

カザフスタン国アスタナ新首都総合開発計画調査  
(事前調査・S/W協議) 対処方針案

項目	対処方針	備考
1. 事前調査の目的	次のとおり整理し、説明する。 1) 先方政府の要請内容及び意向の確認 2) 開調スキームの説明及び黒川コンセプトの著作権問題の整理 3) 本格調査実施方針・内容の協議 4) 本格調査実施に必要な情報収集、既存データの確認 5) 現地踏査 6) 受入体制の確認 7) S/W、M/Mの署名	カザフスタンにおける他の開調S/W、M/M、及びロシア語版開調パンフレットを持参する。
2. 調査団構成及び調査行程	(別紙1)	
3. 協議機関	外務省、戦略計画改革庁、首都開発公社、アスタナ市等の関係諸機関	
4. 具体的作業内容		
(1) 要請内容及び意向確認	1) プロ形調査以降の情勢の変化の有無の確認 2) 調査内容の確認(先方政府意向と当方提案の調査内容との調整) 3) 本調査後の実施計画、資金調達目処の確認(特に油田開発の状況・今後の見通しを含めた「カ」国財政の見通し、他ドナーからの資金調達目処)	マスタープランは、黒川コンセプト実現の基礎となる土地利用計画及び都市インフラ整備計画を策定するものであることを明確にする。
(2) 開調スキーム説明及び黒川コンセプト著作権問題	1) 口上書、コンサルタント選定のプロセス、ローカルコンサルタントの雇用方法等について説明する。特に、同一のローカルコンサルタントが、補強と再委託と両方に関わることはできない旨、明確にしておくこと。  2) 黒川コンセプトの著作権問題については、「カ」政府と黒川事務所との間で整理してほしい旨申し入れる。	口上書の署名者が外務省になるのか戦略計画改革庁になるのか要確認。 ローカルコンサルタントについては、要すればAk Orda社にも説明する。  外務省より在「カ」大を通じて連絡済み。

項目	対処方針	備考
(3) 本格調査実施方針及び内容協議	S/W案を基に協議を行ない、その結果をS/W、およびM/Mにて確認する。	
(イ) 目的	<p>1) 同国の新首都であるアスタナ市の首都としての機能を支え、同市住民の生活の質的向上に資するため、2030年を目標年次として、アスタナ新首都総合開発計画を策定する。</p> <p>2) 優先プロジェクトについて、2005年を目標年次としてフィージビリティ調査を実施する。</p> <p>3) 技術移転の観点から、相手国カウンターパートの計画策定能力を強化する。</p>	先方要請を確認する。この際、F/Sの実施が資金協力（有償、無償）のコミットするものではないことを説明し、了解を得る。また、調査規模の目安としては、M/P 80人月、F/S 30人月程度を想定。
(ロ) 対象地域	アスタナ市（面積約260平方キロメートル）	
(ハ) 内容と項目	<p>別添S/W（案）の通り。</p> <p>1) 現状分析</p> <p>2) 開発課題の分析</p> <p>3) 計画フレームの設定</p> <p>4) 開発シナリオの作成</p> <p>5) アスタナ新首都開発計画の策定</p> <p>6) 優先プロジェクトにかかるフィージビリティ調査</p> <p>特に以下の点に留意しつつ本格調査を実施したい旨説明する。</p> <p>1) イシム川右岸の既成市街地と左岸の新規開発とのバランス</p> <p>2) 「カ」政府が掲げる2005年60万人という目標の実現可能性</p> <p>3) 「カ」政府の財政見通し</p> <p>4) アスタナ市を中心とした広域的な視点</p>	先方要請を確認する。
(ニ) 調査期間	別添S/W（案）の通り、18ヶ月を提示する。また、先方要請があった場合、フィージビリティ調査はプログレスレポート（5カ月目）以降に開始することとする。	政治日程、気象条件等を確認する。

項目	対処方針	備考
(ホ) 報告書	報告書は英語版とロシア語版を作成し、英語版を正文とする。 部数はロシア語版30部、英語版10部、最終報告書のみロシア語版50部、英語版20部とする。また、報告書の取扱いについては通例通り「公開」を原則とし、M/Mに記載する。	
(4) 関連情報の入手及び現状把握	<p>1) CDCについて プロ形調査の際には設立間もなかったが、その後の展開について（特に組織、活動、収入源と予算措置、株主等）、確認する。</p> <p>2) これまでのアスタナ開発 「カ」政府は、アスタナ開発のために、1999年5月1日までに6500万ドルを出費し、1999年には5億1800万ドルの予算が計上している。右実績及び計画の詳細について確認する。</p> <p>3) 人口予測 1997年1月現在で28万人のアスタナの人口を、2005年までに60万人にするための計画が提示されたが、それを支える社会経済成長等の情報を確認する。</p> <p>4) 既存のアスタナ開発計画 Ak Orda社が首都移転計画以前に作成した、2005年までのマスタープランを入手する。</p> <p>5) 国際コンペの作品集 優勝した黒川コンセプト、準優勝のAk Ordaコンセプトを含む、国際コンペ参加作品をとりまとめた作品集を入手する。</p> <p>6) セクター毎の現状把握 電力・暖房、上水道、下水道、廃棄物処理、道路・公共交通、排水等の現況及び改善計画を確認する。</p> <p>7) 円借款要請 「カ」政府が検討中の、アスタナ市のインフラ整備にかかる円借款要請について、内容・スケジュール等を確認する。</p>	
(5) 相手側受入体制確認	<p>1) 実施機関は首都開発公社及びアスタナ市とする。</p> <p>2) 便宜供与事項を確認する。</p>	首都開発公社に加え、技術者のいるアスタナ市を実施機関とすることを確認する。

項目	対処方針	備考
(6) S/W、M/Mの署名	署名者 ・日本側： 事前調査団団長 ・カザフスタン側： 外務省、戦略計画改革庁 首都開発公社総裁、アスタナ市長	「カ」側は、実施機関だけでなく、援助窓口機関も含める方向とする。
(7) その他の確認事項	環境影響調査、社会影響評価、地質調査、地形測量等の必要性和範囲を明確にするとともに、再委託先の調査を行う。	Ak Orda社が再委託先として有力であるが、これ以外の再委託先についても情報収集する。
5. 請訓必要事項	1) 調査内容について大幅な変更を求められたときは請訓する。 2) S/Wの変更については、変更マニュアルにより対応する。	
6. 大使館への報告	本格調査内容検討協議内容についてはJICA本部へ随時報告し、協議の最終結果については大使館へ概要報告するとともに公電発出を依頼する。	
7. 議事録等	1) あらかじめ作成したS/W案を基に説明協議し、合意の上、署名する。 2) 協議内容をM/Mとして取りまとめ、双方の代表者が署名、確認する。	
8. 報告書		
(1) 帰国報告書	帰国報告会資料として、各担当分野について各自2～3頁程度にまとめる。	
(2) 事前調査報告書	目次(案)(別紙2)に従って、各担当者により作成する。	

項目	対処方針	備考
9. 団員の担当事項		
1) 総括	<ul style="list-style-type: none"> <li>・ 調査業務全体の総括</li> <li>・ 先方政府の意向確認</li> <li>・ 要請の背景及び内容の確認</li> <li>・ 現地踏査</li> <li>・ S/W協議、署名</li> <li>・ 事前調査報告書の作成</li> <li>・ S/W案、対処方針、Q/Nの検討</li> <li>・ 本格調査内容検討</li> </ul>	
2) 協力政策	<ul style="list-style-type: none"> <li>・ 我が国のカザフスタン国に対する援助方針・実績の整理</li> <li>・ 先方政府に対する我が国技術協力の枠組みの説明</li> <li>・ 現地踏査</li> <li>・ S/W協議への参加</li> <li>・ 事前調査報告書の作成</li> <li>・ S/W案、対処方針、Q/Nの検討</li> <li>・ 本格調査内容検討</li> </ul>	
3) 協力企画・都市計画	<ul style="list-style-type: none"> <li>・ 既存のアスタナ開発計画の分析</li> <li>・ 現地踏査</li> <li>・ S/W協議への参加</li> <li>・ 事前調査報告書の作成</li> <li>・ S/W案、対処方針、Q/Nの検討</li> <li>・ 本格調査内容検討</li> </ul>	
4) 調査企画	<ul style="list-style-type: none"> <li>・ 調査実施にあたっての全体計画の作成及び総合的調整</li> <li>・ 関連機関、在外公館等との調整</li> <li>・ JICA本部および現地事務所との連絡</li> <li>・ 業務調整</li> <li>・ 現地踏査</li> <li>・ S/W協議への参加</li> <li>・ 事前調査報告書の取りまとめ</li> <li>・ S/W案、対処方針案の作成</li> <li>・ 本格調査内容検討</li> </ul>	

項目	対処方針	備考
5) 都市計画・地域開発	<ul style="list-style-type: none"> <li>・アスタナ首都開発に関する現状及び問題点を把握するため、既存のマスタープラン及び政府の開発目標、社会経済データ、土地利用現況、組織・体制、法律、財源等の情報・資料を収集・整理・分析する。</li> <li>・計画フレーム（人口予測、土地需要予測、経済成長予測、環境保全目標等）設定に必要な情報・資料を収集・整理する。</li> <li>・現地踏査</li> <li>・ローカルコンサルタント実態情報収集</li> <li>・S/W協議への参加</li> <li>・事前調査報告書の作成及び取りまとめ協力</li> <li>・S/W案、対処方針の検討への協力</li> <li>・Q/N作成</li> <li>・現地協議議事録作成協力</li> <li>・本格調査内容検討</li> </ul>	
6) 社会基盤	<ul style="list-style-type: none"> <li>・同国のインフラ関連資料、関連情報、関連データの収集、確認、分析（ハード面のみならず、維持管理に関わる組織・制度・財源等のソフト面も含む）</li> <li>・現地踏査</li> <li>・ローカルコンサルタント実態情報収集</li> <li>・S/W協議への参加</li> <li>・事前調査報告書の作成及び取りまとめ協力</li> <li>・S/W案、対処方針の検討への協力</li> <li>・Q/N作成</li> <li>・現地協議議事録作成協力</li> <li>・本格調査内容検討</li> </ul>	
7) 自然条件・環境	<ul style="list-style-type: none"> <li>・環境関連資料・情報（自然環境規制、文化財保存／土地開発関連法規及び慣例）の収集、確認、分析</li> <li>・現地踏査</li> <li>・ローカルコンサルタント（測量、土質等）実態情報収集</li> <li>・S/W協議への参加</li> <li>・事前調査報告書の作成及び取りまとめ協力</li> <li>・S/W案、対処方針の検討への協力</li> <li>・Q/N作成</li> <li>・現地協議議事録作成協力</li> <li>・本格調査内容検討</li> </ul>	

Questionnaire and Required Data for the Preparatory Study

【Form-1】

URBAN INFRASTRUCTURE AND MUNICIPAL SERVICES IN THE CITY OF ASTANA

No.	Classification/Item	Description	Availability*	Relevant Agency	Material Title
<b>1</b>	<b>Road Transport</b>				
1.1	Road Network	1) Road maps 2) Road inventory (road class, length, width, surface type, related facilities, etc.)			
1.2	Road Transport System (Public bus, trolley bus, car, etc.)	1) Network maps of public transport system 2) Type of transport system and capacity by mode 3) Traffic data by road & by type of vehicle 4) Traffic flow data of cargo/passengers by mode 5) Registered number of vehicles by type 6) Traffic survey system			
1.3	Institutional System, Organization and Financial Sources for Road and Public Transport	(Law/regulation concerned, agency, personnel, budget, fare system, etc)			
1.4	Criteria and Standard for Planning/Design (Road and public transport system)	1) Manual on planning, design, construction, maintenance			
1.5	Reports/information of the Road Development Project				
1.6	Reports/information of the Public Transport Development Project				
1.7	Reports/information of the Traffic Management Development Project				
1.8	Foreign Assistance concerned to Road and Public Transport	(Country/organization, amount of assistance, outline of the project)			
<b>2</b>	<b>Other Transport</b>				
2.1	Railway Transport System	1) Network maps, and inventory (specification of railway/related facilities, transport capacity, etc.) 2) Traffic flow data of cargo/passengers			
2.2	Air Transport System/Airport	1) Network maps and transport capacity 2) Traffic flow data of cargo/passengers			
2.3	Inland Waterway System	1) Network maps and transport capacity 2) Traffic flow data of cargo/passengers			
2.4	Institutional System, Organization and Financial Sources (Railway, air, inland waterway transport)	(Law/regulation concerned, agency, personnel, budget, fare system, etc)			

\* Please mark "Y"(Yes) if available; and "N"(No) in case of not available.

(Form-1: 1/6)

No.	Classification/Item	Description	Availability*	Relevant Agency	Material Title
2.5	Criteria and Standard for Planning/Design (Railway, air, inland waterway transport)	1) Manual on planning, design, construction, maintenance			
2.6	Reports/information of the Railway Transport Development Project				
2.7	Reports/information of the Air Transport Development Project				
2.8	Reports/information of the Inland Waterway Development Project				
2.9	Foreign Assistance concerned to Railway Transport, Air Transport/Airport and Inland Waterway	(Country/organization, amount of assistance, outline of the project)			
3	<b>Water Supply</b>				
3.1	Water Sources (Surface water & Ground water)	1) Inventory (location, water sources, type & specification of intake facilities, etc.) 2) Hydrological data (discharge, water quality, etc.)			
3.2	Water Treatment System	1) Inventory (location, type & specification of facilities, capacity, etc.)			
3.3	Water Transmission & Distribution System	1) Network maps and inventory (type & specification of facilities, capacity, etc.) 2) Operation / maintenance data of facilities 3) Water consumption data by categories (domestic, commercial, public, others)			
3.4	Institutional System, Organization and Financial Sources for Water Supply	(Law/regulation concerned, agency, personnel, budget, tariff system, etc.)			
3.5	Criteria and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
3.6	Reports/information of Water Resources Development Project				
3.7	Reports/information of Water Supply Development Project				
3.8	Foreign Assistance concerned to Water Supply	(Country/organization, amount of assistance, outline of the project)			

\* Please mark "Y"(Yes) if available; and "N"(No) in case of not available.



No.	Classification/Item	Description	Availability*	Relevant Agency	Material Title
<b>4</b>	<b>Sewerage</b>				
4.1	Sewerage System (Collection and treatment)	1) Network maps, sewerage system (separate, combined), treatment facilities ( type & specification, capacity, etc) 2) Tariff system (domestic household, enterprise, others)			
4.2	Industrial Wastewater Treatment	1) Present condition on treatment system 2) Regulation for treatment/drainage			
4.3	Institutional System , Organization and Financial Sources for Sewerage	(Law/regulation concerned, agency, personnel, budget, tariff system, etc)			
4.4	Criteria and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
4.5	Reports/information of Sewerage System Development Project				
4.6	Reports/information for Strengthening Plan on Industrial Wastewater Management				
4.7	Foreign Assistance concerned to Sewerage	(Country/organization, amount of assistance, outline of the project)			
<b>5</b>	<b>Rainwater Drainage and Flood Control</b>				
5.1	Rainwater Drainage System	1) Network maps and inventory of drainage system (type & specification of canal/related facilities, drainage capacity, etc.)			
5.2	Flood Control and Mitigation Facilities	1) Inventory of flood control facilities ( levee, dam, bank protection, etc) 2) River data (river plane, cross section, longitudinal section, etc.)			
5.3	Flood Damage Record	(Past major flood, inundation area, damage, etc.)			
5.4	Institutional System , Organization and Financial Sources for Rainwater Drainage/Flood Control	(Law/regulation concerned, agency, personnel, budget, etc)			
5.5	Criteria and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
5.6	Reports/information of Rainwater Drainage Development Project				
5.7	Reports/information of Flood Control and Mitigation Project				

\* Please mark "Y"(Yes) if available; and "N"(No) in case of not available.

(Form-1: 3/6)

No.	Classification/Item	Description	Availability*	Relevant Agency	Material Title
5.8	Foreign Assistance concerned to Rainwater Drainage and Flood Control/Mitigation	(Country/organization, amount of assistance, outline of the project)			
<b>6</b>	<b>Solid Waste</b>				
6.1	Solid Waste System (Domestic/municipal refuse and industrial waste)	1) System flow : collection & transportation (separate, combine), treatment (open burning, incineration, land fill, others), recycle 2) Inventory (location, type & specification of facilities, capacity, etc.)			
6.2	Institutional System , Organization and Financial Sources for Solid Waste	(Law/regulation concerned, agency, personnel, budget, etc)			
6.3	Criteria and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
6.4	Reports/information of Solid Waste Development Project				
6.5	Foreign Assistance concerned to Solid Waste	(Country/organization, amount of assistance, outline of the project)			
<b>7</b>	<b>Electricity</b>				
7.1	Power Station	1) Inventory (location, type & specification of power plant, capacity, etc.)			
7.2	Power Transmission & Distribution	1) Network maps & inventory (type & specification of facilities, capacity, etc.) 2) Consumption data by categories ( domestic, commercial, public, others)			
7.3	Institutional System , Organization and Financial Sources for Electricity	(Law/regulation concerned, agency, personnel, budget, tariff system, etc)			
7.4	Specification and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
7.5	Reports/information of Electricity Development Project				
7.6	Foreign Assistance concerned to Electricity	(Country/organization, amount of assistance, outline of the project)			
<b>8</b>	<b>Telecommunications</b>				
8.1	Public Telecommunications	1) Present condition on telecommunication services (Type of services, agency, capacity, specification of equipment, etc.)			

\* Please mark "Y"(Yes) if available; and "N"(No) in case of not available.

(Form-1: 4/6)

No.	Classification/Item	Description	Availability*	Relevant Agency	Material Title
8.2	Telephone system	1) Domestic & international ( agency, system type, supply capacity, specification of equipment, etc.)			
8.3	Institutional System , Organization and Financial Sources for Telecommunications	(Law/regulation concerned, agency, personnel, budget, tariff system, etc)			
8.4	Criteria and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
8.5	Reports/information of Telecommunications Development Project				
8.6	Foreign Assistance concerned to Telecommunications	(Country/organization, amount of assistance, outline of the project)			
<b>9</b>	<b>Social Services</b>				
9.1	Heating	1) Heat sources ( location, type & specification of facilities, capacity, etc.) 2) Transmission & distribution ( network, type of facilities, capacity, etc.) 3) Consumption data by categories ( domestic, commercial, public, others)			
9.2	Gas Supply	1) System type, location, capacity, specification of facilities, etc.) 2) Consumption data by categories ( domestic, commercial, public, others)			
9.3	Public Welfare	1) Number & distribution of facilities of public welfare ( hospitals, health centers, others)			
9.4	Education	1) Number & distribution of schools			
9.5	Institutional System, Organization and Financial Sources by Sector (Heating, Gas supply, Public Welfare, Education)	(Law/regulation concerned, agency, personnel, budget, tariff system, etc)			
9.6	Criteria and Standard on Planning/Design	1) Manual on planning, design, construction, maintenance			
9.7	Reports/information of Development Project for the above mentioned Sectors				
9.8	Foreign Assistance concerned to the above mentioned Sectors	(Country/organization, amount of assistance, outline of the project)			

\* Please mark "Y"(Yes) if available; and "N"(No) in case of not available.

No.	Classification/Item	Description	Availability*	Relevant Agency	Material Title
10	<b>Local Consultants</b>				
10.1	Consulting Firms	1) List & information of Consulting firms for planning/designing of urban infrastructure 2) Information of remuneration to consulting services			
10.2	Surveying Firms	1) List & information of surveying firms (topographic survey, geological survey/analysis, etc.)			
10.3	Cost of Surveying	1) Standard price for land survey 2) Standard price for river survey (cross section) 3) Standard price for geological survey such as boring, soil laboratory tests, etc. 4) Standard price for traffic survey & analysis 5) Standard price for hydrological survey (discharge, water quality, etc.)			

\* Please mark "Y"(Yes) if available; and "N"(No) in case of not available.

**【Form-2】**

## (2) TRANSPORT

### 1) Registered Number of Vehicles

Type	Numbers
Car	
Bus	
Trolley bus	
Truck	
Taxi	
Motorcycle	
Total	

(Year: 19\_\_\_\_)

### 2) Road Traffic Volume (Number of Vehicles)

Road / Place	Numbers (per day)

(Year: 19\_\_\_\_)

(\*Attach maps showing of traffic survey point, please)

### 3) Mode Share of Passenger and Cargo Trips

Mode	Passenger trips (persons)	Cargo trips (tons)
Road		
Railway		
Air		
Total		

(\*Attach a public transport network, please)

(Year: 19\_\_\_\_)

### 4) Agencies in charge of Public Transport Services

Transport System	Name of Agency	Outline of Agency
A. Road transport		Numbers of staff, Income, etc.
A-1) Bus		
A-2) Trolley bus		
A-3) Others		
B. Railway transport		
C. Air transport		

(Form-2: 2/8)

5) Transport Development Plan  
(New construction, Reconstruction, Rehabilitation)

Name of Project	Outline of Project
(Road transport)	(project year, agency, amount/source of budget, implementation status, facilities, etc.)
(Railway transport)	
(Air transport)	

## 2. WATER SOURCES AND WATER SUPPLY

### (1) WATER SOURCES AND DAM RESERVOIR

#### 1) Hydrological Conditions (Name of Dam: \_\_\_\_\_ )

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Mean Rainfall (mm)													
Mean Inflow (m <sup>3</sup> /s)													
Mean Outflow(m <sup>3</sup> /s)													
Characteristic of Water Quality													

#### 2) Feature of Dams (Name of Dam: \_\_\_\_\_ )

Name of river		Catchment area (km <sup>2</sup> )	
Construction year		Name of agency	
Dam type	Concrete gravity / Rock fill / Earth fill / Others		
Total storage (m <sup>3</sup> )		Effective storage (m <sup>3</sup> )	
Design flood (m <sup>3</sup> /s)	(year)	Dam height (m)	
Demand by purpose	Potable water (households, volume)		
	Hydropower(MW)		
	Industry (volume)		
	Irrigation (ha, volume)		
	Others (volume)		

### (2) WATER USE

#### 1) Present Conditions of Water Supply

Category	Volume per year (m <sup>3</sup> /year)	Number of households/ population, factories, etc.	Water tariff
Drinking water supply			
Industrial water supply			
Irrigation water supply			
Others ( )			

( Year: 19 \_\_\_\_ )

(Form-2 : 4/8)



## 2) Preset Condition of Water Transmission and Treatment System

Water Source	Facility	Outline of Facility
	Intake facility	(Intake type: gravity/pump/others, Capacity, Construction year, Specification/functions of facility, etc.)
	Transmission	(Transmission type: gravity,/pump/others, Capacity, Construction year, Specification/functions of pump/pipeline, etc. )
	Treatment	(Treatment type, Capacity, Construction year, Specification/functions of facility, etc.)

(\* Attach a map showing water distribution network, please)

## 3) Agencies in charge of Water Sources Development and/or Water Supply

Name of Agencies/Departments	Number of staff		Amount of Annual Budget(\$US)			
	Engineer	Total	Construction	Maintenance	Administrator	Total
(Water sources)						
(Water supply)						

## 4) Water Sources and Water Supply Development Plan

(New construction, Reconstruction, Rehabilitation)

Name of Project	Outline of Project
(Water sources development including diversion)	<div></div> <div></div> <div></div> <div></div>
(Water supply)	<div></div> <div></div> <div></div> <div></div>

(Form-2 : 5/8)

### 3. SEWERAGE

#### 1) Present Conditions of Sewerage

Coverage area of sewerage collection (km <sup>2</sup> ) :	
Number of households in coverage area :	Number of factories in coverage area :
Domestic sewage volume in Astana (m <sup>3</sup> /day) :	Industrial waste volume in Astana (m <sup>3</sup> /day) :

(\*Attach a coverage area maps, please)

Sewerage collection system (separate from rainwater / combined system) :	
Type of collection (sewer/open channel) :	
Sewerage treatment plant (numbers, location, name, construction year) :	
Treatment method :	Treatment capacity (m <sup>3</sup> /day) :

Outline of Industrial wastewater treatment system:
Outline of law/regulation on industrial wastewater drainage:

#### 2) Agencies in charge of Sewerage

Name of Agencies/Departments	Number of staff		Amount of Annual Budget(\$US)			
	Engineer	Total	Construction	Maintenance	Administrator	Total

#### 3) Sewerage Development Plan (New construction, Reconstruction, Rehabilitation)

Name of Project	Outline of Project
	(project year, agency, amount/source of budget, implementation status, facilities, etc.)

(Form-2: 6/8)

#### 4. SOLID WASTE

Coverage area of solid waste collection (km <sup>2</sup> ) : Domestic/municipal refuse	Industrial waste
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(\*Attach a coverage area maps, please)

Domestic sewage volume in Astana (per day) :	Industrial waste volume in Astana (per day) :
Collection system:	
Treatment system :	

Outline of law/regulation on industrial waste:

#### 2) Agencies in charge of Solid Waste

Name of Agencies/Departments	Number of staff		Amount of Annual Budget(\$US)			
	Engineer	Total	Construction	Maintenance	Administrator	Total

#### 3) Solid Waste Development Plan (New construction, Reconstruction, Rehabilitation)

Name of Project	Outline of Project
	(project year, agency, amount/source of budget, implementation status, facilities, etc.)

## 5. RAINWATER DRAINAGE AND FLOOD CONTROL

### 1) Present Conditions of Urban Drainage and Flood Control

Coverage area of rainwater drainage system (km <sup>2</sup> ):	
Drainage facility	canal (type, length, capacity, etc.):
	drainage pump (type, capacity, etc.):
Inundation area (map) due to heavy rainfall:	Heavy rainfall record (mm/day, mm/hour):
Catchment area (km <sup>2</sup> )	Ishim river (upper reaches of the city) :
	Tributaries of the Ishim river in the city :
Flood control facility	Dike (length):
	Dams (specification):
	Floodway (specification):
	Others:
Inundation are (maps) of past major floods:	Hydrological record water stage/(peak discharge)

### 2) Agencies in charge of Rainwater Drainage and Flood Control

Name of Agencies/Departments	Number of staff		Amount of Annual Budget(\$US)			
	Engineer	Total	Construction	Maintenance	Administrator	Total
(Urban drainage: canalization)						
(Ishim river improvement)						
(River improvement in the city)						
(Dam flood control)						
(Others )						

### 3) Rainwater Drainage Development and Flood Control plan (New construction, Improvement)

Note: including On-going project such as Ishim river improvement

Name of Project	Outline of Project
	(project year, agency, amount/source of budget, implementation status, facilities, etc.)

(Form-2: 8/8)

## Questionnaire to the Capital Development Corporation and the City of Astana

I would like to ask about the following items and to get the relevant data and documents, in order to grasp and clarify the present situation of and future tasks for the development of Astana City. I do appreciate your kind cooperation.

1. Existing planning schemes and development framework
  - The development master plan of Astana City to the year of 2005
  - Planning goals and the socioeconomic frame for the capital development set by the Government of Kazakhstan (including the population frame)
  - Orientation and priority of development concepts and plans proposed by Dr. Kurokawa and Ak Orda for the future master plan
  - Land use planning/zoning of Astana city
  - Environmental conservation criteria of Astana city
  - Laws and regulations for the capital development
  - Public investment plan for the capital development
  - Existing organizational framework for the development of Astana city (mandates of relevant governmental agencies and their administrative interrelationship)
  - Orientation and a priority of the capital development in the National development master plan
2. Basic data and assumptions used for establishing the socioeconomic development framework of the development master plan of Astana City
  - Data for population framework (population: Astana City by sub district, neighboring areas (Oblystar) )
  - Data for industrial framework (industrial outputs, employees by industry, approved foreign and domestic investment projects, etc)
  - Data for land use planning (existing land use pattern, future demands for land by industrial sector, availability of land in the city)
  - Data on natural conditions including geographical and geological features
3. The present urban problems which should be tackled with a higher priority in near future
  - The built-up area on the right bank of the Isim River
  - Others
4. Present functional linkages of Astana City and neighboring major cities in terms of socioeconomic activities including commodity flow and migration
5. Situation of Local consultants
  - Their expertise, availability, consulting fee, etc.
6. Other international donors' movements relevant to the Capital development
7. Expectation for the JICA study on the master plan for the development of the City of Astana