- 22nd November, 2012: Regional Meeting

The following framework and strategies were presented and discussed for the revised SDF for Greater Kumasi Sub-Region:

- Revised Future Socio-Economic Framework
- Revised Diagram for SDF for Greater Kumasi Sub-Region
- Phased Spatial Development Scenario
- Rural Development Strategies
- Structure Plan Areas to be Designated by the Sub-Regional SDF
- Urban Growth Boundaries
- Health and Education Strategies

The following matters were presented and discussed for the SP for Greater Kumasi Conurbation:

- General Land Use Plan for Greater Kumasi Conurbation
- Suburban Residential Areas
- Kumasi-Ejisu Urban Corridor
- New Towns
- Industrial Areas
- Sector Plans and Programmes (Transportation, Water Resources Development, Water Supply, Waste Liquid Treatment and Solid Waste Management)
- Land Use Plan for Kumasi City Centre

- Other Issues in KMA (Spreading High Density Residential Areas, Ribbon Development of Commercial/Business)

(15) Preparation of the Interim Report

The technical study results based on the progress made in the planning study were compiled in this Interim Report.

B.3 Planning Study Activities in Phase 3

The period of Phase 3 was from the beginning of January 2013 until the submission of the Draft Final Report, which is early April.

The main activities conducted in Phase 3 are described in the following sections.

(1) Third Technical Committee Meeting

On 15th January, 2013, the Third Technical Committee Meeting was held for the following purposes:

- Presentation and discussion of the Interim Report
- Presentation and discussion of the results of the Fourth Stakeholder Meeting

The members of the Technical Committee generally and technically accepted the Interim Report. The following comments were recorded for revising the Interim Report and also for presenting it to the Steering Committee Meeting.

- The necessity of national level awareness for implementation as well as the importance of the Steering Committee and RCC's approval
- The importance of an implementation plan for the Structure Plan including the achievement of sector infrastructures
- Organization of a platform for coordination as part of the implementation plan such as regular meetings combining Technical Committee members and Steering Committee members

(2) Third Steering Committee Meeting

On 18th January, 2013, the Third Steering Committee Meeting was held for the following purposes:

- Presentation and discussion of the Interim Report
- Presentation and discussion of the results of the Fourth Stakeholder Meeting
- Presentation of comments to the Interim Report from the Technical Committee Meeting

The Objective and procedure for Strategic Environmental Assessment (SEA) was also explained to the Steering Committee members.

The members of the Steering Committee generally agreed on the proposed plans.

(3) Meeting with NDPC

1) Meeting with Director General of NDPC

A meeting with the Director General of NDPC took place on 16th January, 2013 to discuss

the implementation of the Plans formulated under this JICA Project.

NDPC proposed to have a national level workshop in February followed by a high level meeting in April.

2) Meeting for National Level Workshop and High Level Meeting

On the 25th and 31st January, 2013, the JICA Study Team and NDPC had meetings to discuss the national-level workshop and high-level meeting.

(4) Strategic Environmental Assessment (SEA)

1) SEA Scoping Workshop

An SEA Scoping Workshop was conducted on 24th January, 2013 in Kumasi. Total number of 59 persons (excluding the JICA Study Team and SAL Consult Ltd.) participated. Key environmental issues and stakeholder analysis were clarified through group discussion, and consensus was built among the participants.

2) SEA Assessment Workshop

a) Pre Meeting for TCPD Counterpart

Prior to the SEA Assessment Workshop, an internal meeting among the JICA Study Team, SAL Consult Ltd. and TCPD counterpart took place on 15th February, 2013 as a training session. The summary of the SEA Scoping Workshop and SEA assessment tools were explained.

b) SEA Assessment Workshop

The SEA Assessment Workshop was conducted between 19th and 21st February, 2013 in Kumasi. The numbers of persons (excluding the JICA Study Team and SAL Consult Ltd.) participating on each date were as below:

- 19th February 58 persons
- 20th February 62 persons
- 21st February 63 persons

The assessment was undertaken with the SEA assessment tools, to assess the SDF for Greater Kumasi Sub-Region and Structure for Greater Kumasi Conurbation.

(5) Fifth Series of Stakeholder Meetings

A series of District-Level Stakeholder Meetings followed by a Regional Stakeholder Meeting were held for revising the Greater Kumasi Sub-Regional Spatial Development Framework (SDF) and formulating the Structure Plan (SP) for Greater Kumasi Conurbation on the following dates:

District-Level Meetings

- Kumasi Metropolis & Asokore Mampong Municipality: Fri. 8th February, 2013
- Afigya Kwabre District & Kwabre East District: Mon. 11th February, 2013
- Ejisu-Juaben Municipality & Bosomtwe District: Wed. 13th February, 2013
- Atwima Nwabiagya District & Atwima Kwanwoma District: Mon. 18th February, 2013

Regional-Level Main Stakeholder Meeting

- Regional Stakeholder Meeting: Tue. 26th February, 2013.

The series of District-Level Stakeholder Meetings were organized for the purpose of discussing the following:

- To explain to MMDAs the main points of Greater Kumasi Sub-Regional SDF and Greater Kumasi Conurbation SP
- To encourage MMDAs to consider the impacts of various proposals in the SDF and SP on their areas:
 - For the preparation of District SDF and SPs
 - For the incorporation of spatial developmental dimensions into Medium-Term Development Plans

At the District-Level Stakeholder Meetings all metropolitan, municipality and district representatives accepted the proposed SDF and SP as appropriate plans, and evaluated necessary actions for their own districts.

The Regional Stakeholder Meeting was organized for the following purposes:

- To report the results of District-Level Stakeholder Meetings
- To present and discuss the following matters:
 - Revised SDF and Structure Plan
 - Revised Sector Plans and Programmes
 - 1st Draft Key Projects and Priority Projects
 - 1st Draft Implementation Plan
 - 1st Institutional Framework for Implementation

At the Regional Stakeholder Meeting, the proposed SDF and SP was, in general, accepted based on the results from the District-Level Stakeholder Meeting and discussion from a broader point of view. The discussion on necessary action at the regional level for implementing SDF and SP also took place.

(6) Counterpart Training

1) GIS Training

The Geographic Information System (GIS) training was conducted on 4-5th March and 7-8th March, 2013 for TCPD counterparts.

Followed by a lecture and hands on GIS training, the GIS data hand over session was conducted on 15th March, 2013 for all TCPD counterparts. The training programme was a combination of lecture on basic concepts and hands-on exercises using the actual Greater Kumasi GIS data produced in the project.

4th March, 2013

- Lecture on basic knowledge about GIS
- Lecture on basic knowledge about ArcGIS

5th March, 2013

- Lecture and training on basic knowledge about ArcGIS

7th March, 2013

- Lecture and training on thematic mapping and data build up (map data)

8th March, 2013

- Lecture and training on data build up (tabular data) and analysis

15th March, 2013

- Explanation about available GIS and map database

2) Excel Training

Excel training was conducted for the TCPD counterparts at the TCPD Regional and Metropolitan Office to familiarize them with excel and to help them to understand the basic analysis required for spatial planning.

Following topics are planned for this training:

- Tabulation of data for present situation analysis
- Basic graph skills for present situation analysis
- Analysing population average annual growth rate
- Forecasting future population
- Setting future socio-economic framework

Five training sessions took place during Phase 3. The dates, topics and participants are shown in the following table.

Table B.2 Progress of Excel Training in Phase 3

Date	Topic	Participants (no. of attendees)
29th January, 2013	Present Situation Analysis	TCPD Regional Officer (5)
30th January, 2013	Basic Graph Skill	TCPD Regional Officer (4)
5th February, 2013	Present Situation Analysis	TCPD Metro Officer (1)
6th February, 2013	Basic Graph Skill	TCPD Metro Officer (1)
25th February, 2013	Tabulation of Annual Growth Rate	TCPD Regional Officer (4)

Source: JICA Study Team

Excel Training will continue in the following Phase.

(7) Presentation at Regional Co-ordinating Council (RCC)

The implementation mechanism was discussed with RCC on the 21st March, 2013.

The following people attended the meeting:

- Regional Co-ordinating Director
- Deputy Regional Co-ordinating Director
- Regional Economic Planning Officer
- Deputy Regional Economic Planning Officer
- Assistant Regional Co-ordinating Director
- Regional Director, TCPD
- JICA Study Team

RCC agreed about the necessity of supporting the Regional Planning Co-ordinating Unit

(RPCU) at the implementation stage.

(8) Presentation for Asantehene and Traditional Council

On 25th March, 2013, a meeting was held for the Traditional Council to help them in understanding the JICA Study. Over 80 Traditional Chiefs participated in the meeting including Asantehene. The Regional Director of TCPD explained the JICA Study followed by Q&A. Asantehene gained understanding of the plans proposed by the JICA Study Team.

(9) Presentation for Asantehene and Traditional Council

On 25th March 2013, a meeting was held for the Traditional Council to help them in understanding the JICA Study. Over 80 Traditional Chiefs participated in the meeting including Asantehene. The Regional Director of TCPD explained the JICA Study followed by Q&A. Asantehene gained understanding of the plans proposed by the JICA Study Team.

(10) National-Level Workshop for Greater Kumasi SDF and SP in Accra

On 23rd April, 2013, a National-Level Workshop for Greater Kumasi SDF and SP was organized at the National Insurance Commission in Accra.

The major objectives of this workshop are as follows:

- To conduct technical review of the major proposals of Greater Kumasi SDF and SP
- To present Final Draft of the Comprehensive Urban Development Plan (Sub-Regional SDF, Structure Plan and Sector Programmes) for Greater Kumasi at the national level
- To discuss technical aspects of the Comprehensive Urban Development Plan for Greater Kumasi at the national level

Over 50 people from various national government agencies and private sector associations participated in the workshop and had active discussion over various issues and proposed solutions. Much attention was paid to implementation aspects including the implementation plan, institutional frameworks for implementation and capacity necessary for implementation.

(11) Fourth International Seminar on Urban Development in Asia and Africa

On 24th and 25th April 2013, an international seminar was held in Accra following the Third International Seminar held in Kumasi in October 2012. The participants in the seminar came from Vietnam, the Ivory Coast, Senegal and Ghana.

Ghana and Kumasi were the hosts of this seminar. TCPD counterparts made a presentation on the outputs from the Spatial Planning Project for Greater Kumasi Sub-Region (JICA Spatial Planning Study Project) and the Implementation Plan.

Delegations from these countries made presentations on their cities and problems on implementation of urban plans.

(12) Sixth (Final) Regional Stakeholder Consultative Meeting

On 30th April 2013, the sixth regional stakeholder consultative meeting was held at Miklin Hotel Kumasi for the following purposes:

- Final Review of Final Draft of the SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation
- Discussion on Implementation Plan and Capacity Development Programme

Seventy-four people representing various stakeholders participated in the meeting.

This stakeholder meeting was the final one in the process of formulating the sub-regional SDF and SP for Greater Kumasi. A lively discussion was held to clarify and enrich the contents of the SDF and SP. The participants were also interested in the institutional framework necessary for implementation.

Many of the comments raised at the Sixth Stakeholder Meeting have been taken into consideration by the JICA Study Team and the Draft Final Report. Some of the noteworthy comments from the Sixth Stakeholder Meeting were as follows:

- Functions for various urban centres proposed (Primary Centre, Secondary Centre, District Centres and Suburban Centres) should be clarified in the plan.
- What to do with Kejetia Market and Kejetia Torotoro Terminal in the future should be clarified in the plan.
- The future role of the railway (existing and new lines) should be explained in the plan.
- Although the development of formal sectors is essential in economic development for Greater Kumasi Sub-Region, informal sectors are also important to provide employment opportunities. One of the priority programmes should deal with the transformation of informal sectors.

(13) Preparation of the Draft Final Report

The technical study results and proposed conclusion based on the progress made in the planning study are compiled in this Draft Final Report.

B.4 Planning Study Activities in Phase 4

The period of Phase 4 is from the beginning of May 2013 until the submission of the Final Report, which is mid September 2013.

The main activities conducted in Phase 4 are described in the following sections.

(1) Fourth Technical Committee Meeting

On 10th May 2013, the Fourth Technical Committee Meeting was held for the following purposes:

- Presentation and discussion of the Draft Final Report
- Presentation and discussion of the results of the Sixth Stakeholder Meeting

Committee members' major concerns include the following:

- How the comments raised at the Sixth Regional Stakeholder Meeting are to be incorporated in the Study Report.
- The timeframe for establishment of the proposed regional platform should be more feasible.

The JICA Study Team agreed to respond to the comments at the Sixth Regional Stakeholder Meeting by revising the Draft Final Report. The members of the Technical Committee generally and technically accepted the Draft Final Report.

(2) Fourth Steering Committee Meeting

On 14th May 2013, the Fourth Steering Committee Meeting was held for the following purposes:

- Presentation and discussion of the Draft Final Report
- Presentation and discussion of the results of the Sixth Stakeholder Meeting
- Presentation of comments to the Draft Final Report from the Technical Committee Meeting

The following comments were recorded for revising the Draft Final Report:

- Communication infrastructure development, especially that of a fibre optic backbone connecting the southern region with Kumasi and further north, should be mentioned in the Study Report.
- Output from the SEA study should be reflected in the plan.
- A catch phrase for Greater Kumasi was not determined in this Steering Committee Meeting. However, catch phrases for Greater Kumasi should be discussed and determined in the course of prospective activities of the regional platform in the near future.

The members of the Steering Committee generally accepted the Draft Final Report. The Steering Committee agreed to make a recommendation to the RCC for approving the Greater Kumasi Sub-Regional Spatial Development Framework (SDF) and Greater Kumasi Conurbation Structure Plan (SP) (Comprehensive Urban Development Plan for Greater Kumasi).

(3) Meeting for Reviewing the Project and Data Handover

On 16th May 2013 a review meeting was held with the TCPD counterparts and the JICA Study Team to review the process of the whole JICA Planning Project. During this meeting, all the data collected and used for the project was handed over to the TCPD counterparts.

(4) National High-Level Meeting

On 19th June 2013, a National High-Level Meeting for Greater Kumasi SDF and SP was organized at Golden Tulip Kumasi City in Kumasi.

The major objectives of this workshop are as follows:

- To present the final draft of the Comprehensive Urban Development Plan for Greater Kumasi to a higher level of decision makers at the national level
- To get feedback on the proposals in the plan to finalize the plan
- To prepare for the implementation of the plan
- To reach a high-level consensus on the implementation of the plan

Over 70 people from various national government agencies and private sector associations participated in the meeting, which included the Chairman of the NDPC, who was also the

Chairman of the Meeting, the Minister of MESTI, who hosted the meeting, three Deputy Ministers of Ministry of Local Government & Rural Development and Ministry of Energy, the Regional Minister of Ashanti, Kumasi City Mayor and other Directors, Executive Secretaries, and representative of Asantehene. The participants generally accepted the proposed plan and its implementation. They acknowledged the importance and necessity of strong institutional frameworks both at the regional and national level, to coordinate and implement the Greater Kumasi spatial development plan.

(5) Site Visit to First Section of Outer Ring Road (Ejisu – Kodie)

The JICA Ghana Office, Department of Urban Road (DUR) and the JICA Study Team conducted a one-day site visit to the first section of Outer Ring Road, which is between Ejisu and Kodie. On 26th June 2013, TCPD officers from Ashanti Regional Office, Ejisu-Juaben Municipality, Kwabre East District and Afigya Kwabre District, officers from DUR Kumasi Metro Office, JICA Ghana Officers and the JICA Study Team participated in the site visit to see current conditions, especially on land availability for the proposed Outer Ring Road.

(6) Sensitization Meeting for TCPD District Staff of Ashanti Region

In order to respond to a request from the TCPD Ashanti Regional Office, a Sensitization Meeting for all TCPD district staff (both planning officers and technical officers) in Ashanti Region was held on 28th June 2013. All town planning officers and technical officers from all MMDAs of Ashanti Region were invited and major aspects of the Greater Kumasi Sub-Regional SDF and the Greater Kumasi Conurbation SP were explained by the TCPD counterparts.

During this meeting, a questionnaire survey was carried out to understand the major jobs and capacity of all TCPD staff in Ashanti Region. Responses were received from 95 out of approximately 130 staff.

(7) Counterpart Hands-On Training

The following counterpart training (hands-on training) was conducted due to a request from TCPD counterparts as continuing training conducted in Phases 2 and 3:

- How to use “Excel” for preparing Socio-Economic Frameworks
- How to use “Google Earth” for Spatial Planning

1) Excel Training

Excel training was conducted for the TCPD counterparts at the TCPD Regional and Metropolitan Office to understand the socio-economic frameworks formulated for Greater Kumasi Sub-Region and to obtain basic Excel skills necessary to formulate socio-economic frameworks. The period of this training was from 20th to 27th June excluding the follow-up session on 14th June 2013 for the counterpart staff who were not able to attend the previous Excel training in January and February 2013.

The following topics were planned for this training:

- Forecasting future population
- Setting and revising the future socio-economic framework

Nine training sessions in total were held in Phase 4, including both lectures and hands-on training. The dates, topics and participants are shown in the following table.

Table B.3 Actual Sessions conducted for Excel Training in Phase 4

Date	Topic	No. of Attendees
14th June, 2013 PM	- Follow-up on Basic Excel Skill	4
20th June, 2013 AM	- Basic Training: absolute reference, copy & paste, cut & delete, SUM function, etc. - Tabulation of Economically Active Population (EAP) by Region by Sector	10
20th June, 2013 PM	- EAP Analysis	10
21st June, 2013 AM	- Basic Training: VLOOKUP, exponentiation	9
21st June, 2013 PM	- National Population Framework	8
24th June, 2013 PM	- Regional Population Framework	9
25th June, 2013 AM	- Socio-Economic Framework for Greater Kumasi Sub-Region	8
25th June, 2013 PM	- Training on Formulating Population Framework for Districts in Ashanti Region	8
27th June, 2013 PM	- Presentation of Population Framework	9

Source: JICA Study Team

2) Google Earth Training

Google Earth training was conducted for the TCPD counterparts at the TCPD Regional and Metropolitan Office to obtain the necessary basic skills for sub-regional spatial planning. The training took place on 24th and 27th June. These two training sessions were conducted based on hands-on training.

Table B.4 Actual Sessions Conducted for Google Earth Training in Phase 4

Date	Topic	No. of Attendees
24th June, 2013 AM	Basic functions of Google Earth	9
27th June, 2013 AM	Drawing Sub-Regional Plan with Google Earth	9

Source: JICA Study Team

Appendix C Records of the Stakeholder Consultations for Formulating Greater Kumasi Sub-Region SDF and Greater Kumasi Conurbation SP

C.1 Objectives of Stakeholder Consultations

The purpose of stakeholder consultation is to understand each interest group's various interests regarding the spatial development plans that have been formulated through discussion, and to eliminate the possibility that disagreement among different interest groups could decrease the feasibility of the plans.

C.2 Overview of Stakeholder Consultation Meetings

(1) First Meeting	Objectives	<ul style="list-style-type: none"> ➤ Announcement of Launch of the Formulation of SDF for Greater Kumasi Sub-Region ➤ Presentation and Discussion on Preliminary Findings ➤ Solicitation for Additional Information and Issues
	Date and Venue	Thursday, 23 rd February 2012, Kumasi Polytechnic Great Hall
	Programme	<ul style="list-style-type: none"> ➤ Presentation of New Spatial Planning System in Ghana by Team Leader of LUPMP, TCPD ➤ Presentation of Scope of Work, Approaches and Preliminary Findings of the Study on the Comprehensive Urban Development Plan for Greater Kumasi by the Team Leader of the JICA Study Team ➤ Questions and Answers ➤ Group Discussions ➤ Presentation by Each Group ➤ Wrap-Up by Team Leader of LUPMP, TCPD
	Turnout	228
(2) Second Series of Meetings	Objectives	<ul style="list-style-type: none"> ➤ To Conduct a Workshop on Draft Options for Greater Kumasi Sub-Region - To Discuss Options of Socio-Economic Development Policies for Ashanti Region and Greater Kumasi - To Discuss Options of Spatial Structure for Greater Kumasi Sub-Region
	Date and Venue	<ul style="list-style-type: none"> ➤ District Meetings - Day 1: Friday, 8th June 2012, Kwabre East District Assembly Hall (Kwabre East) - Day 2: Tuesday, 12th June 2012, Kokoado Conference Hall (Bosomtwe) - Day 3: Wednesday, 13th June 2012, Ejisu-Juaben Municipality Assembly Hall (Ejisu-Juaben) - Day 3: Wednesday, 13th June 2012, Methodist Church at Kodie Area (Afigya Kwabre) - Day 4: Friday, 15th June 2012, Atwima Nwabiagya District Assembly Hall (Atwima Nwabiagya) - Day 5: Monday, 18th June 2012, Prempeh Assembly Hall (KMA) - Day 6: Wednesday, 20th June 2012, Atwima Kwanwoma District Assembly Hall (Atwima Kwanwoma) ➤ Main (Regional) Meeting

		- Thursday, 21 st June 2012, Miklin Hotel
	Programme	<ul style="list-style-type: none"> ➤ District Meetings <ul style="list-style-type: none"> - Presentation of Options of Visions for Ashanti Region and Spatial Development Strategies for Greater Kumasi Sub-Region by TCPD Office - Questions and Answers - Group Discussions - Presentation by Each Group - Wrap Up by MC ➤ Main (Regional) Meeting <ul style="list-style-type: none"> - Presentation of Options of Visions for Ashanti Region and Spatial Development Strategies for Greater Kumasi Sub-Region by JICA Study Team - Report of District Level Stakeholder Meetings - Questions and Answers - Group Discussions - Presentation by Each Group - Wrap Up by MC
	Turnout	<ul style="list-style-type: none"> ➤ District Meetings : Day 1; 45, Day 2; 47; Day 3; 68 (Ejisu Juaben), Day 3; 60 (Afigya Kwabre), Day 4; 146, Day 5; 86, Day 6; 62 ➤ Main (Regional) Meeting : 55 ➤ Total : 569
(3) Third Meeting	Objectives	<ul style="list-style-type: none"> ➤ To Understand and Discuss Key Points of Draft Sub-Regional SDF for Greater Kumasi Sub-Region ➤ To Announce and Start the Formulation of Structure Plan for Greater Kumasi Conurbation
	Date and Venue	Wednesday, 5 th September 2012, Miklin Hotel
	Programme	<ul style="list-style-type: none"> ➤ Presentation of Key Points of Sub-Regional SDF Statements and Diagrams (Draft) by JICA Study Team ➤ Questions and Answers ➤ Group Discussions on the Key Points of Sub-Regional SDF Statements and Diagrams ➤ Presentation by Each Group ➤ Wrap Up by MC
	Turnout	155
(4) Fourth Series of Meetings	Objectives	<ul style="list-style-type: none"> ➤ Technical Stakeholder Meetings <ul style="list-style-type: none"> - Presentation and Discussion on SDF Strategies for the Sector and the Sector Sub-Programme ➤ District Meetings/Main (Regional) Meeting <ul style="list-style-type: none"> - Presentation and Discussion on Revised SDF for Greater Kumasi Sub-Region and Structure Plan (SP) for Greater Kumasi Conurbation
	Date and Venue	<ul style="list-style-type: none"> ➤ Technical Stakeholder Meetings <ul style="list-style-type: none"> - Day 1: Thursday, 11th October 2012, TCPD Regional Director's Room (Solid Waste Management Sector) - Day 2: Thursday, 18th October 2012, TCPD Regional Director's Room (Transportation Sector) - Day 3: Thursday, 25th October 2012, TCPD Regional Director's Room (Water Resources, Water Supply, Liquid Waste Treatment and Drainage Sector) - Day 4: Wednesday, 31st October 2012, Kumasi Catering Rest House (Electricity Sector) - Day 5: Wednesday, 7th November 2012, Miklin Hotel (Land Use Sector) ➤ District Meetings <ul style="list-style-type: none"> - Day 1: Tuesday, 20th November 2012, Miklin Hotel (Afigya Kwabre, Kwabre East, Atwima Kwanwoma and Atwima Nwabiagya) - Day 2: Wednesday, 21st November 2012, Miklin Hotel (KMA, Ejisu-Juaben and Bosomtwe) ➤ Main (Regional) Meeting

		- Thursday, 22 nd November 2012, Miklin Hotel
	Programme	<ul style="list-style-type: none"> ➤ Technical Stakeholder Meetings <ul style="list-style-type: none"> - Objective of the Meeting - Self -Introductions of Participants - Presentation of SDF Strategies for the Sector and the Sector Sub-Programme - Discussion on SDF Strategies for the Sector and the Sector Sub-Programme - Wrap-Up: Confirmation of Future Plan ➤ District Meetings/Main (Regional) Meeting <ul style="list-style-type: none"> - Presentation of Key Points of SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation by JICA Study Team - Questions and Answers - Group Discussions - Presentation by Each Group - Wrap-Up by MC
	Turnout	<ul style="list-style-type: none"> ➤ Technical Stakeholder Meetings : Day 1; 21, Day 2; 26, Day 3; 20, Day 4; 12, Day 5; 17 ➤ District Meetings : Day 1; 70, Day 2; 70 ➤ Main (Regional) Meeting : 55 ➤ Total : 291
(5) Fifth Series of Meetings	Objectives	<ul style="list-style-type: none"> ➤ District Meetings <ul style="list-style-type: none"> - To Explain to MMDA Main Points of Greater Kumasi Sub-Regional SDF and SP - To Encourage MMDA to Consider Impacts of Various Proposals in the SDF and SP to Their Areas - To Get Evaluation Feedback from Participants on the Greater Kumasi Sub-Region SDF and SP ➤ Main (Regional) Meeting <ul style="list-style-type: none"> - Report of results of district-level stakeholder meetings - Presentation and discussion of the following matters - Revised SDF and SP, Revised Sector Plans and Programmes, 1st Draft Key Projects and Priority Projects, 1st Draft Implementation Plan and 1st Institutional Framework for Implementation
	Date and Venue	<ul style="list-style-type: none"> ➤ District Meetings <ul style="list-style-type: none"> - Day 1: Friday, 8th February 2013, RCC Conference Room (KMA and Asokore Mampong) - Day 2: Monday, 11th February 2013, Kwabre East District Assembly Hall (Afigya Kwabre and Kwabre East) - Day 3: Wednesday, 13th February 2013, Ejisu-Juaben Municipality Assembly Hall (Ejisu Juaben and Bosomtwe) - Day 4: Monday, 18th February 2013, Atwima Nwabiagya District Assembly Hall (Atwima Kwanwoma and Atwima Nwabiagya) ➤ Main (Regional) Meeting <ul style="list-style-type: none"> - Tuesday, 26th February 2013, Royal Lamerta Hotel
	Programme	<ul style="list-style-type: none"> ➤ District Meetings <ul style="list-style-type: none"> - Presentation of Key Points of SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation by JICA Study Team - Questions and Answers - Group Discussions for Bridging the Sub-Regional Level and Metropolitan/Municipality/District Level - Presentation by Each Group - Wrap Up by MC ➤ Main (Regional) Meeting <ul style="list-style-type: none"> - Presentation of Priority Projects and Implementation Plans of SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation by JICA Study Team - Questions and Answers

		<ul style="list-style-type: none"> - Group Discussions - Presentation by Each Group - Wrap Up by MC
	Turnout	<ul style="list-style-type: none"> ➤ District Meetings : Day 1; 40, Day 2; 39, Day 3; 55, Day 4; 47 ➤ Main (Regional) Meeting : 82 ➤ Total : 263
(6) Sixth Meeting	Objectives	<ul style="list-style-type: none"> ➤ Final Review of Final Draft of the SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation ➤ Discuss Implementation Plan and Capacity Development Programme
	Date and Venue	Tuesday, 30 th April 2013, Miklin Hotel
	Programme	<ul style="list-style-type: none"> ➤ Presentation of Final Draft of SDF for Greater Kumasi Sub-Region and SP for Greater Kumasi Conurbation by TCPD Regional Office ➤ Presentation of Priority Projects, Implementation Plan and Capacity Development Programme by TCPD Regional Office ➤ Questions and Answers ➤ Discussion on Implementation Plan, Priority Strategic Programmes and Priority Projects ➤ Wrap-Up by MC
	Turnout	75

C.3 Invitation List for Stakeholder Meetings

Categories	Stakeholders Invited
National Level Agencies	<ul style="list-style-type: none"> - Head Office, Town and Country Planning Department (TCPD) - Representative, Ministry of Environment, Science, Technology and Innovation (MESTI) - Representative, Ministry of Finance and Economic Planning (MOFEP) - Representative, Ministry of Local Government and Rural Development (MLGRD) - Representative, National Development Planning Commission (NDPC) - Representative, World Bank - Representative, AFD - Representative, Ghana Office , Japan International Cooperation Agency
Regional Departments	<ul style="list-style-type: none"> - Regional Coordinating Director - Regional Economic Planning Officer - Regional Director, Ghana Highway Authority - Regional Director, Ghana Tourist Board - Regional Director, Ghana Water Company Limited - Regional Director, Electricity Company of Ghana West - Regional Director, Electricity Company of Ghana East - Regional Director, Environmental Protection Agency - Regional Director, Department of Feeder Roads - Regional Director, Forestry Commission - Regional Director, Food and Agriculture (MOFA) - Regional Director, Trade and Industry - Regional Director, Mining Commission - Regional Director, Ministry of Health - Regional Director, Regional Education Office - Regional Director, Geological Survey Department - Regional Director, Environmental Health - Regional Director, National Disaster Management Organization - Regional Director, Community Water and Sanitation - Regional Coordinator, Land Administration Project - Basin Officer, Water Resources Commission

	<ul style="list-style-type: none"> - Divisional Head, Public & Vested Lands Division, Lands Commission - Divisional Head, Survey & Mapping Division, Lands Commission - Division Head, Land Valuation Division, Lands Commission - Division Head, Land Title Division, Lands Commission - Director, Office of Administrator of Stool Lands - Representative, Ghana Shippers' Authority - The Liaison Officer, Asantehene Lands Secretariat - Representative, Regional House of Chiefs - Regional Director, TCPD - Regional Town Planning Officers
<p>District Assemblies in the Greater Kumasi Sub-Region</p> <ul style="list-style-type: none"> - Kumasi Metropolitan Assembly - Asokore Mampong Municipal Assembly - Afigya-Kwabre District Assembly - Kwabre East District Assembly - Ejisu Juaben Municipal Assembly - Bosomtwe District Assembly - Atwima-Kwanwoma District Assembly - Atwima-Nwabiagya District Assembly 	<ul style="list-style-type: none"> - Metro/Municipal/District Chief Executives - Metro/Municipal/District Coordinating Directors - Presiding Members <ul style="list-style-type: none"> Chairmen of Social Services Sub Committee Chairmen of Development Planning Sub Committee Chairmen of Works Sub Committee Chairmen of Environmental Sub Committee - One Assembly Women - Development Planning Officers - Town Planning Directors/Officers - Metropolitan Director, Waste Management - Metropolitan Director, Urban Roads - Metropolitan Director, Agriculture - Metropolitan Engineer - Directors of Health - Directors of Education - Directors of Environmental Health - Directors of Information - Works Engineers - Fire Officers - Budget Officers - Finance Officers - Statistics Officers - Head of Unit, Urban Transport Project - Coordinator, Ghana Urban Management Pilot Project
<p>Representative from the Districts outside Greater Kumasi Sub-Region</p>	<ul style="list-style-type: none"> - Representative, Bekwai Municipal Assembly - Representative, Bosome Freho District Assembly - Representative, Asante Akim North District Assembly - Representative, Sekyere East District Assembly - Representative, Sekyere South District Assembly - Representative, Offinso Municipal Assembly - Representative, Atwima Mponua District Assembly - Representative, Amansie West District Assembly - Representative, Amansie Central District Assembly - Representative, Ahafo Ano South District Assembly
<p>Kumasi Traditional Council</p>	<ul style="list-style-type: none"> - Representatives of Kumasi Traditional Council
<p>Representatives from Regional Level Associations</p>	<ul style="list-style-type: none"> - Real Estate Developers - Friends of Rivers and Water Bodies - Regional Chairman, Association of Ghana Industries, Ashanti Region Branch - Sand and Stone Contractors - Community Based Organization - Faith Based Organization - Ghana Private Road Transport Union (GPRTU) - Progressive Transport Owners Association (PROTOA)
<p>Institutions</p>	<ul style="list-style-type: none"> - Kumasi Polytechnic - College of Education (KSI Campus)

	<ul style="list-style-type: none"> - Building and Road Research Institute (BRRI) Transportation Planner Development Planner - Kwame Nkrumah University of Science and Technology (KNUST) Professor K. K. Adarkwa Professor Samuel Afrane Professor F.W.Y. Momade Mr. Prince Anokye College of Architecture and Planning Department of Planning Department of Civil Engineering Association of Student Planners Development Office - Former Regional Directors, TCPD - Former National Acting Director, TCPD
Telecom Companies	<ul style="list-style-type: none"> - MTN - Vodafone - airtel - Tigo - expresso - GLO
Media Agencies	<ul style="list-style-type: none"> - TV3 - GTV - Hello FM - Luv FM - Garden City Radio - Daily Graphics - Ghanaian Times - Ghana News Agency

C.4 Summary of Discussions

(1) Group Discussions at the First Stakeholder Consultation Meeting

<p>Group A – Urban Structure and Land Use Plan</p> <p><u>1) Introduction</u> The urban development plan for Greater Kumasi sub-region is a specific plan targeting the sub-regional level. Problems pertaining to the urban development were discussed by the group to devise strategies and plans to solve the identified problems.</p> <p><u>2) Objectives</u> The objectives of the discussion were as follows:</p> <ul style="list-style-type: none"> - To identify problems hindering urban development in Kumasi - To formulate effective strategies in solving the identified problems - To identify plans and strategies in land use/management - To formulate alternative solutions to the problems. <p><u>3) Challenges regarding urban areas</u></p> <ul style="list-style-type: none"> - Congestion in the CBD (Vehicular and Pedestrian): the structure of Kumasi is such that all traffic is directed toward the Adum-Kejetia (CBD) which is the main commercial hub of the metropolis and as such serves as a traffic attraction point. - Rapid urbanization and sprawling - Development preceding planning especially in peripherals of Kumasi - Encroachment on nature reserves - Weak infrastructure in the city centre - Land tenure system / Multiple sales of land - Lack of comprehensive spatial development plans - Weak law enforcement machinery of the MMDAs
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- Inadequate staffing and logistics of enforcement agencies
- Lack of integrated spatial planning linkage between urban and rural areas
- Weak coordination among departments of the district
- Urban poverty
- Unemployment
- Unauthorized development
- Noncompliance with development plans

4) Strategies to be adopted

Two alternatives were discussed which are as follows:

- There should be an urban corridor development public transport-oriented city (high speed mass transit)
- There should be self-reliant community development (employment generation in Municipalities and Districts)

Best alternative to be adopted

There were various comments pertaining to the best alternative to be adopted. The group came to a consensus that one alternative could not be developed leaving the other, therefore the two alternatives should be adopted in addition to other alternatives such as urban consolidation and regeneration as well as adopting growth management strategies (such as urban growth boundaries, green belt, policy) to manage the amount, type and effect of growth. Again the group saw the need for government to go into housing development for the urban dwellers so as to control the issues of sprawling.

Group B – Economic Development of Greater Kumasi

1) Role of Kumasi

Commercial Hub - Kumasi is the bulk breaking point for both locally produced goods and imported to all parts of the country and even to other neighbouring countries such as Togo, Burkinafaso etc. This is due to its efficient road transportation system and its central location in Ghana. It has the largest open market in the whole of west Africa.

2) Potentials of Kumasi

Mechanical garages: The growth and expansion of Suame magazine over the years has led to the emergence of mechanical garages in the city. This is an industrial potential that can be developed.

Wood Processing: Kumasi falls within the forest region of Ghana thus producing significant quantities of timber both for local market and for export. Even though timber production has gone down of late the small scale processing sector is growing. This can be harnessed to make use of the timer products produced in the country.

KNUST: The KNUST offers specialised engineering programs that no other institution in the country offers. More value should be added to these courses to meet specific needs of local industry such as the oil and gas and the manufacturing sector.

Cultural Heritage: Kumasi hosts the stool of the most popular traditional ruler in the country (Otumfuo) and a rich culture that has stood the test of time and these have contributed to attracting tourists into the country and therefore require attention to further develop the city into a major tourist point that can compete intentionally.

3) Advantages of Kumasi over Accra

- Efficient road transport system
- Central location of the city in terms of distribution of commodities
- Kumasi is found in the most populated region in the country (Ashanti), which provides a large regional market.

4) Challenges

- Depletion of natural resources (forest)
- Low level of social infrastructure
- Low level of human capacity (skills)
- Land tenure system

5) The Role of the Six Surrounding Districts

They are endowed with fertile soils and could be centres for agricultural activities. These centres will provide Kumasi with food as well as other primary products and serve as dormitory towns to Kumasi

6) Potentials of the Six Districts

- Can be developed into major tourist attraction sites and also as centres for manufacturing e.g. the handcraft subsector.
- Atwima Kwawoma has a water reservoir and carving activity potentials that can be developed.
- Bosomtwe district has the Bosomtwe Lake of which touristic potential can be exploited.
- Kwabre east has kente weaving and carving activity potentials
- Ejisu juaben also has kente weaving activities, the butterfly sanctuary and the inland port.
- Afigya kwabre and Atwima Nwabiagya also have weaving and carving activity potentials. Atwima Nwabiagya also has the Owabi wildlife sanctuary.

Group C – Natural Environment and Urban Environment

1) Issues discussed regarding the Natural Environment

- Protection of forest reserves and creation of new ones, particularly along water bodies e.g. Owabi, Barekese dam
- Acquisition and Protection of wetlands by the MMDAS
- Tree planting must be encouraged
- Sand winning activities should be regulated and the laws for sand winning should be enforced
- Laws regarding forests should be enforced to protect flora and fauna
- Control of settlement along river banks
- Development of parks should be encouraged
- Cultural practice of slash and burning method of farming and annual ritual of bush fires should be discouraged
- Development of solar energy and biogas for domestic and industrial use
- Dumping of waste into our water body be discouraged
- De-silting streams to allow the free flow of water

2) Issues discussed regarding the Urban environment

- Encouragement of high rise structures
- Development of central sewerage system
- Noise reduction
- Landfill site should be protected, managed properly
- Satellite landfill site
- Acquisition of additional landfill site
- Separation of waste before disposal
- Rail transport should be developed to reduce over reliance on road transport
- Mass transport system should be promoted e.g. the bus system of transportation
- Satellite market and lorry parks should be developed to decongest the city
- Alternative building material must be developed to reduce over reliance on the natural resources
- Re-use of materials
- Education on the use of natural resources and protection of the general environment
- Enforcement of the laws on the environment e.g. chain saw operation, galamsey mining (local artisanal gold miner) and sand winning
- Harnessing our water bodies for aesthetic and recreational purposes
- Signage and street naming should be encouraged
- Lake Bosomtwi should be developed to increase its tourism potential

Group D – Power Supply and Transportation

1) Current Condition of Power Supply

- Current power supply is unreliable (on and off)
- Obsolete equipment
- Poor monitoring
- Inadequate coverage
- Poor maintenance culture
- Waste/power loss due to several reasons such as illegal taps, damage to cable by land/house developer
- Imbalance of supply and demand (consumption is too high)
- Over reliance on hydro power to the neglect of other sources (solar etc.)
- Poor coordination between ECG and developers resulting to damage to cables

2) Programs of the Government Related to Power

- Self-help Electrification Programme (SHEP)
- Street lighting program (individual's electricity bill is overcharged by 1% for street lightning program)

3) What can be done to address the above problems

- Privatization of ECG or introduction of Public-Private Partnership (PPP)
- Opening of power sector to other companies for competition with ECG
- Effective public regulatory commission

4) Problems in Transportation Services

- Over reliance on road transport
- Very high use of private cars and taxis
- Over aged vehicles (15 years)
- Trucks are loading/unloading their cargoes everywhere without control
- One cause of the above problems is the centralisation of facilities and services in Kumasi

5) Countermeasure for Transportation Problems

- Development of BRT system to address heavy movement of people
- Encouraging private sector to finance long buses including BRT
- Construction of terminals at strategic points outside Kumasi
- Construction of the second ring road to divert through traffic away from central Kumasi Control/limit the time to allow entry of trucks into the city centre or at least control the time for them to unload/load their cargoes
- Routine maintenance should be done at night
- Strengthening of the railway transport
- Development of Inland ports
- To solve traffic congestion, one possibility is introduction of staggered working hours like in Japan

6) Road Safety Issues

- Provision of bicycle lanes
- Strengthening of MTTU to enforce road traffic rules and regulation
- Segregation of traffic at busy intersections (e.g. grade separation)
- Stakeholders involvement in road design to ensure adequate road design (for instance, wide enough)
- Road safety team should include fire service personnel
-

Group E – Water Resources, Water Supply, Sewerage, Drainage and Solid Waste Management

1) Water Resources

- Water bodies shall be protected.
- It is important to know whether our water resource is adequate for the population in the future.
- Source of water consists of dam water, lake water, river/stream water, rain water and underground water.
- There are two dams in Greater Kumasi which are the Owabi dam and the Barekese dam.
- Bosomtwe Lake
There is one lake in Greater Kumasi (Bosomtwe Lake).
Eco tourism at Bosomtwe Lake might provide economic benefit to Greater Kumasi.
Farming and rapid development around the lake might cause bad effects (contaminating water quality etc.).
- Rain water harvesting should be considered.
- It seems that greater Kumasi has high potential for ground water. Basically, all districts/municipality surrounding Kumasi use underground water from wells. Some areas/people in Kumasi also use well water. Some wells need to be rehabilitated for larger capacity.

2) Water Supply

- Availability of water shall be considered when preparing the SDF.
- Existing water treatment facility is not in adequate condition to provide necessary water.
- Water supply should not be monopolized. It should be open for privatization.
- Gap between water demand and water supply shall be estimated. Estimation shall include not only the existing situation but also the future situation.
- Water storage shall also be considered.

3) Sewerage

- In Greater Kumasi, only Kumasi has a sewerage system. Three sewerage systems are at Ahinsan, Asafo and Chirapatre. They cover 10% of the Kumasi population. More sewerage systems are necessary for the high density population areas.
- Sewer is treated at the stabilization pond. The advantages of this kind of pond are (a) not consuming electricity, and (b) less maintenance is necessary. However, the disadvantage is that a large area is needed. Necessity of modernized waste water treatment plant shall be considered.
- Public toilet facilities shall be well managed.

4) Drainage

- Drains shall be improved if the capacity is not adequate.
- It is necessary to identify the existing drainage system and establish how to improve its effectiveness.
- A major system to control drainage is necessary. Retention facilities might also be necessary.
- It might be good to cover the open channels to prevent garbage being thrown into it. Constant education on the proper ways of discarding garbage is also important.

5) Solid Waste Management

- Waste sorting at the source is important.
- Solid waste collection systems and landfill shall be considered.
- Kumasi City has the Oti sanitary landfill for waste disposal, while its surrounding districts/municipality (5

districts and 1 municipality) have open dumping sites.

- A material recovery facility (MRF) for KMA which is the first MRF in the Ashanti Region is to be constructed in the coming April in Bosomtwe District. Recycling and composting are to be conducted there.
- Location of final disposal sites will be a major problem in the future in the Greater Kumasi Sub-Region, for example, difficulties in selection of new dump sites and needs for improvement of disposal sites from open dumping to the sanitary landfill.

Group F – Communication

Identification all key communication issues related to the process of the SDF/SP

1) WHY

- Planning for the future development of the people in the community or metropolis and the environment.
- Re- designing of the proper layout of the Greater Kumasi
- Future (expansion or planning) of greater Kumasi
- Vertical and horizontal development

2) Issues identification

➤ Social benefits

- Improvement in social amenities
- Improvement in the environment
- Living in peace
- Improvement in water supply
- Sanitation
- Roads
- Hospitals and control of disease
- Schools
- Drainage
- Security services
- Electricity
- Portable water
- Housing
- Recreational grounds

➤ Economic Benefits

- Creation of employment
- More investment
- Increase in their daily income, Improvement in standard of living
- Value added to their property

3) How

Subcommittee of project linked to local subcommittees of the assemblies and Chiefs with the DCEs as the chairman

The core concern is the BUDGET. How much is to be spent on communication.

- Take to urban council
- Unit committee meetings which should involve the people
- KMA (information office)
- Subcommittee of the MMDA chaired by the DCE
- Public Durbar
- Information vans
- Religious bodies
- Chiefs' community meetings on special days
- Associations, example market women groups
- Radio Phone-in
- Facebook , skype , twitter , and others for the youth / young people
- Media – press, leaflets or fliers, local FM, information centres

(2) Group Discussions at the Second Series of Stakeholder Consultation Meetings

Key Questions of Group Discussion

- Ashanti Region's Socio-Economic Development Policies
 - No.1: Which options of socio-economic development policies are preferred?
 - No.2: Please evaluate those different options of socio-economic development policies

<p>➤ Greater Kumasi Sub-Region's Spatial Structure</p> <p>District Meeting – Day 1 (Kwabre East)</p> <p>Group 1</p> <p>➤ Socio-Economic Development Policies for Greater Kumasi After discussion on the various options presented for consideration on the Socio- Economic Development Policies for Greater Kumasi, the group selected option A [Focus on Commerce, logistics and car repairing/industry in greater Kumasi] for the following reasons:</p> <ul style="list-style-type: none"> - Most of the people in the district are already into small-scale industry like kente weaving and bead making.
<ul style="list-style-type: none"> - The district has adequate land for marketing/commerce and this will discourage people from moving into the CBD and hence reduce traffic congestion on the roads. - Creating vibrant market for the industry, mechanic or magazine shops can be created in the district. <p>➤ Socio-Economic Development Policies Outside Greater Kumasi For socio-economic development policies outside Greater Kumasi, the group opted for Option 2. [Promotion of Foreign / Domestic investments in Agriculture Sector Integrated with Agro – processing Industry] Reason:</p> <ul style="list-style-type: none"> - In order for the district not to be choked some of the development should be designated for nearby districts like Sekyere east, Mampong Municipal and Ejura Sekyedumase. - Agro processing industry could be in the district for processing products like mangoes and cassava from other districts. People from the Kwabre East district trade in these products. <p>➤ Spatial Structure for Greater Kumasi Sub-Region Option 4 [Multiple nucleus urban structure; suburban centres and large-scale developments] was chosen. Reasons:</p> <ul style="list-style-type: none"> - So that development will be well distributed - Communities will be linked together or interdependent so that it will reduce congestion on the main Kumasi road <p>Potential sites for Tourism</p> <ul style="list-style-type: none"> - Adankwame, Antoa, Bamang, Dumanfo, Krobo Anhiwaa, Ntonso <p>Potential sites for Markets</p> <ul style="list-style-type: none"> - Mampongtene, Kenyasi - Car repairing and car Park - Aboaso, Abirem <p>Potential sites for Agriculture</p> <ul style="list-style-type: none"> - Sarfo, Kasaem, Bamang, Amaape, Asonmaso <p>Potential sites for Industry</p> <ul style="list-style-type: none"> - Ntonso , Ahwia, Adawonmase, Dumanfo, Krobo, Ntonso <p>➤ Other suggestions from the group</p> <ul style="list-style-type: none"> - Creation of a big car park for long vehicles and big trucks - Final Disposal sites should be created for both solid and liquid waste - Creation of big hospital within the district - Creation of Training colleges (nursing or teacher training)
<p>Group 2</p> <p>➤ Discussions of Options for Socio-Economic Development Policies for Greater Kumasi Option A: Focus on Commerce, Logistics and Car Repairing Services/Industry in Greater Kumasi</p> <ul style="list-style-type: none"> - Organization and building of capacity for scattered existing industrial areas such as Suame, Sofoline, Asafo and others to change from mere repairing of vehicles to assembling and manufacturing. - Protection of local industries from foreign competition - Improvement of marketing skills for local industries - Creation of warehousing facilities in the other six districts to serve as bulk breaking points and to also ease congestion from KMA <p>Option B: Focus on Manufacturing Sector in Greater Kumasi</p> <ul style="list-style-type: none"> - Mechanisation of agriculture to increase productivity for the manufacturing sector. - Identifying alternative ways of marketing the raw materials from the improved agricultural sector even in the absence of a manufacturing plant to ensure sustainability. - Improved packaging through capacity building for local products.

- Storage and processing facilities for the local raw materials produced.
- Litigation free land acquisition processes.
- Option C: Focus on both Industry and Knowledge-Based Sectors in Greater Kumasi
 - Imparting Practical knowledge regarding industry to the local people
 - Strengthening and capacity building for existing informal local industries
 - Harmonization and marketing of industrial potential in the local area.
- Discussions of Options for Socio-Economic Development Policies for outside Greater Kumasi
 - Option 1: Modernization of Small scale Agriculture outside Greater Kumasi
 - Provision of extension services and mechanisation of agriculture to farmers to increase productivity
 - Domestication of local produce: producing and consuming local raw materials
 - Option 2
 - Establishment of research centres
 - Option 3
 - Enforcement of by laws on mining
- Selection of Scenarios
 - B and 1
 - The area outside Greater Kumasi has large agricultural lands that could be used for large scale farming to feed the greater Kumasi agro processing industries
 - A and 2
 - Farm produce and goods produced by the agro processing industries located outside greater Kumasi could easily be marketed in the greater Kumasi high density business area.
 - Establishment of cooperatives for commercial activities
- Selection of final Scenario
 - No specific scenario was selected since we learnt from both (we considered both options are useful)..
- Spatial Structure
 - Preferred Option: [4] Multiple Nucleus Urban Structure - Decentralized Urban Structure from KMA: By Promoting Suburban Centre Development and Large-scale Suburban Development
 - Reasons
 - Creating alternative nuclei will relieve KMA of congestion and will also serve as support growth centres.
 - It will also help expand suburban areas and promote development.
 - Creation of employment leading to poverty reduction.

District Meeting – Day 2 (Bosomtwe)

Group 1

- Socio Economic options for Greater Kumasi
 - Commerce, Logistics and car repairing industry
 - Because the mechanic business is already well established in KMA we will focus on the manufacturing industry because we are farmers.
 - Already we engage in some form of manufacturing and farming. So let's focus on both industry and knowledge based enterprises. Because we need knowledge and applied skills to enhance our end products
 - Our reason for choosing was to improve on the existing potential to increase income, generate employment and reduce our movement into KMA to reduce traffic and population congestion
 - Chosen focus was: Industry and Knowledge Based enterprises.
- Options for Outside Greater Kumasi
 - Deliberations focused on modernization of small scale agriculture, because the farmers are already in existence, we need to enhance the application of modernized equipment, seedlings and technology which could be done in conjunction with agricultural extension officers and the agricultural department of KNUST, CSIR among other sister institutions outside the country.
 - Other members commented on the issue of promoting foreign and domestic investment. In that regard a member shared light on the fact that this option would be focusing on strategies in attracting the investment. Hence time would be wasted.
 - Deliberations concentrated on the advantages the existing small scale farmers may have in the short term to become large scale producers in the longer term rather than strategizing on how to attract the foreign investors, which probably will not happen.
 - Finally discussions ended with the principle of taking advantage of already existing potential which is the existence of the small scale farmers.
 - Hence the chosen focus is to modernize small scale agriculture to complement the manufacturing industry and

knowledge based enterprises.

➤ Spatial Option

After the presentation on the spatial options the interests fell on decentralisation option and multiple nucleus. In the deliberations, a member raised an issue on the decentralised option and said that although it decentralises the decentralisation is nearer to suburban centres closer to KMA. Hence development does not spread throughout the district.

So we would prefer option four which is multiple nucleus so that the three area council development would be evenly spread though the areas councils and communities within the area councils would have basic social amenities to attract the necessary large scale industry and employment needed.

Finally the chosen option focuses on multiple nucleuses.

➤ Location

- Brodekwno, Fahiakobo and Boniagya naymeani rice cassava, plantain (tourism and farming)
- Peas for oil industry
- Pramso, Jachie, Abountem, Adagya
- Beposo (potential for mining industry)
- Aputuogya (palm oil industry)
- Sawua (cassava industry)
- Edwenasi (mining industry)
- Pramso (mining industry)
- Swedro (mining industry)
- Feyiase, kuntunase (3 proposed private universities (St Margarete, proposed polytechnic site at Feyiase, teacher training at Kuntanase) Islamic university (Esereso) kessben proposed university edwenasi)
- Promotion of industry at mim, Brodekwno

Group 2

➤ Selection of Option on Socio-Economic Development Policies for Greater Kumasi

Option A: Focus on Commerce, Logistics and Car Repairing Services/Industry

Advantages

- Availability of electricity and electricity sub stations in almost all communities to support industrial needs.
- Greater Kumasi constitutes a large market that could support commercial activities in the sub region.
- Availability of land for industrial development

➤ Selection of Option on Socio-Economic Development Policies for outside Greater Kumasi

Option 2: Promotion of Foreign and Domestic Investments in Agriculture Sector outside Greater Kumasi by Integrating with Agro-processing Industry outside Greater Kumasi

Advantages

- It incorporates local people in to the modernization process
- Land availability

➤ Consideration of Scenarios

[A]: Focus on Commerce, Logistics and Car Repairing Services/Industry vs [2]: Promotion of Foreign and Domestic Investments in Agriculture Sector outside Greater Kumasi by Integrating with Agro-processing Industry outside Greater Kumasi

Reasons:

- Outside greater Kumasi fertile agricultural lands exist that could be used for large scale farming to feed the greater Kumasi agro processing industries.

➤ Spatial Structure

Preferred Option: [2] Self-reliant Multiple Nucleus Urban Structure

Advantages

- Enhance resource mobilisation in the sub centres
- Land availability
- Employment creation
- Availability of Lake for leisure purposes

Group 3

➤ TOPIC 1: Options of Socio-Economic Development Policies for Greater Kumasi

The group settled on the focus of the Greater Kumasi to be on Commerce, Logistics and Car Repair Services/ Industry. Some of the other opinions used to support the focus on option A are:

- The central location of Greater Kumasi in Ghana is good for transportation of goods and services to other parts of the nation as well as West Africa (Burkina Faso, Ivory Coast etc.)

- Commerce is a traditional occupation in Greater Kumasi region as such it will be easy to enhance it and create jobs for the youthful population in the Bosomtwe District and Greater Kumasi
- There are already adequate land uses and activities in Greater Kumasi that support option A like Suame Magazine (Car Repair), Adum (Commerce) that provide income for a large part of the current population
- Timber, Teak and some of the other raw materials useful for industrialization are readily available within and outside Greater Kumasi.

Also the group decided on Option A for Bosomtwe District. Some of the points that support the selected Option A include:

- The members of the district have inadequate markets and other commerce, logistics, car repair services/industry land uses as such there is a large population ready to use option A.
- Most of the population commute and migrate to KMA due to commerce activities such as markets and this would change the situation. The markets should be product specific like Plantain Market etc.
- Option A will enable the Tourism industry (game and wildlife area similar to Kakum National Park) to be developed with other services like satellite car repair service centres, hotels and resorts.
- The district is noted for the tourist industry and agricultural products (Oil Palm, Plantain, and Rice) and therefore, option A allowed large scale industrialisation of agricultural products. The main problem with agriculture in the district is the unavailability of a ready market, cost of transportation, inadequate extension officers and rice farmers having inadequate technology (Bosomtwe District Director of Agriculture). Some of the suggested solutions include the use of volunteer farmers such as agricultural extension officers to transfer technical know-how to other famers.
- The district has a large number of warehouses for companies such as Naa Achiaa and therefore, convincing these firms to set up industries in the district would be easy.

➤ TOPIC 2: Options of Socio-Economic Development Policies for Outside Greater Kumasi

The second option of promoting of foreign and domestic investments in the agriculture sector outside Greater Kumasi by integrating with Agro-processing Industry outside Greater Kumasi was decided upon (Option 2).

- Availability of land for Option 2
- Some areas outside Greater Kumasi are engaged in agricultural production; and therefore, option 2 will help the agro-processing industry.

In relation to the spatial structure options, the Multiple Nucleus Urban Structure: Suburban Centred and Large-scale Development was the option preferred. Some of the motives underlining this choice include the following:

- It was the option with most of the components of the other options.
- Option A will allow all districts in Greater Kumasi to have easy access to each other through the Outer Ring Road.
- It will enable all districts to develop their suburban centres, which is one of the reasons for creating districts in Ghana.

➤ Proposed Location

Proposed Location	Reason
Aputuogya	Improve Car Repair service area to serve as source of income and employment
Jachie	Most farm areas are around the community so a proposed market is important
Communities along the Lake	Develop resorts, hotels and other sites and services that support tourism from which other sectors can be developed

District Meeting – Day 3 (Ejisu-Juaben)

Group 1

- TOPIC 1: Options of Socio-Economic Development Policies for Greater Kumasi: (A)
- TOPIC 2: Options of Socio-Economic Development Policies for Outside Greater Kumasi: (2)
- TOPIC 3: SPATIAL STRUCTURE OPTIONS: [4]

Group 2

- TOPIC 1: Options of Socio-Economic Development Policies for Greater Kumasi: (A)
- TOPIC 2: Options of Socio-Economic Development Policies for Outside Greater Kumasi: (2)
- TOPIC 3: SPATIAL STRUCTURE OPTIONS: [4]

Group 3

- TOPIC 1: Options of Socio-Economic Development Policies for Greater Kumasi: (A)
- TOPIC 2: Options of Socio-Economic Development Policies for Outside Greater Kumasi: (2)
- TOPIC 3: SPATIAL STRUCTURE OPTIONS: [4]

District Meeting – Day 3 (Afigya Kwabre)

Group 1

➤ TOPIC 1: Options of Socio-Economic Development Policies for Greater Kumasi: (A)

The group selected Option A (focus of the Greater Kumasi to be on Commerce, Logistics and Car Repair Services/ Industry). Some of the other views used to support the focus on option A are:

- There are plans to relocate some of the Suame Magazine car repair services into the district and therefore, it will be good to focus on option A.
- Warehousing and other Commerce activities in Option A would be very good because the producers of agricultural products and other services from the north and other parts of Ghana still use the district as a transit area.
- Traditionally, the district had a good market which was comparable to the one in Techiman (Major Market in Brong Ahafo Region) but over time the market died down.
- Availability of land for development of option A

➤ TOPIC 2: Options of Socio-Economic Development Policies for Outside Greater Kumasi: (2)

The second option of promoting of foreign and domestic investments in the agriculture sector outside Greater Kumasi by integrating with Agro-processing Industry outside Greater Kumasi was decided upon (Option 2).

- Option 1 without Agro-processing would lead to inadequate ready markets since there are not many storage facilities in the study areas and the district.
- Option 2 will reduce the pressure on socio-economic facilities in the study area.

➤ TOPIC 3: SPATIAL STRUCTURE OPTIONS: [4]

Multiple Nucleus Urban Structure: Suburban Centred and Large-scale Development was the option selected. Some of the reasons underlining this choice include the following.

- It allows for easy accessibility to the other parts of the study area and Ghana
- It allows for development of suburban areas
- It will facilitate the road transportation of goods from the south to the north
- It helps to expand the road network and provide many locations for facilities like Lorry Parks for cross-border trucks

Location

Location	Proposed Facilities
Kyekyewere	Warehousing
Kodie, Boamang	Market
Ahenkro	Industry
Akom	Agro-processing

The District Chief Executive did not like the locations of the proposed facilities since most of them are along the main Kumasi-Offinso Roads. This means that areas away from the major road like Ankaase may not have adequate facilities and this will defeat the purpose of even distribution of resources in all communities in Afigya Kwabre.

Group 2

➤ TOPIC 1: Options of Socio-Economic Development Policies for Greater Kumasi: (A)

The group selected Option A (focus of the Greater Kumasi to be on Commerce, Logistics and Car Repair Services/ Industry). Some of the other views used to support the focus on option A are:

- The transportation of goods and services to other parts of Ghana (Northern Region, Upper East & Upper West,) as well as West Africa (Burkina Faso, Ivory Coast etc.) use the main Kumasi-Offinso Road, which passes through the district. Therefore, a station for trucks and rest-stop facilities will develop the district.
- Related to the above, there is an existing road that would facilitate the location of car repair service centres and related industries.
- Most people commute to KMA because of Commerce so facilities that enhance commerce would help develop the district and create jobs for the youthful population.
- There should be a market to help in developing the commerce industry which will help in providing income for the population.
- Also, because of the large herds of cattle, goats and other related livestock and bird products (guinea fowl etc.) that come from the northern part of Ghana into the study area, it is important to develop an abattoir and related industry to help develop the study area and Afigya Kwabre.
- It will result in the development of other transport facilities like railways and airports
- The advantageous location of Greater Kumasi and Afigya Kwabre gives a competitive advantage for option A especially for logistics and a major bulk-breaking point.
- Availability of land for development of option A

Possible Challenges

- Most Traditional leaders do not want to give out land to land uses that would fetch less income for them. In this regard, the solution may be for the district assembly to acquire land from landowners and traditional leaders as well as other stakeholders.

➤ TOPIC 2: Options of Socio-Economic Development Policies for Outside Greater Kumasi: (2)

The second option of promoting of foreign and domestic investments in the agriculture sector outside Greater Kumasi by integrating with the Agro-processing Industry outside Greater Kumasi was decided upon (Option 2).

- There should be flexible financial packages for domestic investments to be high in the agricultural sector.
- Some areas outside Greater Kumasi like Akomodan are engaged in agricultural production (Tomatoes) and therefore, option 2 will help the agro-processing industry.
- There is availability of land for agriculture
- It will reduce the pressure on socio-economic facilities in Greater Kumasi
- As the Greater Kumasi embarks on option A, option 2 will give Ashanti Region a more diverse economy

➤ TOPIC 3: Spatial Structure Options: [4]

Multiple Nucleus Urban Structure: Suburban Centred and Large-scale Development was the option selected. Some of the reasons underlining this choice include the following.

- It provides a broad network of roads and allows development of suburban areas
- It will facilitate the transport of goods from the south to the north
- It helps to expand the road network and provide many locations for facilities like Lorry Parks for cross-border trucks
- It will enable the Outer-Ring Road to be efficiently used in urban planning
- It is useful for promoting economic growth
- It will allow easy access to the main Kumasi-Accra Road and the Boankra Inland Port

Some of the possible challenges are stated below:

- According to the District Chief Executive, the scattered locations of community and district assembly leaders could hamper quick political and administrative decision making in emergency situations.

Some of the proposed locations, land uses and reasons underlining them include the following:

	Proposed Locations	Proposed Land use
1	Ahenkro	The large amount of Cattle, Goat and other livestock transportation calls for the location of an abattoir in the community
2	Kodie, Ahenkro,	Transport Terminal and Modern Market
3	Kyekyewere, Boaman, Wawase	Large scale agricultural production (Oil Palm, Citrus, Cocoa, Tomatoes and other vegetables)
4	Ankaase	Airport
5	Krobo, Bomso, Buoho	Sand winning, Quarry, Tile factory
6	Railway transport	This could be proposed along the Outer Ring Road or from KMA to the other districts which do not have access to railways

District Meeting – Day 4 (Atwima Nwabiagya)

Group 1

- Options of Socio-Economic Development Policies for Greater Kumasi
After detailed consideration of the various options presented for discussion, the group opted for option A [Focus on Commerce Logistics and Car Repairing Services / Industries in both Industry sectors in Atwima Nwabiagya].
- Options of Socio-Economic Development Policies Outside Greater Kumasi
Based on the option selected for the Socio-Economic development policies for Greater Kumasi, the group selected option 1 [Modernization of Small Scale Agriculture Outside Greater Kumasi].
- Options of Spatial Structure of Greater Kumasi Sub-Region
Option 4 [Multiple Nucleus Urban Structure- Decentralized urban Structure from KMA: By promoting Suburban centre Development and Large-scale suburban development] was selected.
- Diagrammatic presentation of the sites for various land use



- Agricultural sites
- Tourism sites
- Industrial sites

➤ Suggestions/Contributions

- Establishment of factories to process oranges, ginger and tomatoes as they are grown in abundance in the district.
- Poultry and pig farming are done on a large scale hence a slaughter house will be ideal for the district.

Group 2

➤ Options of Socio-Economic Development Policies for Greater Kumasi

After detailed consideration of the various options presented for discussion, the group opted for option A [Focus on Commerce Logistics and Car Repairing Services / Industries in both Industry sectors in Atwima Nwabiagya]

➤ Options of Socio-Economic Development Policies Outside Greater Kumasi

Based on the option selected on Socio-Economic development policies for Greater Kumasi, the group selected option 1 [Promotion of Foreign and Domestic Investment in agriculture outside Greater Kumasi]

➤ Options of Spatial Structure of Greater Kumasi Sub-Region

Option 4 [Multiple Nucleus Urban Structure- Decentralized urban Structure from KMA: By promoting Suburban centre Development and Large-scale suburban development] was selected.

➤ Suggestions/Contributions

- Establishment of factories to process oranges, ginger and tomatoes as they are grown in abundance in the district.
- Poultry and pig farming are done on a large scale hence a slaughter house will be ideal for the district.

Group 3

➤ Options of Socio-Economic Development Policies for Greater Kumasi

After detailed consideration of the various options presented for discussion, the group opted for option C [Focus on both Industry and knowledge-Based sectors in Greater Kumasi]

➤ Options of Socio-Economic Development Policies Outside Greater Kumasi

Based on the option selected on Socio-Economic development policies for Greater Kumasi, the group selected option 1 [Modernization of small-scale Agriculture outside Greater Kumasi]

➤ Options of Spatial Structure of Greater Kumasi Sub-Region

Option 4 [Multiple Nucleus Urban Structure- Decentralized urban Structure from KMA: By promoting Suburban centre Development and Large-scale suburban development] was selected.

➤ Diagrammatic presentation of the sites for various land use



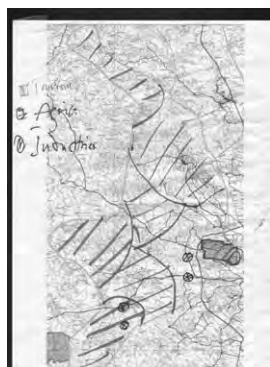
- Agricultural sites
- Tourism sites
- Industrial sites

➤ Suggestions/Contributions

- Establishment of factories to process oranges, ginger and tomatoes as they are grown in abundance in the district.
- Poultry and pig farming are done on a large scale hence a slaughter house will be ideal for the district.

Group 4

- Options of Socio-Economic Development Policies for Greater Kumasi
After detailed consideration of the various options presented for discussion, the group opted for option A [Focus on Commerce Logistics and Car Repairing Services / Industries in both Industry sectors in Atwima Nwabiagya]
- Options of Socio-Economic Development Policies Outside Greater Kumasi
Based on the option selected on Socio-Economic development policies for Greater Kumasi, the group selected option 1 [Domestic Investment in the agricultural Sector by Integrating with Agro Processing Industry outside Greater Kumasi]
- Options of Spatial Structure of Greater Kumasi Sub-Region
Option 4 [Multiple Nucleus Urban Structure- Decentralized urban Structure from KMA: By promoting Suburban centre Development and Large-scale suburban development] was selected.
- Diagrammatic presentation of the sites for various land use



- Agricultural sites
- Tourism sites
- Industrial sites

- Suggestions/Contributions
 - Establishment of factories to process orange, ginger and tomatoes as they are grown in abundance in the district.
 - Poultry and piggery farming are done on a large scale hence a slaughter house will be idle for the district.

District Meeting – Day 5 (KMA)

Group 1

- Selection of Socio-Economic Options : (A) for Greater Kumasi and (2) for Outside Greater Kumasi
- Selection of Spatial Options: [4]

Group 2

- Selection of Socio-Economic Options : (B) and (1), Note: (B) is knowledge-based commerce and car repairing.
- Selection of Spatial Options: [4]

Group 3

- Selection of Socio-Economic Options : (A) and (2), Note: (A) is supported by knowledge-based sectors.
- Selection of Spatial Options: [4]

District Meeting – Day 6 (Atwima Kwanwoma)

Group 1

- Selection of Socio-Economic Options : (B) for Greater Kumasi and (1) for Outside Greater Kumasi
Reasons: Outside Greater Kumasi could produce the raw materials to feed the manufacturing industries in Greater Kumasi.
- Selection of Spatial Options : Option [4]

Group 2

- Selection of Socio-Economic Options : (A) for Greater Kumasi and (2) for Outside Greater Kumasi
- Selection of Spatial Options : Option [4]

Main (Regional) Meeting

Group 1

- Options of Socio-Economic Development Policies for Greater Kumasi
After deliberation on the various options presented for discussion, the group saw it essential to enhance the existing commercial activities in the sub-region. Therefore, the group selected option A [Focus on commerce, Logistics and Car Repairing Services in Greater Kumasi].
- Options of Socio-Economic Development Policies Outside Greater Kumasi
The group selected option [1] [Modernization of Small-Scale Agriculture for outside Greater Kumasi] because

about 98% of agricultural activities are done on a smaller-scale hence there is the need to modernize the agriculture activities and also promote agro-processing to enhance the already existing market in Greater Kumasi

- Options of Spatial Structure of Greater Kumasi Sub-Region

Option 4 [Multiple Nucleus Urban Structure- Decentralized urban Structure from KMA: By promoting Suburban centre Development and Large-scale suburban development] was selected. This will help in the even distribution of development in the adjoining districts and with the outer ring road, transportation will be enhanced.

- Suggestions/Contributions
 - Great focus should be on the agro-processing industry because the majority of the people are in agriculture.
 - Bosomtwe District should not only be noted for tourism but also is a potential site for a stone quarry.

Group 2

- Options of Socio-Economic Development Policies for Greater Kumasi
 - After discussion on the various options presented, the group selected option A [Focus on Commerce, Logistics and Car Repairing Services / Industry in Greater Kumasi]
 - However, the group saw it essential to consider the knowledge-based sector as part of the option needed for sustainable development. For instance, most mechanics in Suame Magazine are getting out of the work because most of the vehicles that come for servicing use modern electronics and they are not able to repair them.
 - Group 2 therefore formed an option to: Focus on commerce, logistics, car services and the knowledge-based sector.
- Options of Socio-Economic Development Policies Outside Greater Kumasi
 - For socio-economic development policies outside Greater Kumasi, the group opted for option 2. [Promotion of Foreign and Domestic Investments in the Agriculture Sector outside Greater Kumasi and Integrating with Agro – processing Industry outside Greater Kumasi]
 - This option was selected because agricultural products must be produced on a large scale to feed and promote commerce in Greater Kumasi.
- Options of Spatial Structure for Greater Kumasi Sub-Region
 - Option 4 was selected from among the other options presented for the spatial structure for the Sub-Region [Multiple nucleus urban structure : suburban centred and large-scale development].
 - This option was selected due to its advantage of the outer ring road linking the various districts and the railway system over the other options.
- Suggestions
 - If another study is to be done, the study area should be extended to include districts such as Amansei West (Pakyi No. 1 and Pakyi No. 2).

Group 3

- Selection of Option on Socio-Economic Development Policies for Greater Kumasi
[B]: Focus on the Manufacturing Sector in Greater Kumasi
ADVANTAGES
 - It is a means of adding value to our locally produced raw materials within the region.
 - Suame Magazine can render services to maintain the equipment and plants in the manufacturing sector.
 - Knowledge based institutions such as KNUST, CSIR etc. would link the sector to modern methods of manufacturing, that is ICT and also research.
- Selection of Option on Socio-Economic Development Policies for outside Greater Kumasi
Option 2 : Promotion of Foreign and Domestic Investments in the Agriculture Sector outside Greater Kumasi by Integrating with the Agro-processing Industry outside Greater Kumasi
Advantages
 - It gives an opportunity to expand the operations of existing farmers and would also link the agricultural sector to the modern ICT sector.
 - It is a means to embarking on large scale agriculture that would feed in the agro processing industries.
 - Availability of land outside Greater Kumasi for large scale agriculture.
- Consideration of Scenarios
B and 2
[B]: Focus on Manufacturing Sector in Greater Kumasi
[2]: Promotion of Foreign and Domestic Investments in the Agriculture Sector outside Greater Kumasi by Integrating with the Agro-processing Industry outside Greater Kumasi
- Spatial Structure
Preferred Option: [4] Multiple Nucleus Urban Structure - Decentralized Urban Structure from KMA: By Promoting Suburban Centre Development and Large-scale Suburban Development

Advantages

- It allows for the equitable distribution of resources in the various suburban centres that would be created.
- Provides efficient accessibility among sub-centres with the ring road.
- KMA is also accessible to the sub-centres by the radial road network.
- Reduces pollution and congestion at the sub regional centre, KMA.

Plenary Session

➤ **Group Presentations**

Group	Socio-economic option for Greater Kumasi	Socio-economic option outside Greater Kumasi	Spatial Structure option
1	A	1	4
2	A Ideal = (A+C)	2	4
3	B	2	4

➤ **Summary of the Results of the Various District Level Meetings**

- The results of the various district level Stakeholder Meetings were presented by Mr. Sasaki.
- From the results, it was observed that of the socio-economic options for Greater Kumasi Sub-Region, option A was most often selected because most people are interested in commerce.
- Options 1 and 2 were mostly selected for socio-economic options outside Greater Kumasi Sub-Region.
- Option 4 was the very natural selection. But it is still abstract because the team still has to determine the location/route of the ring road.
- The study team leader stated that to attract more investment from government and private institutions, Greater Kumasi needs a good vision and good strategy, otherwise our plans will just remain on paper without functioning.
- In bringing his presentation to an end, he said still at this stage, the plan remains abstract hence all suggestions and views are most welcome for effective planning.

➤ **Suggestion and contributions**

- For efficient implementation of the project, political heads and traditional authorities must be involved.
- As we are planning for Greater Kumasi, we should have in mind the proposed regional hospital at Sawua-Bosomtwe district
- Consultation with the Aviation authorities should be engaged in to determine the state of the proposed airport at Afigya Kwabre.
- Also, the Boankra Inland Port is an important project for Greater Kumasi that should be critically looked at.
- Effective education/publicity should be implemented.

(3) Group Discussions at the Third Series of Stakeholder Consultation Meetings

Group A

➤ **Secondary Centre**

Group members put forward reasons to support the proposal for Ejisu to be made a secondary centre. Some of the reasons used to back their arguments include the motives listed below.

- Municipality status of Ejisu
- Proximity to Kumasi (KMA)
- Good location along the Accra-Kumasi Trunk Road
- Nodal location to other districts like Bosomtwe, KMA, Kwabre East etc.
- Availability of railway development
- Proximity to Boankra Inland Port
- Good Road Network (Dual Carriage to Kumasi and towards Boankra)

Other centres like Abuakwa, Kodie and Nkawie should be considered because of location along major transport routes. Boankra is a good starting point for industrial development for Greater Kumasi Sub-Region due to the following reasons.

- Land available for development
- The Boankra Inland Port has already received high publicity
- The National, Regional and District development proposals for Boankra are linked to this one.
- Availability of administrative offices

➤ **Urban Corridor**

Group members postulated that Greater Kumasi Sub-Region needs the Kumasi-Ejisu Corridor due to the following reasons

- The nodal location of the corridor.
- The close proximity of the corridor to Kumasi and Ejisu
- The location of railway tracks along the corridor
- The current land uses of the corridor such as KNUST , CSIR etc. will be enhanced
- The corridor is a current route for piloting the Bus Rapid Transport System.

The availability and use of existing roads in developing another parallel arterial road to form the corridor will help reduce cost. The economic benefit to the state and private firms will be more than the cost of providing another arterial.

However, the Chief Executive for Afigya Kwabre proposed other arterial roads to serve as corridors. This was because in 20yrs other corridors should be developed. Some of the other corridors suggested included Nkawie and Kodie.

➤ Outer Ring Road, District Centres and Suburban Centres

Group members accepted the proposals for the Outer Ring Road with the view that the immediate land use abutting the road should be secured. Also members from KNUST proposed traffic management as a means of ensuring efficient utilisation of the road.

➤ Kumasi Centre Redevelopment

Group members acknowledge the need to transform the city centre of Kumasi because of congestion. Some of the proposed changes from group members are catalogued below.

- Relocate the Prison in the middle of the city and make urban economic use of the land. E.g. Shopping Malls
- Some members also suggested the need to adequately segregate the Lorry Park, Shops and Markets in the New Central Business District development to avoid congestion.
- The use of Redevelopment and Urban Regeneration should be applied to help in transforming the Central Business District

➤ Urban Growth Boundaries

Group members recognised the need for the Greater Kumasi Sub-Region to have an Urban Growth Boundary to manage the continuous urban sprawl the conurbation is experiencing. Members commented that the study team should check the amount of land, compensation and incentives that will be needed for efficient implementation and utilisation of the Urban Growth Boundary. The contingent from KNUST in the group suggested the use of high and mid-rise buildings in suburban areas.

➤ Rural Areas and agricultural Land

Members suggested the designation of urban agricultural areas and urban forest to protect the environment. Others also suggested the designation of corporate farming areas and plantations. The introduction of less harmful wildlife reserves like a butterfly sanctuary in areas near conservation zones like Barekese Dam Conservation Area.

➤ In conclusion, the members agreed that the strategies suggested by the team would help achieve the goals of integrated spatial development.

Group B

➤ Secondary Centre

The participants agreed that Ejisu should be the secondary centre of Greater Kumasi for the following reasons.

- Easy access to other district capitals like Kuntanase and Mamponteng from Ejisu.
- The BRT pilot program will be started first between the Ejisu – Kumasi urban corridor.
- Proximity to major Educational institutions like KNUST and BRRI
- The first section of the outer ring road will be the Ejisu-Kodie section.

A member said that in order to not worsen the congestion situation in Kumasi, Ejisu, which is closer to Kumasi should not be selected but rather, he suggested Foase.

However, with the aid of the diagram for overall spatial structure for greater Kumasi, it was observed that both Ejisu and Foase are approximately the same distance from Kumasi.

➤ Urban Corridor

Without any hesitation, the group accepted that once Ejisu has been accepted as the preferred secondary centre, the Ejisu-Kumasi corridor should be a well-developed urban corridor. In view of this, it was observed that the proposed parallel road will be of paramount importance to enhance mobility along the corridor.

➤ Outer Ring Road

The group observed that the outer ring road is near to almost all the district capitals within the study area. Though some compensation needs to be paid in some areas, the group agreed that the radius of the ring road will help connect the KMA and all the six adjoining MDAs enhancing the socio-economic development of the sub-region.

- **Kumasi Centre Redevelopment**
Promoting of sub-centres, satellite markets and establishing of bulk breaking points will help decongest the CBD hence a new CBD is not relevant. However, redevelopment of some areas of the Kumasi centre (areas within the inner ring road) such as the zongo areas is very relevant. It should be noted that there will be friction/opposition before such areas can be redeveloped.
- **Urban Growth Boundaries**
The need for urban growth boundaries is very relevant to check the rate of urbanisation. A member said that the issue is not about the rate of development, but about the attitude to check the uncontrolled development by enforcing the necessary laws. The modalities of purchasing land in the country should also be considered. To help strengthen the urban growth boundary, access to basic utility facilities should not be provided beyond the set boundary.

Group C

- **Secondary Centre**
Group members put forward reasons to support the proposal for Ejisu to be made a secondary centre. Some of the reasons used to back their arguments include the following:
 - Proximity to Kumasi (KMA)
 - Good location along the Accra-Kumasi Trunk Road
 - Nodal location to other districts like Bosomtwe, KMA, Kwabre East, Central Region and Northern Region etc.
 - Availability of railway development
 - Proximity to Boankra Inland Port
 - Good Road Network (Dual Carriage to Kumasi and towards Boankra).
 Other centres like Mampongten and Abuakwa should be considered because of their location along major transport routes. Boankra is a good starting point for industrial development for Greater Kumasi Sub-Region due to the following reasons:
 - Land available for development
 - The Boankra Inland Port has already received high publicity
 - The National, Regional and District development proposals for Boankra are linked to this one.
- **Urban Corridor**
Group members suggested that Greater Kumasi Sub-Region needs the Kumasi-Ejisu Corridor due to the following reasons;
 - The nodal location of the corridor,
 - The close proximity of the corridor to Kumasi and Ejisu,
 - The location of railway tracks along the corridor,
 - The corridor has a dual carriage road from K MA to Ejisu,
 - The current land uses of the corridor such as KNUST , CSIR etc. will be enhanced,
 - The corridor is a current route for piloting the Bus Rapid Transport System.
 Members suggested that since the KMA to Ejisu road is dual, there should be road expansion because it already has enough land. Also the Government will not pay very much for compensation. Developing another parallel arterial road to form the corridor will help reduce congestion in the future but first expansion of the arterial road should be considered.
A member who is part of the BRT project team also suggested that the expansion of the arterial road will help the BRT work faster and more efficiently.
- **Outer Ring Road**
Group members accepted the proposals for the Outer Ring Road with the view that the immediate land use abutting the road should be secured.
- **Kumasi Centre Redevelopment**
Members acknowledge the need to transform the city centre of Kumasi because of congestion. Some of the proposed changes from group members are catalogued below.
 - Create another Zoo within the Greater Kumasi Sub Region like Kodie to create employment for the people there.
 - The need to adequately segregate the Lorry Park, Shops and Markets in the New Central Business District development to avoid congestion.
 - The use of Redevelopment and Urban Regeneration should be applied to help in transforming the Central Business District.
- **Urban Growth Boundaries**

Group members recognised the need for the Greater Kumasi Sub-Region to have Urban Growth Boundaries to manage the continuous urban sprawl the conurbation is experiencing. Members commented that the study team should check the amount of land, compensation and incentives that will be needed for efficient implementation and utilisation of the Urban Growth Boundaries.

➤ Rural Areas and agricultural Land

Members suggested the designation of urban agricultural areas and urban forest to protect the environment. Others also suggested the designation of corporate farming areas and plantations. The introduction of less harmful wildlife like a butterfly sanctuary in areas near conservation zones like Barekese Dam and Owabi Dam Conservation Areas was proposed.

➤ In conclusion, the members agreed that the strategies suggested by the team would help achieve the goals of integrated spatial development but the implementation is what they are more concerned with.

Group D

➤ Secondary Centre

The participants agreed that Ejisu should be the secondary centre of Greater Kumasi for the following reasons.

- Its location between the capital of the nation Accra and Kumasi with KNUST and Boankra close by
- BRT route which is to be established
- Size of the population

The role that Ejisu should play as the secondary centre was expressed as below.

- Reduce the population of KMA as well as the concentration in KMA with Ejisu connected with other cities by the ring road
- The gateway city of Kumasi
- Employment centre of Greater Kumasi with Boankra being its industry centre

➤ Urban Corridor

The participants from Kwabre East commented that Kumasi-Ejisu Urban Corridor will be an advantage for Kwabre.

Some participants gave their opinion that the usage of the existing road and space available should be the priority and not whether it is parallel or not.

Linkage roads between the parallel roads were requested for the parallel road to function as an alternative road.

➤ Outer Ring Road

Participants in general preferred to have a larger radius ring road that will bring benefit to their district as a connecting road between the towns and cities. Some people brought up the idea that the ring road should be connected to Ntonso or closer to the new proposed airport in Ankaase. The concern most participants had was the compensation that will be necessary if the people do not start their action for the ring road today. Some participants also raised the point that the existing road should be used as part of the ring road instead of building a completely new road.

➤ Kumasi Centre Redevelopment

The participating chief commented that redevelopment should be settled with Ashantihene and if he agrees everyone is to also follow him.

One participant gave his opinion that the sub-centres should be developed with services rather than making a new CBD. Most participants also agreed that if there is to be a new CBD it should be outside the centre of Kumasi to decrease the concentration.

➤ Urban Growth Boundaries

The participants agreed on the idea of urban growth boundaries which will stop the urban sprawl. However some participants expressed their concern about urban growth boundaries which are so small that they will not allow people to build their own house on lands people have already bought for their future. All participants agreed to have the urban growth boundaries to be outside the proposed outer ring road.

(4) Group Discussions at the Fourth Series of Stakeholder Consultation Meetings

Technical Stakeholder Meetings

Solid Waste Management Sector

➤ Waste collection in MDAs

Collection of waste in MDAs can be categorized into 3 areas namely:

- Collected area
- Uncollected area

- Self-Disposal area

The Self-disposal areas are mostly rural areas. By 2033, waste from these rural areas will still remain uncollected but waste generated from the urban areas (collected and uncollected areas) will be 100% collected for disposal to a final dumping site.

For example, according to Ghana Statistical Service, 58% of Kwabre East district is urbanized and 42% of the district is rural. In 2033, Kwabre East will be producing the estimated waste amount of 355t/day, however, not all the waste produced will be collected as some rural areas will still be practicing self-disposal. It is targeted that waste from the urbanized areas of the district will be 100% collected.

➤ Small-scale landfill site for MDAs

It is ideal that MDAs should have a small-scale landfill site for efficient management of solid waste. According to the Ghana landfill guidelines issued by the Environmental Protection Agency (EPA), depending on the population of an area, a landfill can be constructed without it being necessarily an engineered sanitary landfill. Therefore the category/ standard of the proposed landfill should be specified.

In order to ensure the implementation of these landfills, the acquisition of the land should be of paramount interest of the assemblies.

➤ Conversion of waste to energy

The idea of converting waste to energy has never been materialized despite the attempts by government and many private organizations. This technology is expensive to operate and easy to break down. However, this idea should not be totally abandoned as this technology does not require a large land area.

➤ Sludge treatment

Sludge from the toilets that collects in the Septic tanks is sent to the treatment ponds located at the Oti landfill for treatment. These ponds serve both Kumasi and the adjoining districts. Moreover, some houses and institutions at Asafo, Ahinsan and Chirapatre are connected to a sewerage system at a cost. According to the district environmental officers and KMA-WMD, it will be better to have their own sludge treatment ponds at the same site as the proposed small-scale landfill.

Transportation Sector

- Programme on Road Network Development: the widening of Antoa road to 4 lanes from Airport RB to Buokrom estate must be extended to Duase or Kenyase because of Dept. of Feeder Road's plan of developing the Fawade to Antoa road.
- Incorporation of other plans by the Kumasi Metropolitan Assembly: since the SDF and the Structure plan is supposed to guide development in KMA, all plans and programmes of the Kumasi Metropolitan Assembly and other departments should at least be made available to the JICA study team because once the plan is formulated, it would be difficult to reconcile it with other plans and programmes of other agencies. Emphases were put on places for satellite markets, parking spaces and the development plans for minor roads in the city.
- This can help test how problems and challenges of other plans can be resolved by this SDF and the Structure plans.
- Programme on Freight Transport Management: KMA has by-laws and regulations on the number of hours trucks can enter the city to load and unload and the time these trucks should leave the city but there was no clarity of how these regulations actually work so Mrs. Rosamund Edusei is to find out from the KMA how it works and the challenges.
- Non-motorized Transport System (Flexible Working Hours): this strategy may not be feasible in Kumasi or in Ghana as a whole because of the huge working population engaged by the informal sector. The strategy may even be difficult to implement for workers in the formal sector.
- Development at other places within KMA: to make the BRT system and other areas between the ring roads work, other minor roads should be developed as part of the BRT system so as to increase the density of people living along the major route of the BRT vehicles.
- Call for survey data: to enhance better understanding of some issues, survey data, especially Origin-Destination data, can be made available to some of the stakeholders.
- To support the achievement of the objectives of the Freight Transport Management, a bulk breaking point could be proposed in this plan as a means of also reducing the number of trucks in the city.
- Training for human capacity: in as much as the SDF and the Structure plans solve physical problems and challenges, an attached plan can be added to train the human capacity or implementers of the plans because most plans have failed in Ghana as a result of lack of the requisite skills of the implementers.
- Collaboration between stakeholders or land agencies: many plans fail because of lack of collaboration between various agencies and departments so there was a call for regular meetings between these agencies to share ideas on the various plans and programmes of the respective agency or department. This can give them a common

voice on certain issues confronting the city.

- Hand outs for stakeholders to study should be made available to participants at least 24hrs before meetings are convened.

Water Resources, Water Supply, Liquid Waste Treatment and Drainage Sector

➤ **Water Resources and Water Supply**

- **Industrial Water Demand**

In estimating the water demand forecast for Greater Kumasi, the Industrial demand was also considered as industries form about 35% of the total water demand.

- **Rain Water harvesting**

Usually, it rains for about 9 months in Kumasi, but the water is not harvested and is lost as runoff. If these rains are harvested in reservoirs, the water can be used for domestic chores and also help reduce flooding. Harvesting of rain is a good supplementary source of water for institutions. According to the Community water and sanitation agency (CWSA), in places where it is possible to drill boreholes, rainwater harvesting will not be recommended because boreholes are comparatively economical when compared to rainwater harvesting.

- **Boreholes**

Borehole drilling is recommended for less populated areas. Geologically, KMA is located on a Basement complex. The basement complex has little primary porosity for groundwater storage; hence borehole drilling needs to go to about 100m deep to access groundwater. Comparatively, the granitoids have many fractured zones for groundwater storage; hence groundwater can be accessed when boreholes are drilled about 30m deep.

- **Barekese dam power supply**

Due to the unstable and unreliable power supply for pumping treated water to the Suame reservoir, GWCL is unable to meet the water demand. Despite the presence of a hydroelectric generator at the Barekese dam, it is unable to produce electricity because the force with which the water falls is not enough to produce energy as the water inlet and outlet have only a small difference in elevation due to the surrounding flat terrain.

- **Non-Revenue Water**

Most of the distribution pipelines are very old and leak. But because they are buried, they are difficult to detect, causing water loss.

➤ **Liquid Waste Treatment**

- **Stabilization ponds**

Every district will have its own liquid waste stabilization pond for treating black water situated at the proposed small-scale sanitary landfill site to be constructed in every district assembly within the study area.

- **Hospital liquid waste**

Contagious/Toxic waste from hospitals and industries are treated by the hospitals/industries themselves. However, black water is treated at the Asafo sewerage treatment ponds or at the Oti treatment ponds.

The majority of houses close to streams secretly discharge their black water into the streams. Such situations should be reported to the Environmental health unit or EPA.

After treating black water, the solid content remains as residual, and such residual can be used as a manure for farmlands or for generating energy, however, the residual is contaminated with the leachate from the landfill site.

➤ **Drainage**

The focus of drainage is to reduce or prevent flooding in the city. One way of ensuring this is to increase the capacity of the drains by lining them. Despite the efforts expended in an attempt to increase the capacity of the drains, it has been thwarted by the bad attitudes of people that dump trash into the drain. The WMD/KMA has plans to provide bins at vantage points and through education, mitigate this problem.

At the end of the discussion, it was strictly emphasized that Education, Information and Enforcement should be adhered to so as to achieve the objectives of the project.

Electricity Sector

- The power generation capacity in Ghana seemed to be higher than the demand according to the VRA 10 year capacity demand and supply balance (2012-2021) but the concern is that this opinion is not shared by many Ghanaians as there are frequent power outages in the country. In response, ECG West said the power generation capacity on the graph (the VRA 10 year capacity demand and supply balance, 2012-2021) represents the plan but the actual installed capacity is not equal to the demand now; so this plan represents how the identified demand

would be met not the current situation.

- It seems the eastern part of Greater Kumasi was considered for the electrification project to the neglect of the western; but the answer to this was that, there is enough generation capacity for other areas but an attention has been focused the western part because of the plan to promote activities at the Ejisu corridor.
- Issue of budgetary Constraints of the ECG: ECG West told participants that the ECG operates at a loss as a result of government interference in the fixing of rates for electricity charges. This constrains the company in acquiring modern equipment to replace old ones.
- The issue of power losses: Again ECG West partly blamed this on government interference. The company may have a plan for replacing old and obsolete conductors and other equipment to reduce the losses in the system but government sometimes hesitates to allocate budget for that and rather focuses on extension of electricity to other areas. By the injection of power stabilization, the distance between the power source and the consumer is reduced and this reduces the losses in the system so it is more prudent to replace obsolete equipment than to continue extending electricity supply area which has been the hallmark of politicians in the country.
- The issue of trimming trees and overhead lines: Although it is the work of the ECG to prune trees obstructing power cables, it is also the responsibility of owners of properties to inform the ECG so that the power in those lines could be shut down for the trees to be pruned. There have been cases where the company has been sent to the law courts for cutting down trees which obstructed overhead lines.
- The issue of tightening the enforcement of un-paid consumers by providing pre-paid meters: An issue was raised by TCPD officer that some consumers requested the pre-paid meters but they didn't get them. In response, GRIDCo said that people do not like the pre-paid meters because they may not be able to temper with them. A typical example was given as the situation in the Northern Region where the Northern Electricity Distribution Company, NEDcO tried to install pre-paid meters for consumers but people vehemently opposed them and went on street demonstrations against the distribution.
- The Regional Director of TCPD Edusei suggested creation of a body to monitor road reservations so as to promote or reserve a place along roads to encourage the burying of underground power cables. ECG West added that if there is going to be encouragement of power cables buried under the ground, then there must be the technology to needed detect faults.
- The JICA Study Team Leader suggested to participants that one of the main strategies of the plan is to propose a place with a boundary for roads, electricity and water as basic infrastructure in certain areas, especially between conurbations so that these services could be shared. ECG West embraced it as a good idea but said it may not be feasible to implement in Ghana.
- This is because the ECG provides transformers to places with high demand but is sometimes manipulated by the government to send power to other places. All these things impede the implementation of plans so the proposal may be good but may not be feasible because of the interference by the government.

Land Use Sector

- Regarding the Kumasi-Ejisu Corridor, has the Ejisu-Juaben SDF and Ejisu SP been taken into consideration?
 - (JICA Study Team) Yes, the Ejisu-Juaben Municipality SDF and Ejisu SP have been reviewed and considered for preparation of the Greater Kumasi Sub-Regional SDF and Greater Kumasi Conurbation SP.
- Will people be moving out with improved housing outside Kumasi?
 - (JICA Study Team) At present, the speed of such suburbanization is not substantially large, partly because basic infrastructures and services are not well developed outside KMA.
- How can we promote the development of all the facilities needed? Land acquisition needed to develop necessary facilities is not easy in some areas, especially in area around Manponteng.
- There are unused lands in Kaase Industrial Area
 - (JICA Study Team) Those lands are useful resources available for revitalizing industry for Greater Kumasi.
- Can waste be changed into energy in the future?
 - (JICA Study Team) Incineration is useful technology for securing energy, but incineration plants are too expensive for Ghana at present and probably will be even in 20 years.
- Would not New Towns built by private investment create slums in the surrounding area like in Tema?
 - (JICA Study Team) Slums will not appear in the suburban areas which are proposed for Greater Kumasi. Tema's slums have developed because of proximity to ports and availability of jobs.
- Affordable housing should be considered in the New Towns.
 - (JICA Study Team) Proposed New Towns should satisfy diversified needs for housing, including affordable housing and social housing.

District Meetings

Day 1: Afigya Kwabre, Kwabre East, Atwima Kwanwoma and Atwima Nwabiagya

➤ AFIGYA KWABRE DISTRICT

- Large Urban Growth Boundary

The group suggested that the current large urban boundary at Akom should be extended to Ahenkro since urbanization has already reached the area. For the UGB-L to be maintained, by-laws should be maintained and institutions should be resourced to carry out their mandates. Also, the Asantehene should encourage the Chiefs to help preserve lands for developmental projects. Proper education of the major stakeholders is also very important. The project has proposed a logistics centre in the district; hence the assembly is encouraged to acquire the land for the logistic centre between Akom and Ahenkro.

- New towns

The study team has already proposed a new town at the airport city (Ankaase). The group also proposed that a new town should be developed at Aboabugya, Wawase or Swedru. However, roads in these new towns should be double lane instead of the single lanes currently existing in the districts.

- Rural areas

The structure plan is to cover areas such as Boamang and Tetrem. The group suggested that Kyekyewere should also be considered. It is strategically located and has an access road to Techiman and Ejura- Sekyere Dumase. Mostly, farmers in the district engage in crop farming, hence to enhance the socio-economic development of the farmers they are encouraged to go into livestock rearing.

Areas such as Kotokuom, Adibinso Kessi and Ejurati should be considered as ideal places for recreational centres.

➤ KWABRE EAST DISTRICT

The issues discussed were:

- Urban growth boundaries set to manage urban development. (Large urban growth boundary and small urban growth boundary). Members discussed and agreed that the conurbation/ large urban growth boundary should be extended to cover communities near the district capital e.g. Aboaso and Ahodwo.

- The Traditional Authorities should be ready to release land, especially for the development of the New towns

- The law should be enforced such that the measures put in place to stop development outside the conurbation are adhered to.

- New towns

Members accepted Ntonso to be created as a new town as proposed by the JICA study team because of the advantages that would be accrued in the future. However, they suggested that there should be proper documentation when planning for the new towns. Facilities such as pedestrian walkways, play grounds and recreational centres should be provided.

- Rural development strategies

The strategies proposed by the JICA team were accepted

- Promote suburban Agriculture

- Promote and expand traditional textiles industries

➤ ATWIMA KWANWOMA DISTRICT

At the end of the group presentation, the following were major contributions from group members in the ensuing discussions:

- Urban Growth Boundaries

- Facilitate speedy plan preparation and implementation of project strategies to reduce compensation that would be paid to owners of existing properties.

- Chiefs whose areas will suffer restrictions should be compensated.

- The group realised that the proposed structure plan area of Trede happens to be within the conurbation area. The group, therefore, proposed Trabuom as a replacement for the new structure plan area

- Rural Strategies

- There is the need to improve poultry farming in the district in addition to the metal, wood and craft industries.

- Improvement of Bamboo cultivation for the production of furniture, khebab strips etc.

- Tourism: The project should take note of Gisgo cottage, Dida pond, and the hanging stone at kyekyewere.

➤ ATWIMA NWABIAGYA DISTRICT

The group collectively agreed to the conurbation idea but raised some challenges that may disturb the plan. The challenges are:

- Issues of land tenure system in Ghana and Ashanti Region

- Problem of monitoring of the plan

- Reliance on land sales as only source of livelihood for chiefs.
- Suggested solutions are
 - Education of the chiefs on the proposals of the plan
 - Put in place mechanisms to ensure the monitoring of the plans
 - Demarcate and acquire the proposed lands and areas to avoid future compensation
 - Put in place measures to meet the chiefs' interest because their main concern may be sale of land. Also encourage agricultural development in the rural areas to help sustain the chiefs' source of income
- Rural area strategies
 - Relocation of poultry farms found in the conurbation to the rural areas. Majority of poultry farms in Kumasi are found in this district
 - Include citrus production as part of the rural area strategies in Amankyea
 - Include ginger production in Gyankuba as part of the rural area strategies
- Tourism strategies
 - Development of Okonfo Anokye footprints at Nkawkrom as a tourist centre
 - Development of cave at Barekese
- Suggested Proposals by the group for Greater Kumasi
 - Propose a new diversion of the north-western portion of the Outer Ring Road which may not be constructed due to concerns regarding the possibility of polluting the water inflowing into Barekese Dam. The new diversion should go through the existing routes from Esaso, Kumi, through Barekese and to the Offinso road.
 - If these conversions are not possible, then probably a new dam must be constructed to make way for the construction of the north-western portion of the outer ring road.
 - Propose new towns near Kumi, Aninkoroma and Pasoro.

Day 2: KMA, Ejisu-Juaben and Bosomtwe

➤ **KMA & ASOKORE MAMPONG MUNICIPAL**

Strategies for Central Core

- Promotion of Redevelopment of Old housing area
Areas such as Bompata and Fanti New town have been reconsidered for redevelopment. Currently, some students from the planning department at KNUST are undertaking studies in this respect.
- Promotion of bulk breaking points at the sub-centres will also help reduce congestion at the city centre and hence restructuring the city centre will be easier.
- Liquid waste management
The population in the CBD is rapidly increasing hence available land is scarce. It is therefore ideal that the introduction of stabilization ponds should be encourage rather than the current practiced of on-site treatment systems (Septic tank systems)
- Modernization of the central market also includes restructuring to relocate the market in the new high rise buildings to accommodate many people and enhance convenience at the market. To achieve this, we need a strong political will.

Strategies for Sub-Centre

- Transformation of the roundabouts in the sub-centres to interchanges will help ease traffic congestion in these centres. It is also appropriate to allocate places for car parks or terminals.
- Traffic congestion in the CBD can also be attributed to the influx of many cars. The BRT is a good project to help reduce this problem. The design for the terminal is done but the site for it is yet to be acquired.
- The outer-ring road
The route of the outer ring road was determined by consulting with the major stakeholders in transportation. It is important that consultation with the chiefs should highly recommend reserving or securing the land for the outer ring road.

➤ **EJISU-JUABEN MUNICIPALITY**

- New town areas and green belt proposals need further stakeholder consultation to check if land has not already been sold or planned for development (although it may look vacant).
- Consider recognizing towns with approved layouts (Juaben and others)
- BRT is already being developed in Kumasi-Ejisu corridor. New towns should be considered for this route at Besease, Boankra etc.
- Create mini-market spaces along corridors, for hawkers, to prevent them from using roads.
- Rural uses:
 - Mushroom, livestock such as cattle, grasscutters, rice
 - Tourism. Ejisu-Juaben Forest Reserve and butterfly sanctuary; guesthouses, hotels etc.

➤ **BOSOMTWE DISTRICT**

- Urban growth boundary should be widened to include Pramso and Seadro where development has already taken place.
- New Towns should be considered for Dedesua, Aduaben, Behenase, Kokodei and Abidjan Nkwanta
- Rural Strategies should include
 - Irrigation schemes (so that vegetables, rice etc. can be grown year round rather than providing only seasonal employment)
 - Improved feeder roads to access key towns and their facilities.
 - Improved bus routes and terminals so people can access new rural key towns. These should include technical and vocational training institutes to give young people skills so that they can get/create employment.
 - Tourism: leisure parks etc. along lake shore (north side)
- Structure Plans needed for: the whole of the Kuntense and Abonu areas, including lake/recreational areas; and Brodekwanu.

Main (Regional) Meeting

- Question regarding the growth boundary of the conurbation: a question was asked for clarity as to whether a green boundary/belt was to be used to serve as a buffer for the growth boundary but was told that the outer ring road could in a way serve as the buffer. Also, green areas have been proposed near the outer ring road.
- There was a call for a plan which would serve as a means of revising the SDF and the SP. In response it was stated that the new physical planning guideline makes provision for revision of plans.
- There were also suggestions that durbar meetings should be organized in the various MMDAs to sensitize people on the importance of the proposed New Towns.
- Representative from the Statistical Service of KMA raised a concern that the growth rate used by the JICA is too low compared to the current rate of 5.4%. The response was that it is better to stabilize the growth of KMA and redistribute it other areas so as to reduce the burden of activities on KMA. It was added that an urban area like KMA with a growth rate of 5.7% is not something to be encouraged.
- In some big cities, some lands are reserved for urban agriculture so a participant asked why there are no such proposals in the city (KMA). A follow up to this question was that between the years 1999-2000, places were earmarked for urban agriculture and open places and that most of the vegetables in Accra are grown within the Accra metropolis so urban agriculture would be encouraged in this plan.
- A participant raised the attention of the Study Team to the fact that the Danish Government is assisting in preparing an industrial estate and group of auto repair shops so the Team should make an effort to learn the details of the Danish plan and see how it may influence this plan.
- There are a lot of quarry activities in the Afigya Kwabre district so there should be at least a buffer surrounding the quarry areas. This was raised by a representative of the District and was noted by the JICA Study Team
- A participant again wanted to know how the vision of the plan corresponds with the proposals of the SDF and the Structure Plan. Mr. Hideyuki Sasaki explained that the vision influenced the proposals and strategies adopted for the plan.

(5) Discussions at the Fifth Series of Stakeholder Consultation Meetings

District Meetings Day 1 – Group Discussions of KMA

➤ **Consideration of the Proposed Spatial Plan**

It is very important that Kumasi have a Spatial Plan to redirect the growth of KMA. Currently, the city is very congested and with development of the sub-centres and the surrounding districts, congestion in the city centre will be considerably reduced. The proposed spatial structure plan will be a good tool to guide development of Greater Kumasi Sub-Region and hence is accepted by the Metropolitan assembly

➤ **Selection of Priority Actions**

- Preparation of KMA Structure Plan for guiding urban redevelopment

With a proper Structure Plan being prepared by JICA for KMA and the Greater Kumasi conurbation area, a good arrangement of the infrastructure can be implemented as that will be a blue print for the city engineers and authorities.

- Conduct pilot projects for urban redevelopment

Feasible projects should ideally be piloted and be extended/projected to a larger area. A specific example is the pilot project on the redevelopment of the Asawasi Zongo community by the Columbian university students. KMA has released a portion of land for this purpose.

- Making arrangements for lands enabling urban redevelopment under the auspices of Asantehene and Traditional chiefs
Release of land for projects is not the responsibility of the assembly but Traditional leaders/chiefs. Hence effective consultation and sensitization of the chiefs should be done to ensure the reservation of land for the various proposals. These lands should be acquired and necessary compensation paid to prevent encroachment. The Asantehene (Otumfuo) is very much the key in this regard.
- Incorporation into the Medium Term Development Plan
As with all other assemblies within the Greater Kumasi Sub-Region, the various proposals and urgent actions will be duly considered when preparing the next MTDP.

District Meetings Day 1 – Group Discussions of Asokore Mampong

- From the viewpoints of the municipality, how they see the proposed spatial structure of Greater Kumasi Sub-Region. Is it appropriate or not. Why is that so?
The issue on whether to accept the Spatial Structure to guide KMA and Asokore Mampong: the group accepted it but had a concern that Asokore Mampong should have a Sub-Centre as the other district capitals do. An existing light industrial area (pharmaceutical industry) should also be incorporated on the map. The group concluded that a new town be established at Asokore Mampong and surrounding towns like Asabe, Parkoso. Again, there is a vacant land at Bobang which can be developed as a landfill site.
- They were to evaluate the necessary action and to find out which action is the most urgent, and important for the municipality.
Necessary actions for the implementation of strategies for developing New Road Sections within Asokore Mampong.
 - Reshaping the road parallel to the Aboabo-Airport road to reduce the traffic on that road
 - Upgrading of Sawaba road linking KNUST junction
 Necessary action for implementing strategies for establishing BRT routes
 - It is necessary to widen the Inner Road and the Radial Roads.
 Necessary action for implementing the Structure for Open Space and Recreation
 - A suggestion was made to the Municipal Assembly to lead in ensuring that spaces are created for recreational purposes.
 Rezoning in Asokore Mampong
 - The affordable housing area is an example and the Industrial area can also be used.
 Necessary actions for implementing strategies for urban redevelopment at Asokore Mampong.
 - Aboabo no. 1 should be redeveloped, especially the area from Asawase to Asokore Mampong road.
 Strategies for road improvement and sub-urbanization
 - Measures to be put in place to develop the middle ring road with existing roads like Oduom-Asokore Mampong.
 - Developing the Aprade-Pakoso road
 - Asokore Mampong road
 - Developing the road from Kentinkrono to Asokore Mampong.
 Kumasi – Ejisu urban corridor should be constructed to ease pressure on other roads.
- Pick the top three urgent/important actions for the municipality
The most urgent Actions to be taken for Asokore Mampong Municipality are:
 - Upgrading of major roads
 - Necessary measures for upgrading new roads within the municipality
 - Urban redevelopment
 - Kumasi – Ejisu urban corridor
 - Strategies for re-zoning within Asokore Mampong
 - Open Space and Recreational areas
 - Action for implementation of strategies for BRT routes
- They were also to look at how to incorporate those urgent actions into the next Medium Term Development Plan (2013-2016)
Incorporating urgent Actions in the Medium Term Development Plan (2013-2016)
 - It was agreed that the Development Planning Officer should consult various stakeholders in developing the MTDP
- Should there be a relocation of the Suame Magazine?
Members agreed that a relocation of the Suame Magazine would ease the congestion and open up new areas for development.

- How to solve the issues of the Central Market.
There should be satellite markets/bulk breaking points like Asawase market, Sawoaba market and Asokore Mampong market which can be developed and upgraded to relieve some of the pressure from the main Central Market.

District Meetings Day 2 – Group Discussions of Afigya Kwabre

- Evaluation of necessary actions for achieving the Greater Kumasi SDF and SP
 - The outer Ring Road
The main road through the district is usually under pressure as majority of the heavy duty trucks coming into the Kumasi city use this road. With successful implementation or construction of the outer ring road, it will help disperse traffic and ease pressure on the existing main road. Also, the land value around the proposed outer ring road will increase if the outer ring road is successfully constructed. From the spatial structure of Greater Kumasi Sub-region, a logistics centre is situated at Kodie, for this logistic centre to be vibrant/effective; the outer ring road plays a key part.
Access to the proposed airport at Ankaase within the district will be easier as the outer ring road easily connects to other sub-centres.
 - Kumasi – Ejisu Urban Corridor (Kumasi – Mampong urban corridor)
Members of the district deemed it necessary to discuss the Kumasi – Mampong Secondary Urban corridor rather than the Kumasi – Ejisu Primary urban corridor. The Secondary Urban corridor passes near the border of Kwabre East district and Afigya Kwabre district hence the district can also benefit from the Secondary urban corridor. The Kumasi- Mampong corridor will also provide an alternative route to the city centre and hence reduce traffic congestion on the existing main routes for both Kwabre East and Afigya kwabre districts.
 - Location of Health and Education facilities
Members of the district proposed that it will be appropriate if a district hospital is situated in the district capital- Kodie and also in Boamang (the proposed structure plan area). A missionary hospital is located in Ankaase. However, this hospital needs expansion and government support. Moreover, the district proposed Swedru as an ideal place to established a Nursing Training College (Tertiary institution)
 - Development of District centres / Suburban centres
As the population of the district increases and also with the proposed logistics centres in the district centres, there will be the need for infrastructure improvement in the district centre (Kodie) in terms of roads and utility improvements and effective waste management systems. The majority of the roads in the district capital are not tarred hence it becomes difficult to use them during the rainy season.
 - Structure Plan Areas
Boamang is the only proposed Structure plan area in the district apart from the conurbation area. This was appropriate for the district, but communities such as Nkwanta Kese, which is very close to the conurbation area, are fast developing as layout plans had already been developed. Habitat for humanity (an organization which provides safe and affordable houses for communities) have their estate houses in Nkwanta Kese.
Though Nkwanta Kese is not considered as a structural plan area, development could still go on as layout plans had already been done.
- Selection of Priority Actions
After careful evaluation and consideration of the necessary actions, the three priorities of Afigya Kwabre district are:
 - Action for Structure Plan Areas outside Greater Kumasi Conurbation
 - Locations of Health and Education facilities
 - Securing land for the outer ring road
- Incorporation of urgent actions into the next Medium-Term Development Plan
In order to achieve the proposed actions for the district, the necessary actions will be considered when preparing the next medium term development plan.
- Greater Kumasi Spatial Plan
From the view point of the district, the proposed Spatial Plan of Greater Kumasi is appropriate because when it is implemented there will be drastic development of the district, increase in the revenue base of the district and also enhance job creation for the youth.

District Meetings Day 2 – Group Discussions of Kwabre East

- From the viewpoints of Kwabre East, how do you see the proposed spatial structure of Greater Kumasi Sub-Region? Is it appropriate? Or not appropriate?
The group accept the proposed spatial structure because the implementation structure will bring development in the district.

- Question two response - Prioritization / ranking of proposed necessary actions by JICA team
The group rank the proposed necessary actions by JICA team in order of importance as follows:
 - Securing land for the construction of the outer ring road
The group is of the view that making special arrangements with Otumfuo Asantehene and other local chiefs in the district is very important and consider it as the most the necessary action so as to secure land for the construction of the proposed outer ring road.
 - Development of urban conurbation
The group is of the view that the development of settlements like Ahwiaa, Medoma, Fawoade Mampong, and Kenyase etc., which falls within the proposed spatial conurbation, is very important as it will help improve the living condition of the people in these areas.
 - Outer ring road and development of its surrounding areas.
It was suggested that the construction of the proposed outer ring road is very important since it will ease traffic on the main road and also bring development to the surrounding areas.
 - Construction of link roads
The group propose that links roads which fall within the conurbation should be developed in order to ease movement within the district as well from and to Kumasi. They propose link roads from Fawoade to Medoma, and Fawoade to Kenyase through the Airport roundabout and Dumanafa to Ejisu. This will help to reduce traffic congestion on the main Kumasi – Mampong Road.
- How to incorporate those urgent actions into the next Medium-Term Development Plan (2013-2016)?
The development planning officer for Kwabre –East and the group accepted the idea of incorporating the proposal of the spatial development framework and the structure plan into this year’s medium term development plan for 2014-2017 and appreciate the fact the idea has come this early.
- General group suggestion
 - The group suggested that all by-laws governing construction and development of towns and buildings should be enforced and major key stakeholders like TCPD, The District Assembly, Chiefs, Assembly members and every individual should assist in implementing all the by-laws.
 - The group also suggested that the government should commit enough financial resources towards the achievement of the proposed structure plan.
 - The group also advise the Chiefs to avoid unnecessary sale of land but secure some for the implementation of the project.
 - The group also caution the Assembly to control encroachment on the main Kumasi- Mampong road and avoid the erection of temporary structures on the road as well as all other arterial routes within the district so as to harness the smooth start of the project, most especially the BRT
 - The group also suggested that zoning polices on high rise buildings in certain towns within the district should be considered in order to ensure efficient land use in the district.
 - The group also propose that the government should revitalize the State Housing Co-operation for them to assist in the development of new towns as well increasing housing stock in the district.

District Meetings Day 3 – Group Discussions of Ejisu-Juaben

- Consideration of the Spatial Plan of Greater Kumasi
The Ejisu-Juaben municipality considered the proposed spatial plan of the sub-region as appropriate and will benefit from its implementation hugely based on the below listed factors:
 - Ejisu, the capital town of the Municipality, is considered as the Secondary Urban Centre of the Greater Kumasi Sub-region
 - The Kumasi – Ejisu Primary Urban Corridor is considered as the priority for the BRT pilot project and work has already began on the expansion of the Kumasi- Accra road
 - Fumesua is considered as a suburban centre
 - There are about 4 proposed industrial centres in the municipality
 - There are about 3 proposed new towns in the municipality
 - The proposals for the municipality at previous stakeholder meetings have duly been incorporated into the spatial plan, in that, Boankra has been included into the Conurbation area, and hence a Structure plan will be prepared for it.
 - The proposed Structure plan for Greater Kumasi is not so different from that already prepared for Ejisu-Juaben about 2 years ago.
- Selection of Priority Actions
After carefully considering all the actions presented for discussion, the municipality selected the below listed actions as their priority actions

- Securing Land for the Outer ring road.
Having the Boankra inland port in mind, the municipality considered Securing Land for the outer ring road as the highest priority action. This will decrease congestion and enhance free access to the inland port.
- Structure Plan areas outside Greater Kumasi.
There are about 5 proposed Structural plan areas within the municipality including areas such as Domase, Juaben, and Baman. There will be coordinated development at these areas if the Structure plan is made at the appropriate time so that haphazard development will not happen.
- Kumasi –Ejisu Urban Corridor
The World Bank in partnership with the government of Ghana is developing the Kumasi to Ejisu corridor to implement the Bus Rapid Transit. Since work is progressing on this project already, the municipality considered it as their third priority action. Most important to the assembly is the proposed parallel road to the Kumasi-Ejisu road.
- Incorporation of Actions into the Medium Term Development Plan
According to the Development Planning Officer of the assembly, all the proposed actions for the municipality are keenly noted and will be incorporated into the next Medium Term Development Plan. As the major stakeholders of the assembly were available to accept the proposal made by the study team for the municipality, it will not be difficult defending it.
- Recommendation
The proposed outer ring road by the Department of Urban Roads did not materialize because of the huge compensation that had to be paid. In order not to repeat this unfortunate incident, the land for the proposed outer ring road should be acquired immediately.
Proper Education and awareness creation should be enhanced to achieve implementation of the proposed plans smoothly.

District Meetings Day 3 – Group Discussions of Bosomtwe

- From the viewpoints of Bosomtwe, how do you see the proposed spatial structure of Greater Kumasi Sub-Region? Is it appropriate? Or not appropriate?
- The conurbation: after much deliberation, the group adopted the proposals by the JICA Team, that is; all the proposals for the conurbation
- New Towns: the group adopted the proposed area for New Town Development that is; Behenase but also proposed Abrankese, Kokodie and Piase area as additional New Towns.
- Outer Ring Road: members accepted the proposed areas for the road since it will link the district to other adjoining districts.
- Industrial Development: the Bosomtwe group again accepted the Nkwanta area for the industrial development but proposed additional areas near Brodekwano to also serve as an industrial area.
- Structure Plan Areas: this was unanimously accepted by the group but further added Peposo-Brodekwano as structure plan areas.
- Linking Roads: opening of Beposo to bomfa Nkwanta, opening of Sawuah junction through Aputuogya to Kokofu, opening of Anyinatiase to Bekwai.
- Sub-Centre Development: Aputuogya was accepted as the sub-centre of the district because of its strategic location.
- District Priorities:
 1. Creation and expansion of link roads
 2. Sub-Centre development
 3. Industrial development (Agro and citrus processing)
- How to incorporate the above actions into the next MTDP of Bosomtwe District:
 - Inclusion of spatial maps to show locations of projects in the MTDP
 - Stakeholders meetings and participation to prioritise which areas to incorporate
 - Rolling back of previous Action Plans into the current ones to balance the two

District Meetings Day 4 – Group Discussions of Atwima Kwanwoma

- Greater Kumasi Spatial Plan
After careful explanation and discussion of the proposed Spatial Plan for the district and Greater Kumasi at large, the assembly accepted the Spatial Plan for Greater Kumasi Sub-region and if they have any concerns, they can review it in 5 years. The assembly wanted the conurbation area to be extended beyond Foase to Trabuom. However, the facilitators made it known that Trabuom is a proposed Structural Plan area.
- Selection of Priority Actions
Considering the necessary actions presented for discussion, the district selected the following actions as their

priority.

- Securing Land for the Outer Ring Road

Land acquisition has been a major problem to the implementation of many projects. Hence, to ensure successful implementation of the outer ring road, extensive consultation with the chiefs has to be done to preserve the land for this project. It is therefore important to allocate the specific route/ places needed for the outer ring road.

- Development of the District and Suburban Centres

Improvement of the linking roads within the district capital will enhance effective mobility of goods and people, hence, commercial activities will be promoted.

- Structural Plan Areas outside Greater Kumasi Conurbation

Boaman is the proposed Structure Plan area for the district. With the current rapid development of the area, it is ideal that a Structure Plan be prepared to coordinate development of the area.

➤ Incorporation of Actions into the Medium Term Development Plan

Currently (2013), the various proposed actions cannot be incorporated into the MTDP but the actions will be duly considered when preparing the next MTDP.

➤ Recommendations & Concerns

The assembly members of the various districts have to be sensitized to own the project so that as they are closely in touch with the community members, they (assembly members) can educate the entire community to appreciate the various proposals.

District Meetings Day 4 – Group Discussions of Atwima Nwabiagya

➤ From the viewpoints of the district, how do they see the proposed spatial structure of Greater Kumasi Sub-Region? Is it appropriate or not. Why is that so?

Members of the group accepted the Spatial Structure Plan but added that;

- The Outer Ring Road which goes through the District should be extended to go beyond Sepaase. The argument was that the current route goes through built up areas and may be expensive because of the compensation that would have to be paid to property owners.

- They also agreed that their portion of the Outer Ring Road should go through the existing roads so as to by-pass the Barekese Dam.

- There were also concerns from the participants that compensation should also be paid properly and on time to anybody whose property would be affected by the project.

Although the group concluded that the Outer Ring Road should be extended beyond Sepaase, they also threw out a word of caution that the current proposed routes of the Outer Ring Road in the District should be put into another use e.g. Bicycle lanes to prevent people from developing in that area. This they said would help prevent encroachments at the Barekese Dam.

For the plan to be fully implemented in the District, the group agreed that there should be a good relationship between the Assembly and the Traditional Authorities.

There should also be a stronger and legal commitment from all stakeholders, especially the District Assembly.

➤ They are also to look at how to incorporate those urgent actions into the next Medium Term Development Plan (2013-2016)

How the Plan would change the current Development Plan of the District (incorporation of the Plan in the MTDP): they said, the Greater Kumasi Conurbation plan would give a broader perspective of development in the District because the proposals and developments undertaken in the Districts have always been on a smaller scale so the Greater Kumasi Conurbation Plan would give a broader view of all aspects of development in the District. Incorporation of the plan doesn't end there but must be accompanied with a legal backing. There must also be public interest in the form of sensitization.

When the plan is fully incorporated in the MTDP, there could be an attraction of investors into the District because there would be existing plans to direct them.

➤ They are to evaluate the necessary actions and to find out which action is the most urgent, important for the district?

➤ Pick up the top three urgent/important actions for the district

Prioritization of actions:

- Necessary actions should be taken to develop the District Centres and Suburban Centres

- Lands should be secured for the development of the Outer Ring Road

- Locations must be selected for Health and Educational Facilities

In conclusion, the group unanimously agreed that, "Resources and time-frame" must be matched to promote effective implementation of the plan. This is because a land owner could reserve his/her land for some proposals

in the plan but the land may lie idle for many years without it being put into use. So the time frame is very important when it comes to acquisition of land for the proposed activities.

Main (Regional) Meeting

Questions and Answers at the Plenary Session

- Issues on the proposals for the Electricity sub-sector: A suggestion was made to the house to also tackle the issue of electricity generation in the proposals. It was added that the plan should also encourage people to become involved in the generation aspect.
Comment: there is a well advanced national plan on electricity generation so the generation of electricity would be adequate for Ghana very soon. On the other hand, ECG has plans for improving the supply of electricity so the problem would only be the replacement of bad wires and other minor things.
Additional comment on Electricity: Although the national plan on electricity is in place, there should also be encouragement for others to start producing/generating electricity. At the micro level, the use of bio-gas could also be encouraged to generate some electricity.
- Question: What are the plans for residential accommodations?
Answer: There are proposals for New Towns (about 1700ha) for residential purposes
- Comment: All will come to nothing if there is no land security. Areas meant for certain purposes in old plans have been turned to other uses which affected compensation. What measures have been put in place for land security and for land owners to stick to the proposals?
Answer: The next step of the plan would be trying to secure the needed land. Ashanti is very fortunate, especially when it comes to the issue of land, because of the Asantehene. Also the new planning bill gives adequate provision for land security. When this bill becomes law, it would be difficult for anybody to undertake rezoning without addressing the appropriate concerns.
- Question: How can we integrate the priorities for the various districts?
- Question: National development planning policy – how does the JICA plan fit into it?
- A lot of issues and problems which have been discussed under this Greater Kumasi plan are still happening in the Greater Accra area so what are the stringent measures that can be put in place by this plan to ensure that once approved, it may not suffer the same fate as the Greater Accra?
- The issue of land is not only with the Chiefs but the authorities and managers, government officials etc. They should be able to implement and enforce the existing laws
- Comment: There is the preparation of a national plan in which all areas and cities would have a role to play so we shouldn't think about Kumasi standing alone but should try and look at the general picture of land use planning in Ghana.
- Question: Are the JICA Team and stakeholders aware of the informal economic activities in the industrial clusters that are proposed in the Greater Kumasi plan? What are the effects of the informal economic activities on the plan in terms of the industrial cluster proposed?
- Comment: Stakeholders should give RPCU the mandate to implement the plan.
- Question: Where are the funds going to come from to implement this plan?
- Recommendation: The government should secure the lands at the current or a lower rate because when the proposed use is put in place, the value of the other surrounding areas would begin to appreciate.

Group Discussions of Group 1

- General acceptance of the SDF and SP
After a lengthy discussion and concerns raised on the proposed SDF and SP, the group accepted the proposal by the JICA Study team as appropriate considering how the infrastructural development will enhance the socio-economic standard of Greater Kumasi and Ashanti region at large if only it is implemented.
- Actions for Implementation
Attitude is very critical to achieve a successful implementation of the various proposals for the Sub-region. Various plans have failed to see the light of day because of the bad attitude of institutional heads towards these plans as they fail to implement the laid down laws.
Capacity building of the counterparts and coordinating directors are also very important so that people will have adequate knowledge for successful implementation. Also the technicians should liaise with leadership to provide good suggestions.
The MDAs should be empowered as the actual implementation comes to their level. However, transparency should be upheld at the district level to overcome unforeseen challenges.
Proper marketing of the plan at the national level is very necessary.
- High Priority Action
New water sources are essential and dredging of the existing dams should be done to enhance their capacity.

- Mobilization of Resources for effective Implementation
 - Use of Public Private Partnership
 - Use donor funds
 - Use of internally generated funds like property taxes
- Recommendation
 - Parking lots should be duly considered when constructing roads to avoid on-street parking which reduces the road capacity.
 - Mass transportation like the metro mass transit and the BRT system is an ideal solution to reduce congestion in the peak hours.
 - Optimum use of the liquid waste should be implemented to convert the waste to energy.

Group Discussions of Group 2

➤ General Acceptance of the SDF and SP

Participants agreed to the strategies outlined above but had some suggestions to add, especially the issue of Open Space and Recreation. They agreed that cultural areas should be highlighted because of the cultural practices of the people of Ashanti Region.

Another suggestion was made for the provision of land banks for future innovations. He said that land could be reserved in the city centre because the world is advancing in technology so a new idea may crop up in about 30 to 50 years which may require the land. In response to this suggestion, a participant commended the idea but added that it cannot be done in the city centre because of land optimization (land to the highest and best use). He added that land banks could be created at the peripheries instead of the city centre because redevelopment can also be done once there is that kind of innovation in the future.

On the issue of water supply for the sub-region and conurbation, a member suggested that the Team encourage collective ground water drilling, especially at the District level. That is; a group of towns or communities could join resources to dig a mechanized borehole for water supply.

A participant who is a member of the Progressive Transport Owners Association (PROTOA) and also a member of the National Transportation Committee explained the operations and services of the BRT to the other members. They all accepted the Spatial Structure Plan and added that, a “Park and Ride” system should also be proposed to complement the BRT.

➤ Necessity to Take Actions for Preparing for and Implementing the SDF and SP at the Regional Level

Participants outlined various steps in which this plan could be implemented. They gave them as;

- The Plan should categorize the various proposals made into National (that is those proposals that cannot be implemented by the MMDAs), those which can be implemented through PPP and those that can be executed by the MMDAs.
- From there, various MMDAs should be made to prepare their own Structure Plans. By this, the proposals by the Sub-Regional SDF would influence their proposals at the local level.
- Again, local plans should be prepared from the Structure Plans. A suggestion was made to get a copy of the Ghana National Infrastructure Plan so as to guide the Team in some of the proposals for the region.

A member of the group explained to members that there are various ways for institutions to implement the plans. There is the use of the existing institutions, creation of new institutions and a combination of the existing and newly created ones. He said these institutions all come with their challenges. For instance; creation of new institutions requires legal backing on so on. He cautioned that it sometimes becomes difficult to dissolve these institutions once formed because they become very powerful so he believes it is acceptable to use existing institution like the RPCU. The problem he identified with RPCU is the fact that although Act 462 gives it the mandate to implement plans, it is very weak. He then suggested the strengthening of the RPCU and other existing institutions rather than the creation of a Special Platform or new ones. This was understood by all the members and was agreed.

How the RPCU should make the Plan work: it was agreed that since the RPCU is mandated to harmonize MTDPs, these proposals can be pushed through at the preparation of the MTDP so that it can receive the needed funding.

➤ High Priority Strategic Actions

The first step that was adopted was to have the approval of the Greater Kumasi Sub-Regional SDF and the Greater Kumasi Conurbation SP but it shouldn't go to the Establishment of a Regional Platform as indicated but instead, make sure the existing institutions like the RPCU are strengthened. After this, adequate publicity should be given so that the ordinary person on the street can understand the plans as was done with the preparation of the Western Regional SDF. There is no need to establish a National Mechanism for promoting the implementation because there is the Ghana Export promotion Council and again there is a Regional Minister and

Member of Parliament who are supposed to lobby for these kinds of things (and funds) for their various areas so when the proposals are categorized in the National, District, Local and Public-Private levels, authorities can take up their respective portions and lobby for funds and other things.

- Priority Projects/Actions for Economic and Social Infrastructure Sectors

The group agreed to the proposals made by the JICA Team but added that the water sector should be looked at from a holistic point of view. That is; start with the preservation of wetlands; assess areas that need protection like the catchment areas before the dredging aspect can be tackled.

- Sources of Funds for Implementation

As mentioned above, the members agreed that once the proposals are phased into National, Regional, District and Local levels, various authorities like the Regional Minister, Member of Parliament and others can lobby for funds for their respective areas. This categorization can also help in securing funds from donors and other agencies.

The issue of betterment by Act 462 could also be used to mobilize funds for the projects because according to the act, once a plan appreciates your property, you are supposed to pay for the betterment.

Group Discussions of Group 3

➤ General Acceptance of the SDF and SP

After careful consideration of the proposed Spatial Structure for Greater Kumasi Sub-Region, the group accepted the proposal by the JICA Study team for the reasons explained below.

- The implementation of the outer and middle ring roads will help ease congestion in the Kumasi city centre and enhance the mobility of both goods and services.
- With the development of the Sub-centres and district centres/capitals, relocation of some commercial activities can be done hence focus will not be only on the CBD.
- Summarizing, if the proposals are effectively implemented, they will help improve the socio-economic and infrastructural development of Greater Kumasi Sub-Region and also effectively contribute to the development of the country as Kumasi serves as the Commercial hub of Ghana, as the country has attained the middle income status.

➤ Actions for implementation of the SDF

The Regional Planning and Coordinating Unit (RPCU) by law is required to assist districts to implement their plans. It is therefore essential to empower the RPCU to be effective in the execution of its duties and strengthen their legalities to prosecute offenders.

Also, all institutions concerned should be clearly specified and their specific responsibilities stated. A monitoring mechanism should be set up to ensure that all stakeholders are up to task and effectively functioning. A good communication strategy is needed to enlighten the populace about the project to ensure smooth implementation of the various proposals.

Since an SDF will be prepared for Ashanti region and the nation at large, there is the need to duly consider and incorporate the necessary proposals by the study team into the SDF which will be prepared for the region and the country at large.

With good branding and marketing of the project at national, regional and district levels. it will attract both local and foreign investors

➤ High-Priority Strategic Actions

The facilitators of the group considered the priority actions proposed by the study team and deemed them to be appropriate.

Both the Region and the districts have their own priorities, however, it is important not to let Regional priority supersede district priorities. It is therefore essential to harmonize the priorities of various stakeholders and critically consider the district level priorities.

Districts are therefore encouraged to preserve land for their priority projects/actions and increase their revenue base in the future.

➤ Mobilization of Resources for Effective Implementation

To start with, it is important to demarcate areas for the various proposals and secure the land. This can be done when Otumfuo owns the project himself and encourages his chiefs to do the same. In this case, fewer funds will be spent on compensation.

The government of the country should also be interested in the project and take adequate initiatives such as construction of roads which are capital intensive. Moreover, the government can sell the proposals to foreign donors/ investors to undertake major projects for the sub-region.

A strong collaboration should be established among RCC, Districts and the house of Chiefs so as to create the platform for effective marketing of the proposals and easy acquisition of land to attract local investors also.

➤ Recommendation

All stakeholders should be bold to take decisions and actions that will ensure smooth implementation of the various proposals.

According to the representative from ECG, institutions like KNUST (universities) and KATH should relocate some departments or blocks to specific places so that the whole institution does not become non-functional in case of water shortage or no electricity. For example, the mechanical engineering department can be relocated to the Suame magazine area.

(6) Plenary Discussions at the Sixth Stakeholder Consultation Meetings

- a) Prof Samuel Afrane: Over the years, most sub-centres that have been proposed in his many plans have not been successful so he recommended that the Study Team should clarify which functions proposed sub-centres should have. Another suggestion on this same issue was to specialize some of these proposed sub-centres so that people would know that a specific sub-centre is for a specific activity.
- b) Issues of land management and land tenure issues in Kumasi: the recommendation was that the plan should include a component on land management but it was made clear to the house that the Asantehene is fully supportive of the plan and would help in the land tenure issues.
- c) Again Prof. Afrane said to the house that he had heard nothing regarding urban renewal or upgrading and that a plan for Kumasi for the next twenty to thirty years should at least include proposals for some parts of the city to be renewed. A quick response to this was that, the plan actually addresses the necessity for urban renewal, especially in Kumasi City Centre, for instance Fante New Town and Asawase.
- d) The Professor suggested to the Study Team that if the methodology used for the infrastructure projections were only the programmes and projects from the sector agencies, then there could be a setback to this plan because most of the projections made by these agencies do not consider proper population projections. The response from the Team leader was that the projections were done by experts who did not use sector agencies' projects, but the Study Team's own future socio-economic framework based on the 2010 population and housing census of Ghana.
- e) There was also the view that there should be a human resource assessment for the capacity building component of the plan to ascertain the type and kind of personnel, resources etc. that would be needed.
- f) The last point raised by Prof. Afrane was that the time line for the implementation of the plan seemed long so some of the activities should be "boxed" with others to reduce the time frame.
- g) A question was asked about how the development of Kumasi Kejetia would fit into this Greater Kumasi SDF and SP but it was made known to all that the city centre plan by the Study Team takes care of all activities within the Kumasi city centre.
- h) The Chief of Foase appealed to the Study Team to arrange a meeting with the Ashanti Regional House of Chiefs to brief them on the project and also appeal for their support.
- i) A recommendation was made to the Study Team to include vegetation protection along the banks of the Barekese and Owabi dams other than just the dredging of the Barekese but the house was told that vegetation reservation and protection are part of the strategies for the water sector programmes.
- j) The Development Planning Officer of Atwima nwabiagya raised a concern that the capacity building outlined by the plan was skewed toward the personnel from the TCPD but the Regional Director of TCPD assured him that the capacity building encompasses all stakeholders, it was just that the TCPD office is looked at as the Secretariat of the plan.
- k) There were many concerns about the non-involvement of the railway system in the Greater Kumasi plan. There were concerns that it should form part of the transportation system in the city but a quick response by the Team Leader was that at present in Ghana, it was advisable to concentrate on the road network system, especially the BRT. He added that the BRT system requires the use of six lanes with two lanes in the middle for the BRT so some of these roads could be converted to railway lines when the need arises but for now, it is prudent to adopt the road system. He also assured participants that the existing railway lines have not been discarded.
- l) A question was asked as to whether the Kumasi Zoo can be relocated to the other adjoining districts but a response by the Regional Director of TCPD was that there are sections of the public who are against its relocation so it is a subject matter that can be discussed later but in the meantime, it is reserved on the SDF and the SP.
- m) A suggestion was also made to include the transformation of the informal economic activity in the priority programmes and projects since it employs a lot of people in Kumasi's economy.
- n) A suggestion was made on the inclusion of the informal economic activity by grouping them in blocks and allocating space for them. Again the response was that this level of the plan does not give details of certain activities so that would be looked at in the local plan level. Also the redevelopment aspect of the plan will consider the informal economic activity.

- o) The Study Team in conclusion responded that all the comments made would be looked at if they are not captured in the plan because most of the things raised are found in the plan already, it was just that they could not be explained due to time constraints.

Appendix D Records of Process for Strategic Environmental Assessment for Greater Kumasi Sub-Regional SDF and Greater Kumasi Conurbation SP

D.1 Introduction

This appendix contains the results of the major workshops and review meeting for the SEA study.

Results of the meeting recorded in this appendix are:

- SEA Scoping Workshop
- SEA Assessment Workshop
- SEA Review Meeting.

D.2 SEA Scoping Workshop

(1) Objectives

- To clarify sources of information and base conditions;
- To identify potential stakeholders in the assessment; and
- To identify possible environmental impacts.

(2) Date and Location

The SEA Scoping Workshop was held on 24th January, 2013 at Miklin Hotel in Kumasi.

(3) Participants

A total of 59 stakeholders, not including the JICA Study Team and local consultant, participated in the workshop. A participant from EPA had sufficient experience in the field of SEA because he was a member of the working team that established the Ghana SEA system, so he supported and facilitated the participants in proper group discussion.

Based on the stakeholder analysis to initially select stakeholders, The TCPD and JICA Study Team identified the stakeholders who participated in the scoping workshop for the above matters. The following stakeholders were invited:

Table D.1 List of Invitees

Organization, Participants		Attendances	
		Invited	Participated
from Accra	EPA	3	1
	NDPC	1	0
	TCPD	1	0
KMA	Director	1	1
	Planning Officer	1	1
	Planning Officer	1	1

Organization, Participants		Attendances	
		Invited	Participated
	Development Planning Officer	1	1
	Road Engineer	1	1
	Environmental Health Unit	1	1
	Information	1	1
Ejisu-Juaben Municipality	Director	1	1
	Planning Officer	1	
	Planning Officer	1	
	Development Planning Officer	1	1
	Road Engineer	1	
	Environmental Health Unit	1	1
	Information	1	1
Asokore Mampong Municipality	Development Planning Officer	1	
	Road Engineer	1	
	Environmental Health Unit	1	
	Information	1	1
Kwabe West Municipality	Director	1	
	Development Planning Officer	1	1
	Environmental Health Unit	1	1
	Information	1	
	Feeder Roads	1	1
Afigya Kwabe District	Director	1	1
	Development Planning Officer	1	
	Environmental Health Unit	1	1
	Information	1	1
	Feeder Roads	1	
Atwima Nwabiagya District	Director	1	1
	Development Planning Officer	1	1
	Environmental Health Unit	1	1
	Information	1	1
	Feeder Roads	1	1
Atwima Kwanwoma District	Director	1	
	Development Planning Officer	1	1
	Environmental Health Unit	1	1
	Information	1	1
	Feeder Roads	1	1
Bosomtwe District	Director	1	1
	Development Planning Officer	1	
	Environmental Health Unit	1	1
	Information	1	1
	Feeder Roads	1	
Traditional Council	Chief	8	7
Ashanti Region	Co-ordinating Director	1	
	Economic Planning Officer	1	1
	Regional Director, Ghana Highways Authority	1	1
	Regional Director, Tourist Board	1	1
	Regional Director, Water Company	1	1
	Regional Director, Electricity Company	1	1
	Regional Director, Regional EPA	1	
	Regional Director, Feeder Roads	1	1
	Regional Director, Forestry	1	1
	Regional Director, Minerals Commission	1	
	Regional Director, Food and Agriculture	1	1
	Regional Director, Geological Survey	1	1
	Department		
	Regional Director, Survey & Mapping, Lands Commission	1	
Regional Director, Trade & Industry	1	1	
Regional TCPD	Regional Director	1	1
	Director	1	

Organization, Participants		Attendances	
		Invited	Participated
	Planning Officer	5	5
MOFA	M.O.F.A.- PPRS		1
Others	KNUST	1	
	BRRRI	1	1
	Association Ghana Industries	1	1
	Ghana Road Transport Coordinating Council	1	1
	Friends of Rivers and Water Bodies (Faith based Organization)	1	
	(Community Based Organization)	1	
	Ghana News Agency	1	1
	Total Number	85	59

Source: JICA Study Team

(4) Programmes

The programme for the Scoping Workshop was as follows:

PROGRAMME OF ACTIVITIES	
08:30am - 09:00am	Registration
09:00am – 09:15am	Opening Remarks
09:15am – 09:30am	Address by Regional Director, Town and Country Planning Department (TCPD)
09:30am—10:00am	The Study on Comprehensive Urban Development Plan for Greater Kumasi
10:00am--11:00am	SEA Scoping on Comprehensive Urban Development Plan for Greater Kumasi Environmental Base Conditions Purposes of SEA, and Scoping Process Questions and Answers Grouping
11:00pm– 11:30am	Snack Break
11.30pm – 13:00pm	GROUP WORK
13:00pm– 13:45pm	Lunch
13:45pm--14:45pm	Presentation by Group Leaders
14:45pm – 15:00pm	Closing Remarks

(5) Group Work

The stakeholders who will be involved in the SEA assessment session and key environmental issues were identified by participants through the group discussion. That kind of active involvement is the typical SEA process in Ghana. Participants were divided into the following four groups:

- Group A: Transportation;
- Group B: Land use;
- Group C: Water (supply and resources) and waste (solid and liquid), and
- Group D: Energy.

The First Guideline shown in Table 7 for method of identification of stakeholders and key environmental issues (challenges) was described to the participants at the Scoping Workshop.

Table D.2 Guideline of Scoping Session

SEA for the Greater Kumasi Area SDF and SP Scoping Workshop	
Miklin Hotel, Kumasi, 24 January 2013	
Objective of the Scoping Process	
<ul style="list-style-type: none">• inform the public about the proposed project, as part of a public disclosure strategy;• identify the main stakeholders and their concerns and values;• identify and focus on the important environmental issues and significant impacts to be addressed by the SEA;• define the reasonable and practical alternatives to address identified environmental and social concerns for project;• define the boundaries for the SEA in time, space and subject matter.	
<u>A: Stakeholder identification</u>	
Key Questions	
<ol style="list-style-type: none">1. Who qualifies to be a STAKEHOLDER2. List all STAKEHOLDERS relevant to the sector and project3. Categorize them as PRIMARY or SECONDARY4. Prepare a MATRIX describing main stakeholders in terms of:<ol style="list-style-type: none">a. Institutional mandateb. Roles and responsibilitiesc. Interest in the Project- high or lowd. Policy maker, regulator, service provider, implementation agency, enforcement etc.	
<u>B: Identification of Environmental issues and Mitigation</u>	
Key Questions	
<ol style="list-style-type: none">1. What are the major challenges currently associated with the sector in the Greater Kumasi Project Area2. Discuss and RANK the challenges in terms of their environmental and social impact: vis-à-vis impact on<ol style="list-style-type: none">a. Physical (Air, water, land) and Social environmentsb. Are the impacts Local, regional, national, global in naturec. Are the impacts of Immediate, short term, or long term nature or concern3. List possible PLANNING INTERVENTIONS to address the three most important challenges4. Suggest possible RISKS and OPPORTUNITIES (two each) associated with each planning option	

(6) Summary of the Workshop Results

The summary of the scoping workshop is presented in Final Report Part VII Chapter 25.

D.3 SEA Assessment Workshop

(1) Objectives

The objective of the Assessment workshop is to clarify:

- Policy conflict among the policies / plans / programmes in the SDF/SP;
- Impact on the natural environment including habitat and biodiversity and living environment caused by the adoption of SDF and SP;
- Impact on the social structure and people's lives caused by the adoption of SDF and SP, and
- Impact on the economic structure and economic growth caused by the adoption of SDF and SP.

(2) Date and Location

The SEA Assessment Workshop was held on 19th – 21st February, 2013 at the following venues in Kumasi.

- 19th February, 2013: Golden Tulip Kumasi City
- 20th February, 2013: Miklin Hotel Kumasi
- 21st February, 2013: Miklin Hotel Kumasi

(3) Participants

The stakeholders to participate in the assessment workshop were selected based on the results of the scoping session. Basically, the same members were nominated, while the following were newly selected and invited:

- Assemblywomen (one unit in each district/municipality)
- Ghana Civil Aviation Authority, Kumasi Airport
- Police- MTTU- Regional Commander
- National Disaster Management Organisation (NADMO)
- Office of the Administrator of Stool Lands (OASL)
- Department of Women and Children’s Affairs (RCC)

It was notable to select assemblywomen. They are a kind of community leaders that are elected, but they are not politicians or government officers. They can act as representatives of communities.

In addition, a deputy director in NDPC who had advised in determining the SEA process since the JICA Study Team had commenced SEA was included. He also has knowledge of the Ghana SEA system, hence he and participants from EPA did a good job of facilitating other participants for clear discussion on the assessment.

A total of 58 stakeholders, not including the JICA Study Team and local consultant, participated.

Table D.3 List of Invitees to SEA Assessment Workshop

Organization, Participants	
EPA Accra	EPA
NDPC Accra	NDPC
TCPD Accra	TCPD
KMA	Director
	Planning Officer
	Planning Officer
	Development Planning Officer
	Road Engineer
	Environmental Health Unit
	Information
Ejisu-Juaben Municipality	Hon. Assemblymen
	Director
	Planning Officer
	Planning Officer
	Development Planning Officer
	Road Engineer

Organization, Participants	
	Environmental Health Unit
	Information
	Hon. Assemblymen
Asokore Mampong Municipality	Development Planning Officer
	Road Engineer
	Environmental Health Unit
	Information
	Hon. Assemblymen
Kwabe West Municipality	Director
	Development Planning Officer
	Environmental Health Unit
	Information
	Feeder Roads
	Hon. Assemblymen
Afigya Kwabe District	Director
	Development Planning Officer
	Environmental Health Unit
	Information
	Feeder Roads
	Hon. Assemblymen
Atwima Nwabiagya District	Director
	Development Planning Officer
	Environmental Health Unit
	Information
	Feeder Roads
	Hon. Assemblymen
Atwima Kwanwoma District	Director
	Development Planning Officer
	Environmental Health Unit
	Information
	Feeder Roads
	Hon. Assemblymen
Bosomtwe District	Director
	Development Planning Officer
	Environmental Health Unit
	Information
	Feeder Roads
	Hon. Assemblymen
Traditional Council	Chief
Ashanti Region	Co-ordinating Director
	Economic Planning Officer
	Regional Director, Ghana Highways Authority
	Regional Director, Tourist Board
	Regional Director, Water Company
	Regional Director, Electricity Company
	Regional Director, Regional EPA
	Regional Director, Feeder Roads
	Regional Director, Forestry
	Regional Director, Minerals Commission
	Regional Director, Food and Agriculture
	Regional Director, Geological Survey Department

Organization, Participants	
	Regional Director, Survey & Mapping, Lands Commission
	Regional Director, Trade & Industry
TCPD	Regional Director
	Director
	Planning Officer
Others	KNUST
	BRR
	Association of Ghana Industries
	Ghana Road Transport Coordinating Council
	Friends of Rivers and Water Bodies
	(Faith based Organization)
	(Community Based Organization)
	Ghana News Agency
	Ghana Civil Aviation Authority, Kumasi Airport
	Police- MTU- Regional Commander
	National Disaster Management Organisation (NADMO)
	Administrator of Stool Lands
	Gender/ Vulnerable Groups
	Department of Women and Children Affairs (RCC)

(4) Programmes

The programmes for the Scoping Workshop were as follows:

Programme for Day1

08:30am - 09:00am	Registration
09:00am – 09:15am	Opening Remarks
09:15am – 09:30am	Address by Regional Director, Town and Country Planning Department (TCPD)
09:30am—11:30am	Briefing Assessment for the SDF and SP Results of Scoping Workshop
11:30pm– 12:00am	Snack Break
12:00pm – 13:00pm	Training on SEA Tools
13:00pm– 13:45pm	Lunch
13:45pm--14:45pm	Training on SEA Tools
14:45pm – 15:00pm	Closing Remarks

Programme for Day2

08:30am - 09:00am	Registration
09:00am – 09:15am	Opening Remarks
09:15am – 09:45am	Grouping
09.45pm – 12:30pm	Group Work

(11:00pm– 11:30am	Snack Break)
12:30pm– 13:15pm	Lunch
13:15pm--14:45pm	Group Work
14:45pm – 15:00pm	Closing Remarks

Programme for Day3

08:30am - 09:00am	Registration
09:00am – 09:15am	Opening Remarks
09:15am – 10:30am	Group Work
(10:30pm– 11:00am	Snack Break
11.00pm – 12:00pm	Group Work
12:00pm– 12:45pm	Lunch
12:45pm--14:15pm	Presentation by Groups
12:15pm--14:45pm	Questions and Answers, Conclusion
14:45pm – 15:00pm	Closing Remarks

Main works:

- Presentation on:
 - Summary of results of scoping workshop, and
 - Points of the SDF the SP to be assessed,
 - Guidance of assessment using SEA tools.
- Group Works and presentation on:
 - Compatibility among policies;
 - Compound matrix in each sector; and
 - Environmental risks and opportunities.

(5) Group Work

The SEA tools compatibility matrix, compound matrix and environmental risks and opportunity matrix were used in the group discussion. The participants were given exercises to use these tools prior to group discussion using the guidelines below:

Table D.4 Guidelines of SEA Assessment in Group Discussion

<u>STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE STUDY ON COMPREHENSIVE URBAN DEVELOPMENT PLAN FOR GT. KUMASI</u>	
<u>COMPATIBILITY: GROUP EXERCISES</u>	
1.	Objectives
To ensure that the objectives of the plans are internally consistent and do not conflict with each other.	

2. Approach and Task

Formation of groups based on sectors (i.e. Transport, Energy, Waste management, Land use, etc.) The tasks for each group are as follows:

- List a set of Plan objectives down the rows in the first column.
- List these same plan objectives across the columns in the top row.

Each group should be chaired by the representative of a key sector institution and a Rapporteur appointed from the group.

The group should review the matrix by examining the interactions of plan objective 1 identified in the first column with each of the remaining policies numbered 2 upwards, appearing across the top of the matrix.

- Where two plan objectives are mutually supportive with each other this should be recorded by marking a ✓ in the relevant box.
- Where two plan objectives have the potential to conflict with each other this should be recorded by marking an X in the relevant box.
- If there is no significant interaction this should be recorded by O.

3. Duration of Group Work : Max. 1hr.

4. Group Presentation : 10 min. per group

5. Expected Output

- List of plan objectives that are mutually supportive
- List of plan objectives that are conflicting
- Proposals for addressing the conflicts

STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE STUDY ON COMPREHENSIVE URBAN DEVELOPMENT PLAN FOR GT. KUMASI

COMPOUND MATRIX: GROUP EXERCISES

1. Objectives

To assess whether the plan objectives and interventions address the key environmental concerns in the sector.

2. Approach and Task

Formation of groups based on sectors (i.e. Transport, Energy, Waste management, Land use, etc.) The tasks for each group are as follows:

- List the plan interventions/strategies down the rows in the first column, and
- List the key environmental concerns across the columns in the top row.

Each group should be chaired by the representative of a key sector institution and a Rapporteur appointed from the group.

The compound matrix is used, principally to evaluate individual PPPs against a range of environmental criteria, which serve as indicators of the existing environmental conditions. These criteria relate to the four pillars of sustainability; Natural resources, Socio-cultural, Economic, and Institutional issues

Each individual PPP is assessed in turn using the key environmental concerns.

The group should discuss the way in which each PPP will interact with each of the key environmental concerns and a decision taken as to whether or not the PPP is likely to eliminate the environmental effect or worsen it or be largely neutral. The following symbols are used to record the judgement as follows:

- Conditions are likely to be positive +
- Conditions are likely to be negative -
- Conditions are likely to be neutral o
- Conditions are uncertain ?

3. Duration of Group Work : Max. 1hr.

4. Group Presentation : 10 min. per group

6. Expected Output

- List of PPPs and Key environmental concerns that conflict
- List of PPPs and Key environmental concerns that support each other
- Proposals to mitigate the conflicts

STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE STUDY ON COMPREHENSIVE URBAN DEVELOPMENT PLAN FOR GT. KUMASI

RISK AND OPPORTUNITY MATRIX: GROUP EXERCISES

1. Objectives

To assess the risks and opportunities associated with the plan interventions/strategies and propose mitigation measures to address the risk and enhance the opportunities.

2. Approach and Task

Formation of groups based on sectors (i.e. Transport, Energy, Waste management, Land use, etc.) The tasks for each group are as follows:

Create a 5 column matrix with the following headings;

- Plan interventions
- Anticipated risks/opportunities
- Proposed Mitigation/ Implementation Guidelines
- Responsible institution
- Remarks

And

- List the plan interventions/strategies down the rows in the first column.
- List the Anticipated risks/opportunities in the second column
- List the proposed mitigation measures in the third column
- Indicate the relevant institution who should be responsible for mitigating the risk or enhancing the opportunities
- Provide any comments/remarks in the last column

Each group should be chaired by the representative of a key sector institution and a Rapporteur appointed from the group.

3. Duration of Group Work : Max. 1hr.

4. Group Presentation : 10 min. per group

7. Expected Output

- List of all PPP interventions
- List of all anticipated risks/opportunities
- List the proposed mitigation measures
- List of relevant institution responsible for mitigating the risk or enhancing the opportunities

(6) Summary of the Workshop Results

The summary of the scoping workshop is presented in Part VII Chapter 25.

D.4 SEA Review Meeting

(1) Objectives

The objectives of the SEA Review Meeting are:

- To be reviewed by EPA which principally acts as a leading body for supervising SEA Study, and
- To provide suggestions and recommendations for finalizing the draft SEA report provided by the JICA Study Team.

(2) Date and Location

The review meeting was held on 25th April, 2013 at Best Western Premier Hotel in Accra.

(3) Participants

A total of 4 persons attended excluding the JICA Study Team and sub-consultants.

Table D.5 List of Invitees to the SEA Review Meeting

Name	Position / Organization
Mr Kwaku Adjei-Fosu	National Development Planning Commission (NDPC), Accra
Ms Christine Asare	Director SEA Unit, Environmental Protection Agency, Accra
Mr Ebenezer Appah-Sampong,	Director, PPME, Environmental Protection Agency, Accra
Mr Kwabena Badu-Yeboah	Director, Environmental Protection Agency, Accra-West, Amasaman
Mr L Z Dakura,	Deputy Director, Town and Country Planning Department (TCPD), Accra
Mrs. Rosamund Edusei	Regional Director, Town and Country Planning Department (TCPD), Ashanti Region

(4) Programmes

The programmes for the Review Meeting were as follows:

08:30hrs - 09:00hrs	Registration
09:00hrs – 09:30hrs	Opening Session Welcome Address Purpose of Meeting
09:30hrs—11:00hrs	Presentation and Discussion on General Comments by Participants
11:00hrs– 11:30hrs	Snack Break
11:30hrs– 13:00hrs	Presentation and Discussions of Specific Comments by Participants
13:00hrs– 14:00hrs	Lunch
14:00hrs--15:00hrs	Presentation and Discussions of Specific Comments by Participants Continued
15:00hrs--17:00hrs	Refining the SEA Report
17:00hrs	SNACK AND CLOSING