

The Republic of Cote d'Ivoire

Ministry of Hydraulics

**Preparatory Survey
for
Bandama River Water Supply Project for
Abidjan and Surrounding Cities
(PPP Infrastructure Project)
in
the Republic of Cote d'Ivoire**

**FINAL REPORT
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Source: Google Earth Pro

Schematic Map



Source: Water Supply Sector Strategy Plan 2017-2020
Water Source Development



Greater Abidjan

List of Abbreviations

AFRO	Agence Fonciere Rurale
ANDE	National Environmental Agency (Agence Nationale de l'Environnement)
CIAPOL	Centre Ivoirien Antipollution
DGIHH	The General Department of Infrastructures of Human Hydraulics (The General Department of Infrastructures of Human Hydraulics)
ESIA	Environmental and Social Impact Assessment
GTC	General Tax Code
MADR	Ministry of Agriculture and Rural Development
MCLAU	Ministère de la Construction, du Logement, de l'Assainissement et de l'Urbanisme (Ministry of Construction, Housing and Urbanism)
MIE	Minister des Infrastructures Economiques (Ministry of Economic Infrastructure)
OIPR	Ivorian Office Parks and Reserves
ONAD	L'Office National de l'Assainissement et du Drainag (The National Office of Sanitation and Drainage)
ONEP	L'Office National de l'Eau Potable (The National Office for Drinking Water)
PNHH	Programme National de l'Hydraulique Humaine (Program of Maintenance of National Water Supply Facilities)
RGPH	Recensement Général de la Population et de l'Habitat (General Census of Population and Housing)
SODECI	The Société de distribution d'eau de la Côte d'Ivoire

CHAPTER 1 PROJECT BACKGROUNDS

1.1 Situation of the Water Sector in Abidjan

1.1.1 Overview of water sector (including water distribution), situation of operating assets, development plan for water supply in Abidjan

(1) Overview of water sector in Abidjan

Drinking water supply of Cote d'Ivoire has been developed by the national drinking water program started from 1973. It is subdivided into urban water supply sectors and rural water supply sectors. Among about 227 million m³ that is the annual production volume of nationwide urban water supply of 2015, 153 million m³ (67%) is being consumed in Abidjan, which is an economic capital of Cote d'Ivoire (SODECI, 2016). It is about 400,000 m³ /day, which is all covered with groundwater.

During the conflict, the population of Abidjan was rapidly increasing, and at the time of 2012 after the conflict, the shortage of water production in Abidjan city water supply was calculated to be about 200,000 m³ /day (Oriental Consultants Global CO., Ltd., CTI Engineering International Co., Ltd., and CTI Engineering Co., Ltd., "The Final Report of Survey for Abidjan City Water Supply Ver.2", July 2017 (hereinafter "Oriental Consultants' Report, 2017")). For this reason, the Cote d'Ivoire government has promoted development of wells which are used as water sources in Abidjan and its suburbs.

Due to the development of new wells such as Bounoua, Songon, etc., shortfalls are almost eliminated at present. However, developing further water sources to cope with the medium-term population increase is the subject to be resolved for Abidjan urban water supply. Regarding the water source, it is pointed out that excessive pumping of the Abidjan aquifer, which is the source of feedwater in Abidjan, is a serious problem. According to the survey in 1995 (SOGREAH), the maximum volume of accessible groundwater is 388,800 m³/day. It is necessary to reduce groundwater consumption and to develop a new surface water source.

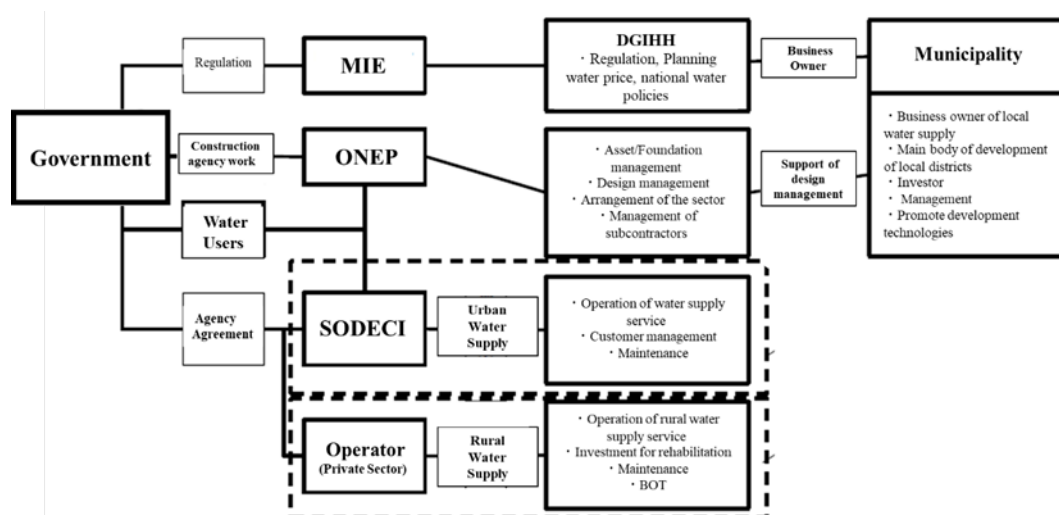
In relation to urban water supply, water supply in Abidjan and inland regional cities were operated according to outsourcing contract with private company SODECI and continued until now.

The outsourcing contract between the Cote d'Ivoire government and SODECI is a method called an affermage contract, which is similar to a concession contract. Both contracts are

methods of public service consignment by public-private partnership (PPP). In general, in concession contracts, management of public services and the facility investment is entrusted by the government to private companies, whereas in affermage contracts, business management and facility investment are conducted by the government, and operation of the government facilities and related services are entrusted by government to private companies.

SODECI continues to increase the number of subscribers and sales are rising, but the water fee has not been raised since 2004 and the profitability of the water supply business is declining.

Figure 1 shows the role assignment of each actor described in the Water Supply Sector Strategy Plan 2012-2015. In urban water supply, according to SODECI and the country's outsourcing agreement as shown in this figure, MIE entrusts urban water supply business management to SODECI, and ONEP is responsible for management of SODECI business operations. The agreement between the government and SODECI was updated in 2007, and it will continue until 2022. As described in 4.1.1, the Cote d'Ivoire government reshuffled the Cabinet at July 10, 2018 and jurisdiction over water supply of the company was transferred to Ministry of Hydraulics, which was newly established. The organization chart of Ministry of Hydraulics has not been disclosed yet, but the implementation system of water supply is not expected to be changed from the present according to government officials.

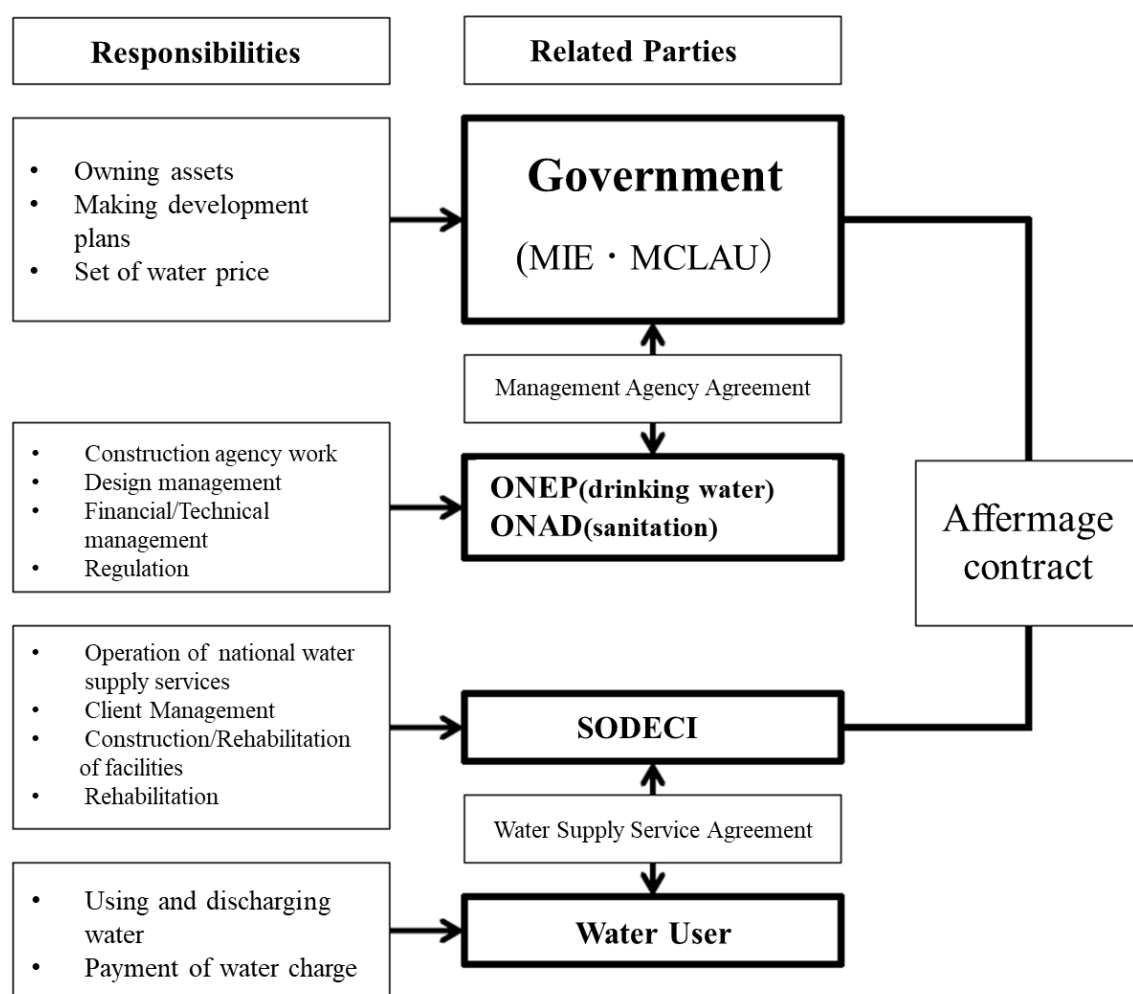


Source: Created based on 2012-2015 Water supply sector strategic plan (ONEP, 2011)
(Oriental Consultants' Report, 2017)

Figure 1 implementation structure of water sector

Figure 2 shows the contract relationship between the Cote d'Ivoire government, ONEP, SODECI and water users. Water supply is controlled by MIE and it has entered into agency agreement with ONEP, which is an external organization. The ownership of water supply facilities is in the government and MIE has entered into a contract with SODECI in order to entrust the operation of the government facilities.

Water users conclude a water supply service contract with SODECI. The collection of water fee is scope of SODECI, and the water fee constitutes revenue of SODECI.



Source: Created based on SODECI brochure (Oriental Consultants' Report, 2017)

Figure 2 Contract relationship of urban water supply concession contract

(2) Situation of operating assets

As previously said above, the sources of Abidjan city water supply are all underground water.

As of 2012, it had 88 wells, 9 water purification plants, and 4 neutralization facilities. The pipe extension was 2,924 km.

Since groundwater in the Abidjan Aquifer is acidic, it is distributed after being neutralized with an alkaline agent such as slaked lime.

Water supply pipes are managed and maintained by SODECI and the pipes and water meters from distribution branch pipes to each door are called branch water supply pipes (branchement). They are owned by SODECI, but in the case where they are not installed in the building of the user, it is necessary for the user to bear the installation cost.

Bottleneck on the water supply in Abidjan is the lack of water distribution facilities, and strengthening distribution facilities corresponding to the increased water production volume will be required.

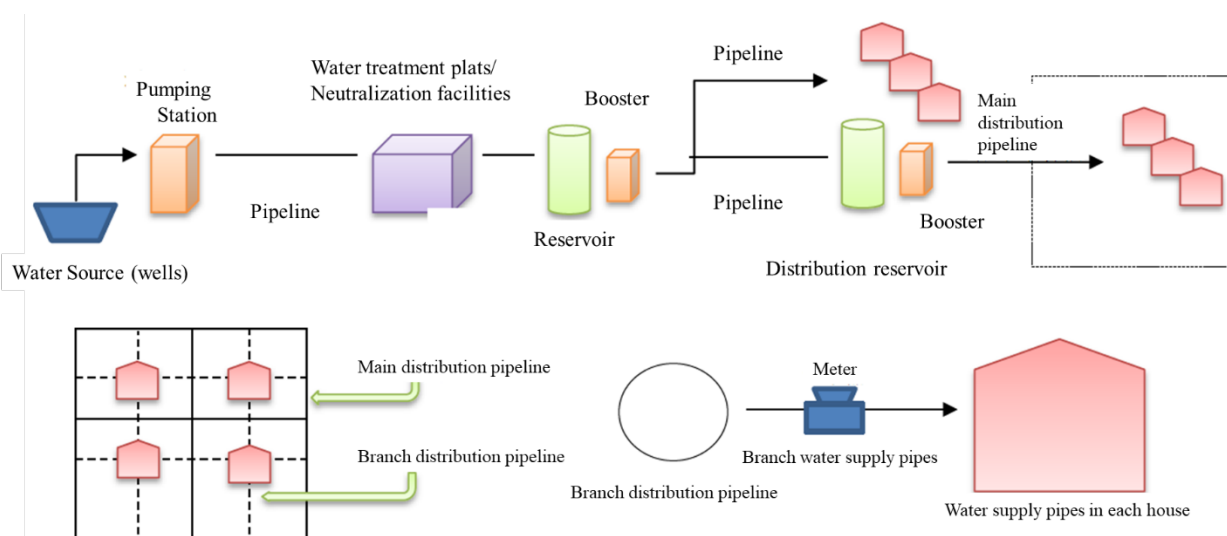


Figure 3 Conceptual diagram of Abidjan city water supply facility, (Oriental Consultants' Report, 2017)

(3) Development plan for water supply in Abidjan

- ✓ National Development Plan 2016-2020 (PND : Plan National de Développement 2016-2020)

The national development plan 2016 - 2020 was formulated in 2015 based on the

evaluation result of the preceeding national plan 2012 - 2015. Development of water supply is promoted according to its strategic axes of "harmonious infrastructure development and environmental protection in the whole country". As a result, it is aiming to achieve the results of the six items shown in Table 1.

In PND, the government enumerates action plans for each of the six achievements shown in Table 1, and is conducting surveys, budgetary measures and activities towards 2020. Among the action plans, the surface water source development project of the Bandama River is only clearly stated as water source development project for Abidjan.

In addition to the Badama River water supply project, the government also works for plans to develop other water treatment plants through direct negotiation with private companies. OENP signed an MOU with Veolia in November 2016 for the construction of a 240,000m³/d plant on the Me river, and also signed another MOU with Fluence for the construction of 150,000 m³/d plant on the Aghien Lagoon in late 2017.

Achievement	Number of Actions	Budget (2016-2020) Million FCFA
Governance of water supply infrastructure sector is strengthened.	5	
The actors in water supply sectors are strengthened with personnel, skills, and financial capabilities.	7	28,064
Water resources for water supply are secured.	5	15,245
Water supply infrastructure is refurbished.	16	85,896
High quality water supply infrastructure is constructed.	41	688,929
Technological innovation of water supply sector is promoted	3	4,610
Total	77	822,744

Source: TOM3 Action Plan, National Development Plan 2016-2020

Table 1 Results and budget planned in National Development Plan 2016-2020

1.1.2 Forecast of water demand and supply in Abidjan (water demand, forecast of available supplies of water, non-revenue water)

(1) Summary

In March 2018, JICA Study Team (Mitsubishi Corporation & Metito Utilities Limited) presented water demand and supply analysis to the government of Cote d'Ivoire. The summary chart (Appendix 1) shows summary of water demand and supply analysis.

According to this chart, even with the assumption that new development of water sources in Bandama River and La Me River will be made in a timely manner, total volumes of water demand and supply in 2017 are estimated approximately at 660,000 m³/d and 340,000 m³/d, with the gap of 320,000 m³/d shortage of supply.

Also, volumes of water demand and supply in 2030 are estimated at approximately 930,000 m³/d and 810,000 m³/d, with the gap of 120,000 m³/d shortage of supply.

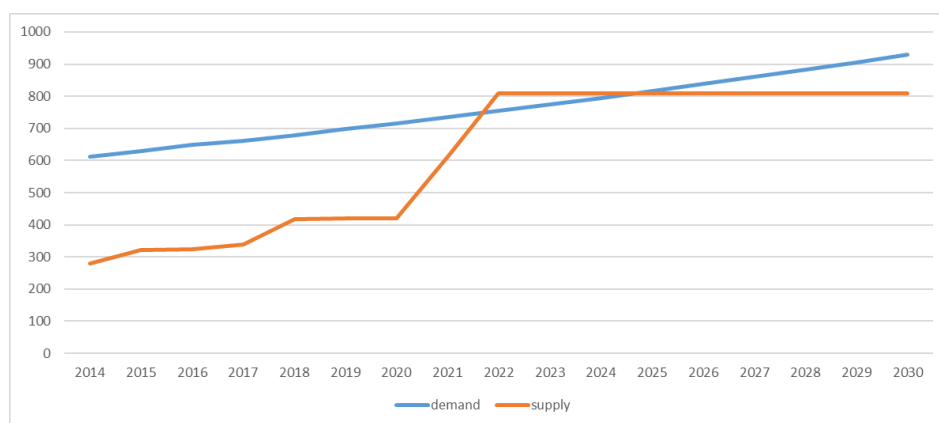


Figure 4 Abidjan Water Demand and Supply

(2) Water Demand in Abidjan

Water demand in Abidjan in 2017 is calculated about 660,000 m³/ day.

The forecast of water demand is about 930,000 m³/ day in 2030.

The assumption is as follows.

- Water demand: 100 liters per person per day for real comfort (based on WHO)
- Population of Abidjan: 5,091,648 inhabitants (based on the results of 2014 RGPH, which takes into account the 14 following municipalities.
(Abobo, Adjame, Attecoubé, Cocody, Koumassi, Marcory, Plateau, Port-Bouet, Treichville, Yopougon, Anyama, Bingerville, Brofodoume, and Songon)
- Population projections by 2030: JICA Study Team used three different methods and compared them with their average, in order not to overestimate the future

population. The details of the calculations are given in appendix 2.

Approach 1: Variable Rate (application of growth rates by communes of the RGPH)

Approach 2: Regressive Rate (RGPH 2014 from 2014 to 2018, reduced by 0.2%, until 2023, then 0.2% / 10 years)

Approach 3: Constant Rate (recommends national 2.51% over the period)

	2014	2017/2018	2030
1. Variable Rate	4,707,404	5,122,986	7,395,375
2. Regressive Rate	4,707,404	5,122,986	7,013,828
3. Constant Rate	4,707,404	5,070,843	6,999,084
4. Average	4,707,404	5,091,648	7,153,601

Comment: the differences by method represent 1% in 2017-18 and 5% in 2030 and are therefore not significant.

- Non domestic water demand: There are the other categories of users, which are industries, businesses, administrations, hospitals, services, etc. Those users represent a significant part of the demand, especially in an agglomeration like Abidjan. Non domestic demand is calculated as a percentage of domestic demand, which increase with increase in population size. JICA Study Team selected in the first approach a ratio of 25% (already validated by ONEP in a study of definition of resources and needs in 2016).

Nevertheless, taking into account a significant development prospects in the North and West districts (such as Songon and Akoupe-zeudji), it seems appropriate to choose a ratio of 30% in order to integrate these important and unidentified development prospects into the 2014 RGPH.

- Total demand = domestic demand + non domestic demand = 1.3 × domestic demand

(3) Water Supply in Abidjan

In the same presentation to the government, we also showed water supply in Abidjan as follows.

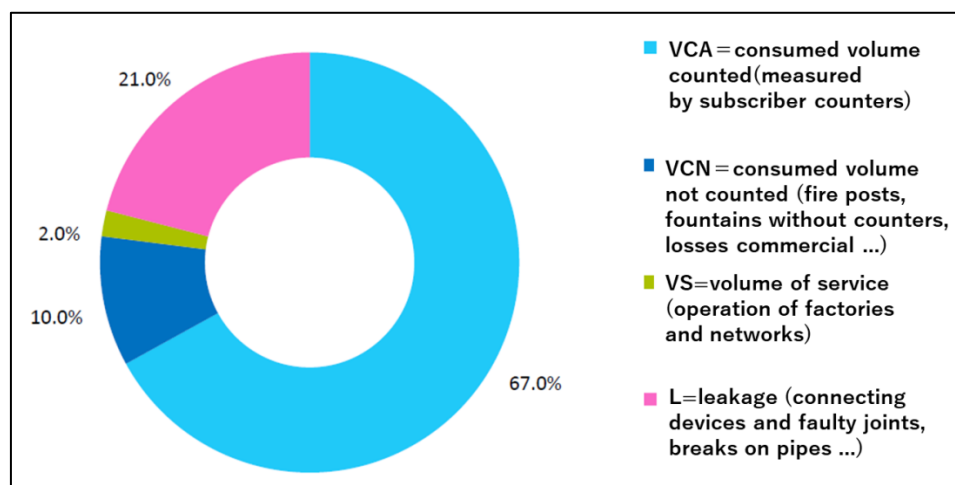


Figure 5 Distribution of water volume in Abidjan

The percentages indicated come from the following.

- VCA, VCN, and L: data provided by the ONEP (preliminary inquiries) in June 2017
- VS: average volume observed by the various service managers in relation to the total volume distributed.

Only VCA + VCN reaches consumers, so 77% of the volume distributed is consumed.

ONEP estimates the share of leaks at around 20%, which seems rather optimistic given the leakage levels observed on other systems. We estimate that proportions of VCN and L should be revised to 5% and 26% respectively, bringing the volume reaching consumers (VCA + VCN) to 72%.

The Appendix 3 shows the total volume of production of portable water in 2017, which is consisted of the production volumes by the different sites for potable water, is approximately 440,000 m³/d. A recapitulative table of these data was provided by the MIE in September 2017. For each production plant, ONEP has given the following data and Egis, who is our technical advisor analyzed it(Appendix3).

- The theoretical hourly rate, ie the capacity for which the installation was carried out (4th column)
- The hourly rate, the actual performance measured (5th column)
- The daily production time, allowing to calculate the real daily flow (6th column)
- The product of the last 2 series of data allows to obtain the actual daily flow (7th column)
- ONEP has indicated for 19 of the 21 production plants, daily operating times of 24 hours. This is impossible because there are daily maintenance and maintenance

tasks, incompressible, which require the shutdown of facilities and important early operations, low frequencies that require shutdowns of several days.

- An average operating time of the plants of 20 hours per day, therefore, the volume of water distributed daily is the total of the 5th column, multiplied by 20 hours.
- It is easy to make appreciative errors by confusing the theoretical hourly rate and the observed hourly rate, as well as by neglecting the impact of maintenance times on the duration of operation. For example, the Saint-viateur plant, which is under construction, is considered to be a plant with a capacity of $4 \times 200 \text{ m}^3/\text{hour} = 800 \text{ m}^3/\text{hour}$ (this is the capacity (target) for which the plant was study), which with a running time of $24 / 24\text{h}$ would give us a volume of circulating water of $800 \times 24 = 19,200 \text{ m}^3/\text{day}$.
- However, it turns out after tests in situ, that the drilling will be limited in flow and that this factory will finally produce $4 \times 170 \text{ m}^3/\text{hour}$ and this 20h per day. The actual volume distributed is therefore $4 \times 170 \text{ m}^3/\text{hour} \times 20 = 13,600 \text{ m}^3/\text{day}$. The difference in appreciation leads to an error of $5,600 \text{ m}^3/\text{day}$.

1.1.3 System and decision-making body and mechanism of water tariff in Abidjan

Water tariff mechanism is discussed every 5-years between SODECI, Hydraulic Ministry Representative (MIE, now Ministry of Hydraulics), ONEP and representative of Ministry of Economy and Finances.

When discussion is over and approved, a presidential decree is taken to ratify the water tariff.

Table 2 shows water charges for each user category. Prices have not been raised since 2004 and it is necessary to consider raising the price to the appropriate level. In addition, although the fee is uniform throughout the country, water production cost for Abidjan is relatively low as it uses a groundwater source, while water production cost in inland areas is relatively high. As the use of remote well water and surface water is expected to increase as sources of water for Abidjan in the future, it is expected that water production cost will rise.

Item	Profit of SODECI	Value Add Tax (TVA) (18%)	Special Tax		Total Water Price (TTC)
			FDE	FNE	
Basic Price 2,115 FCFA (including 9m3)					
Category1 (Social Aid) 10 ~18 m3	228	0	7	0	235
Category2 (Household) 19~90 m3	228	41	77.3	21	367.3
Category3 (Ordinary) 91-300 m3	228	41	271.3	46.5	586.8
Category4 (Industry) < 300 m3	228	41	331.3	84	684.3
Government Asset	228	41	141.3	113	523.3
Average/m3	228	31.2	121.1	44.2	424.5

Source: Presidential Decree No.2004-378, Setting of water tariff for 2003-2007 on August 6, 2004

Table 2 Water Price (FCFA)

Category 1 is an exemption fee for economically vulnerable people, VAT and FNE are exempted, and FDE is also low. As another reduction and exemption system, there is also a system of installing a social branch water supply pipe for free.

SODECI does not pay the usage fee of the water supply facility in the affermage contract. However, the following special taxes included in the water fee are paid to the government from SODECI and are used for investment in the water supply sector.

- FDE (Fond National de Développement): National Development Fund, which is used for investment of urban water supply facilities. Also, a part of it is used for ONEP's activity fee.
- FNE (Fond National de l'Eau): National Water Fund, which is used for investment in water supply facilities in rural areas, and sewage facilities, in addition to urban water supply facilities.

Reduction of water usage of public facilities, correction of delays in payment of water fee, optimization of water charges, etc. are important issues for dissemination and renewal of facilities.

1.2 Interests and movement of other domestic/foreign companies around the project

We were entitled the exclusive right to make feasibility study for the Bandama River water supply project in April 2017, with the effective date extended until October 28, 2019.

Other projects that use surface water as a source of water supply for Abidjan are also in progress. ONEP signed an MoU with Veolia in November 2016 for the construction of a 240,000m³/day plant on the La Me river. Additionally, it also signed a MoU late in 2017 with Fluence (RWL Water at the time) for a 150,000m³/day plant on the Aghien Lagoon.

1.3 Social and economic conditions in Abidjan

Abidjan is the largest city of Cote d'Ivoire and occupies 20% of population of the country (2014 RGPH). Its population density is extraordinarily higher than other cities in the country. It is 2,222 persons/km², while 70 persons/km² in all over the country (2014).

Along with the rapid population growth and urbanization after the conflict, the gap between the affluent and the impoverished has been widening in the city, especially in Yopougon and Abobo, many people live in poverty and there are problems of high unemployment rate and insufficiency of basic infrastructure facilities. For reference, GNI per person in Cote d'Ivoire is USD1,579 (World Bank, 2017).

In economic aspect, 90% of Côte d'Ivoire's industrial sector is located in Abidjan, with average industry growth of 8% per annum (Deloitte Touche Tohmatsu Limited, "Invest in Côte d'Ivoire, A business guide for Africa's fastest-growing economy" March 2017). Specifically, in Yopougon, large industrial zone has been developed and many different factories such as food processing, plastic or metallic processing factories etc. are under operation.

1.4 Challenges of water sector in Abidjan

As previously said in 1.1.1(1), challenges of water sector in Abidjan include lack of water distribution facilities, and excess pumping from Abidjan Aquifer, which is source of water supply for the city at the present as well as shortfall of water supply caused by population growth. Shortage of water supply is described in 1.1.2.

As to lack of water distribution facilities, the Bonoua 1 well group of the new water source has a watering amount of 80,000 m³/ day, but due to the shortage of the water distribution facility, the amount for actual distribution is limited to only 60,000 m³/ day. Additionally, southern part of Abidjan, where urbanization and industrialization progress (Yopougon, Songon etc.), has urgent needs to extend the existing distribution pipe network and to increase the diameter of pipelines. The distribution network is being strengthened in Abobo and Abidjan by the project of AFD, and in Yopougon by the World Bank project, respectively. Regarding excess pumping from Abidjan Aquifer, which is a sedimentary layer of the Tertiary Deposit, water is supplied from 10 well groups (93 water wells) as of 2015.

Until 2014, the water level of Abidjan's water well was declining. This is thought to be caused by urbanization, a decline in penetration area, and logging of forests such as Banco forest. Water level rose in 2015, and ONEP supposes that this is the effect of rainfall increase.

Further water pumping from Abidjan Aquifer is concerned, but sufficient data has not been obtained, because the network for water level observation has deteriorated. There are currently 4 observation wells in Bonoua and 34 in Abidjan, but no observation wells have been installed in Dabou yet. It is planned to increase the number of observation wells to 130 by AFD's project. Water supply source by groundwater is limited, and it is necessary to switch to a surface water source.

There are other challenges in water supply for Abidjan. Regarding water supply facilities, the continuity of water supply service and the water quality have been affected in recent years by the deterioration of the capacity of some water treatment plants, and water storage facilities. The reasons are as follows: 1) many facilities have not been renewed for more than 20 years, 2) the past facilities are under capacity to respond to the population increase, 3) Delayed development of water distribution network for new urban areas, etc.

CHAPTER 2 RELATED LAWS AND REGULATIONS IN COTE D'IVOIRE

2.1 Related laws and regulations on water sector in Cote d'Ivoire

The list of laws and regulations applicable to the water sector in Cote d'Ivoire are as follows.

(1) Laws

- ✓ Law No. 87-1476 dated 18 December 1987, on the 1988 Finance Act (in particular article 15);
- ✓ Law No. 96-766 dated 3 October 1996 on the Environmental Code; and
- ✓ Law No. 98-755 dated 23 December 1998 on the Water Code.

(2) Decrees

- ✓ Decree No. 71-74 dated 7 February 1971 relating to land and property procedures;
- ✓ Decree No. 82-531 dated 28 May 1982 fixing the tariffs for the sale of water;
- ✓ Decree No. 84-851 dated 4 July 1984 declaring roads and various networks of national and urban interest within the city of Abidjan;
- ✓ Decree No. 84-852 dated 4 July 1984 declaring roads and various networks of national and departmental interest within the boundaries of municipalities other than those comprising the city of Abidjan;
- ✓ Decree No. 86-452 dated 25 June 1986 transferring competences from the State to the “communes” as regards standpipes and public water wells;
- ✓ Decree No. 87-1471 dated 17 December 1987 approving the concession of the urban public service of supply of potable water in Côte d'Ivoire and of the organization of the public control of the concession;
- ✓ Decree No. 87-1472 dated 17 December 1987 establishing the National Water Fund and determining the terms of its operation;
- ✓ Decree No. 87-1474 dated 17 December 1987 fixing the price and the selling price of water and determining the conditions of application of the system of social connections;
- ✓ Decree No. 89-961 dated 30 August 1989 on the operating tax for aquifer water withdrawal, taken pursuant to Article 15 of the Law No 87.1476 of 18 December 1987 on 1987 Finance Law;
- ✓ Decree No. 90-929 dated 19 September 1990 fixing the price and the tariff of sale of water and determining the conditions of application of the regime of the social connections;
- ✓ Decree No. 95-817 dated 29 September 1995 setting the rules of compensation for destruction of crops;

- ✓ Decree No. 96-894 dated 8 November 1996 determining the rules and procedures applicable to studies relating to the environmental impact of development projects;
- ✓ Decree No 98-43 dated 28 January 1998 on classified facilities for environmental protection;
- ✓ Decree No. 2004-378 dated 6 August 2004 fixing the price and tariff of sale of water for the period 2003-2007;
- ✓ Decree No. 2005-03 dated 6 January 2005 on environmental audit (in particular article 17);
- ✓ Decree No.2005-110 dated 24 February 2005 on the Public Procurement Code;
- ✓ Decree No 2006-274 dated 23 August 2006 on the establishment and organization of the state-owned company called the “*Office National de l’Eau Potable (ONEP)*” (the National Potable Water Agency);
- ✓ Decree No. 2008-44 dated 21 February 2008 approving the affermage contract entered into between the State of Côte d'Ivoire and SODECI;
- ✓ Decree No. 2012-239 dated 7 March 2012 on Declaration of Public Utility of nearby perimeters and security of immediate perimeters of aquifer fields of the District of Abidjan;
- ✓ Decree No. 2012-1047 dated 24 October 2012 on the procedures for implementing the polluter-pay principle as defined by Law No. 96-766 dated 3 October 1996 on the Environment Code;
- ✓ Decree No. 2013-440 dated 13 June 2013 determining the legal regime of the perimeters of protection of the water resources, the hydraulic infrastructures and structures;
- ✓ Decree No. 2013-507 dated 25 July 2013 determining the periodicity of the inventory of water resources, the hydraulic infrastructures and structures;
- ✓ Decree No. 2014-25 dated 22 January 2014 amending Decree No. 2013-224 of 22 March 2013 regulating the extinction of customary rights for general interest; and
- ✓ Decree No. 2018-619 dated 10 July 2018 appointing members of the Government.

(3) Ministerial Order

- ✓ Order No 53 MB. DMP. dated 17 August 1988 establishing the obligation for SODECI for a public procurement as part of the concession of the public urban potable water distribution service in the RoCI; and
- ✓ Order n°162 MIE CAB July 30th, 2002 determining the conditions of application of the subsidized connections regime.

(4) Agreements

- ✓ Affermage Contract dated 28 September 2007 as amended in November 2015.)

2.2 Related laws and regulations on PPP in Cote d'Ivoire

The PPP regulatory framework consists of the following Decrees: Decree No 2018-358 dated 29 March 2018 defining the rules applicable to public-private partnerships (the “PPP Decree”), and Decree No. 2018-359 dated 29 March 2018 relating to the attribution, organization and functioning of the “Comité National de Pilotage des Partenariats Publics-Privés”.

(1) Scope of Decree No 2018-358 dated 29 March 2018 relating to public-private partnerships (“PPP Decree”)

The PPP Decree defines the rules applicable to PPPs, which by definition imply a *partnership* between a public entity and a private operator. In practise a PPP is composed of the following components (as opposed to a public tender / marché public):

- The delegation of a broad mission covering the construction or transformation, the maintenance, exploitation or management of works, equipment, immaterial assets used to provide a public service, and the financing of the project;
- A private financial structure financing equipment used for the provision of a public service;
- Private Partner(s) is remunerated by the public partner or the public services users;
- The parties share a mutual interest in the implementation of the project.

(2) PPP contract award under the PPP procedures

Article 12 of the PPP Decree provides that the procedures for public tenders provided for in the Public Procurement Code apply to PPPs.

The provisions in the PPP Decree in relation to open and restricted tenders are similar if not identical to the provisions of the Public Procurement Code, although they are drafted in a more concise manner.

Article 24 of the PPP Decree provides that PPP contracts awarded also need to be approved by the Minister of Budget. Before the award of the contract, the procuring authority submits the PPP draft contract to the opinion of the CNP-PPP:

- Regarding the "direct negotiation procedure", Article 20 of the PPP Decree provides that this procedure can be used in the following circumstances:
 - in emergency circumstances where unforeseeable circumstances or Force Majeure situations preventing the respect of the deadlines set forth in the call for tender procedure require immediate intervention in order to ensure the continuity of the public service;
 - when the project involves defence or national security;
 - when only one "source" or provider can provide the service (especially when the service requires the use of intellectual property rights, professional secrets or other exclusive rights owned by one or a number of persons); and
 - when the invitation to a prequalification or an invitation to tender procedure fails, or where none of the proposals meet the qualification criteria, and where a new tender would be unlikely to lead to the designation of an operator in the required timeframe. The negotiation procedure is defined by a framework document that must be submitted to the previous opinion of CNP-PPP as well as the approval of the council of ministers.

CHAPTER 3 IMPLEMENTATION STRUCTURE OF THE PROJECT

3.1 Allocation of public/private responsibilities and funds for the project

We are proposing the following to the government as public and private responsibilities and funds for the project.

Private	Public
✓ Design and construction of a plant for production of drinking water of 300,000 m3/d with a line of transfer	✓ Organize the distribution to secondary cities from the treatment or management of transfer station

<p>of 125 km</p> <ul style="list-style-type: none"> ✓ Development of a detailed feasibility study ✓ Development of the best financing structure and coordination with banks to get attractive financing ✓ Coordination with JICA on the "Viability Gap Funding" (in conjunction with the 'public') ✓ Operation and maintenance of the production of water for 20-25 years service ✓ Prepare the necessary relevant agreements for the PPP structure projects 	<ul style="list-style-type: none"> ✓ Approvals, permissions and / or permissions to the project-related issues ✓ Acquisition of land (right-of-way, using the site of the factory, and relocation of people if necessary) ✓ Coordination with JICA on the "Viability Gap Funding" (in conjunction with the "private") ✓ Other reasonable and necessary arrangements for the "bankability" of the structure of PPP (arrangement for electrification, guaranteed buyer and arrangement with the SODECI etc.) ✓ Prepare the necessary relevant agreements for the PPP structure projects
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3.2 Consideration of structure, form of organization, and implementation mechanism of the project (not disclosed)

3.3 Situation of negotiation/agreement among related parties of the project

We will submit our proposal to the government in the middle of December 2018, and then negotiate to agree on substantial terms or conceptual business scheme of the project.

CHAPTER 4 OVERVIEW OF MAIN RELATED PARTIES AND IMPLEMENTATION PLAN

4.1 Overview of main related parties

4.1.1 Mitsubishi Corporation

Mitsubishi Corporation (Mitsubishi) is a global integrated business enterprise, who locates headquarters in Tokyo, Japan and develops and operates business across virtually every industry including industrial finance, energy, metals, machinery, chemicals, and daily living essentials. Mitsubishi's current activities have expanded far beyond its traditional trading operations to include investments and business management in diverse fields including natural resources development, manufacturing of industrial goods, retail, new energy, infrastructure, finance and new technology-related businesses. With over 200 offices and subsidiaries in some 90 countries worldwide and a network of approximately 1,200 group companies, Mitsubishi employs a multinational workforce of over 70,000 people.

4.1.2 Metito Utilities Limited

Metito was founded in 1958 as an engineering company specializing in custom design and manufacture of water and wastewater treatment plants in the Middle East. The Metito Group has since grown more than 20 offices worldwide with its global headquarters in UAE and regional offices in Egypt, UAE, and Indonesia etc.. Metito has installed over 3,000 plants across in the Middle East, Africa, and Asia. Metito has in excess of 2,300 engineers and professionals with a senior management team that has over 50 years of industry experience. Metito Holdings Limited established Metito Utilities Limited (MUL) as the investment arm of Metito, giving it the responsibility to oversee the company's investment into water and wastewater assets. MUL was incorporated in Guernsey, as a wholly owned subsidiary, to undertake the utility business for Metito group.

MUL is presently growing its concession business and already developed more than 30 water and waste water schemes on a concession basis in diverse locations in North and Sub-Saharan Africa, Asia, and the GCC.

In 2017, MUL reached financial close for a water supply PPP project in Rwanda, which is the first competitively tendered BOT water concession in Sub-Saharan Africa.

4.1.3 Egis

Egis is an engineering consulting company founded in 1970. Its headquarters is located in Paris, France. About 75% share of the company is owned by a French public financial institution. They have a significant competitive advantages in Francophone Africa, and

in Cote d'Ivoire, have an effective relationship mainly thorough the formation of a masterplan centered on the water supply field.

4.1.4 Ministry of Hydraulics

At July 10 2018, the Cote d'Ivoire government reshuffled the Cabinet, and Ministry of Hydraulics was newly established, by separation of previous Ministry of Economic Infrastructure (MIE) into Ministry of Hydraulics and Ministry of Equipment and Road Maintenance. As a result, jurisdiction over water supply of the company was transferred to Ministry of Hydraulics from MIE.

4.1.5 SODECI

SODECI was founded in 1959 in Cote d'Ivoire. Its main shareholder is Eranove, it is one of the authoritative public service companies in Africa.

Between 1959 and 1972, SODECI signed a concession agreement with the Cote d'Ivoire government and operated the water supply business in Abidjan. After the National Water Supply Program 10 was started in 1973, the government of Cote d'Ivoire and SODECI signed outsourcing agreement to outsource Abidjan and the inland water supply project in Cote d'Ivoire. After that, in 1987, a new outsourcing agreement was entered that entrusted urban water supply projects throughout the country except for rural water supply. This contract expired in 2007 and a new outsourcing agreement continued from 2008 to 2022 as previously said in 1.1.1(1).

4.1.6 ONEP

As shown in Figure 2 in 1.1.1(1), ONEP is managing the operation of urban water supply by SODECI based on management agency agreement. The agreement prescribes ONEP's responsibility for all businesses in the water supply sector as well as urban water supply business operation management.

Management agency contract is renewed every 3 years. The current contract was signed in 2014 and tacitly renewed for 3 years more in 2017 until 2020..

The responsibilities of ONEP as stipulated in the management agency contract in 2014 are the following four items.

- Agency work as a client of construction in water supply project or design

supervision work

- Management work of public assets in the water supply sector
- Work on securing financial resources for water supply sector investment
- Supervision of consistency with regulations and adjustments on multiple contracts in the water supply sector

In the business specification attached to the management agency contract, ONEP is eligible to obtain 3% to 6% of the contract amount (excluding tax) for public procurement, such as procurement for equipment and construction, as a reward.

In this project, we proposed that the offtaker would be the government in order to hold them responsible to pay water tariff directly, therefore their rolls in this project agreement has not been determined yet however they are currently managing water supply in Abidjan.

4.1.7 CNP-PPP (Public Private Partnership National Steering Committee)

The organizations and their roles for promoting the PPP project were announced on December 19, 2012 in the Presidential Decree No. 2012-1152, and Presidential Decree No. 2014-246 on May 8, 2014. The components and roles of these PPP-related organizations are shown in Table 4.

Organization	Member	Roles
CNP-PPP (Comité national de pilotage des PPP)	<ul style="list-style-type: none"> • The fixed members below are appointed by the ministerial ordinance of the prime minister: (Chairman) • President Republic Representative (Vice chairman) • Prime Minister representative (Member) • Ministry of Planning and Development Representative 	<ul style="list-style-type: none"> • CNP-PPP is the main body of the decision and approval of the PPP project and directs the institutional framework of PPP promotion. The main roles are as follows: - Develop a PPP development strategy and submit it to the government together with the regulatory document draft. - Approve the PPP

	<ul style="list-style-type: none"> • Ministry of Economy and Finance Representative • Ministry of Industry Representative • Ministry of Budget Representative • Budget and Finance Director General of Budget and Finance • Director General of National Technology Research and Development Bureau(BNETD) • Director General of Cote d'Ivoire Investment Promotion Center(CEPICI) • Director General of Public Procurement Bureau, Ministry of Budget • Non-fixed members are representatives of Ministry of Technology and invited by CNPPPP. They do not have voting rights. 	<p>project.</p> <ul style="list-style-type: none"> - Approve bidding documents, budget, procurement method, evaluation criteria created by the client. - Approve agreement and contract. - Set up a conversation framework with investment partners. - Monitor project implementation by the customer. - Submit an annual report of the PPP project to the government. - Approve the activity plan submitted by SE-PPP. - Secure the necessary budget. <ul style="list-style-type: none"> ● The CNP-PPP conference is held at least once a month and as necessary.
SE-PPP (Secrétariat exécutif des PPP)	<ul style="list-style-type: none"> ● SE-PPP is established in Ministry of Economy and Finance. ● The members are persons and professionals who are appointed by Ministry 	<ul style="list-style-type: none"> ● SE-PPP will assist CNC-PPP. The main roles are as follows: <ul style="list-style-type: none"> - Develop an annual action plan and get approval of CNP-PPP. - Prepare the CNP-PPP

	<p>of Economy and Finance in accordance with ministerial ordinance.</p> <ul style="list-style-type: none"> ● The responsible persons are Executive Secretary appointed by Ministry of Economy and Finance, and Deputy Executive Secretary appointed by Ministry of Industry. 	<p>conference and serve as the amanuensis.</p> <ul style="list-style-type: none"> - Following the decision of CNP-PPP, policy and resolution implementation. - Adjust the whole actor of PPP. - Get internal and external contacts of CNP-PPP. - Perform necessary logistics of CNP-PPP. - Develop annual activity reports and periodical reports of CNP-PPP. - Develop and implement domestic actor training and capacity building strategies related to PPP. - Arrange dialogue with external investment partners. - Propose to CNP-PPP regarding strategy and implementation decisions, action matrices and project prioritization / classification. - Propose recommendations on procedures / tools for
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		<p>bills, reforms, PPP development, for smooth implementation of PPP.</p> <p>- Monitor contracts.</p>
<p>CA-PPP (Cellule d'appui des PPP)</p>	<ul style="list-style-type: none"> ● CA-PPP is established in BNETD. ● The members are independent professionals appointed by BNETD on behalf of CNP-PPP. ● CA-PPP is led by coordinators appointed by ministerial ordinance of the prime minister which is based on the suggestion of CNP-PPP. 	<ul style="list-style-type: none"> ● CA-PPP supports SE-PPP and CNP-PPP. The main roles are as follows: <ul style="list-style-type: none"> - Provide assistance and expert advice for SE-PPP and CNP-PPP for developing PPP development strategy and draft relevant legislation. - Economics of development projects proposed to CNP-PPP, especially from the orderer, by kicking under the responsibilities of SE-PPP and CNP-PPP prescribed in Article 4-11 of Presidential Decree No. 2012-1152, Provide assistance and expert advice on feasibility as a PPP case. - Proposal for optimization of partners' role sharing by comparing options, construction of

		<p>financial model, and assistance and expert advice to SE-PPP and CNP-PPP as necessary.</p> <ul style="list-style-type: none"> - Create bidding documents based on technical information provided by the orderer and its consultants. - Assist orders in procurement of PPP contracts. - Participate in monitoring PPP contracts.
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Source: Presidential Decree No. 2012-1152 on Dec 19, 2012, and No. 2014-246 on May 8, 2014

Table 3 Constituent members and roles of PPP related organizations

4.2 Project implementation plan (not disclosed)

CHAPTER 5 PRIMARY ANALYSIS OF THE PROJECT RISK

We conducted risk analysis of the project by appointing Clifford Chance and Cabinet Jean Francois Chauveau as legal advisors. Risk Analysis Matrix is attached as Appendix 4.

There has been no water treatment and supply project in Cote d'Ivoire that has been developed on a BOT/BOOT basis and financed following the principles of limited recourse project financing. Therefore, there is no precedent or market practice in the country for water treatment and supply projects.

Generation projects in the power sector ("IPPs"), however have been successfully banked under limited recourse project financings on numerous occasions. Therefore, we have drawn -- where applicable or where the risks are similar or analogous -- a brief comparison with the risk allocation in the power sector.

CHAPTER 6 PRIMARY DESIGN AND THECHNICAL PLAN (not disclosed)

CHAPTER 7 DRAFT TERM SHEET OF THE MAIN PROJECT AGREEMENT AND PROGRESS OF NEGOTIATION (not disclosed)

CHAPTER 8 INITIAL CASH FLOW MODEL AND SENSITIVITY ANALYSIS (not disclosed)

CHAPTER 9 RELATED TAX REGULATIONS IN COTE D'IVOIRE

9.1 Main Taxes relating to the project

9.1.1 Corporate Income Tax

Under the article 2 of the General Tax Code(GTC), resident companies are subject to tax on income derived from Cote d'Ivoire. The Corporate Income Tax (CIT) rate is 25%.

Taxable income includes total profits less certain deductions (such as depreciation and amortization, general expenses, taxes paid by the company, provisions etc.) provided for by the law and excluding exempted income.

Expenses that are not directly linked to the taxable business activities carried on in Cote d'Ivoire are not deductible for the calculation of the taxable income. Besides, deductible expenses must not be excessive compared to payments made by other taxpayers for similar purchases of goods and services.

Article 26 of GTC provides that losses arising from normal business activities are deductible and may be carried forward up to 5 years. However, deferred depreciation may be carried indefinitely. Carry-back of losses is not allowed.

The article 52 of the GTC provides that corporate income tax is paid in three (3) installments in April, June and September:

- April 10th, June 10th, September 10th for industrial companies;
- April 15th, June 15th, September 15th for commercial companies;

-April 20th, June 20th, September 20th for service providers.

As a service provider company, ICSPV (the company we will establish to operate this project) shall pay its installments on April 20th, June 20th and September 20th.

9.1.2 Business License Tax

Any company, whether domestic or foreign, which carries on a trade, business or profession not included in the list of exemptions set out in the GTC is liable to business license duty (article 264 of the GTC). Any premises used for the purpose of the professional activity is subject to the business license tax. In this respect, buildings, water plant, pipeline, uncultivated land for a commercial or industrial use, used to perform the activity are subject to the business license duty. Business license tax is calculated on a rental value of such assets, irrespective whether the company rents such assets or legally own such asset. Business license duty includes a turnover tax and proportional tax. The turnover tax is calculated on turnover at the rate of 0.5%, with a minimum tax of FCFA300,000 and a maximum tax of FCFA3 millions.

The proportional rate is 18.5% and is based on the rental value of the professional office location (based on general office rent).

Companies under the normal regime with their turn over being less than FCFA1billion are business license tax exempted during the first two years following their setting up.

The article 285 of the GTC provides that the business license tax is paid by two instalments. The first one on March 15th and the second one on July 15th.

9.1.3 Real Estate Tax

Tax levied on rental value of various types of properties. The rate is 15%. Reduced rates exist in specific cases (article158 of the GTC).

9.1.4 Distribution Tax

Any distribution of profits or capitalized reserves, as well as the amortization of capital, is also treated as a dividend and therefore subjected to distribution tax. Dividends are subject to the withholding tax on income from movable capital(IRVM) at the following rates:

- 10% on dividends paid by listed companies;
- 15% on dividends, attendance fees, remunerations paid to Directors;
- 15% on dividends distributed by companies the profits of which are exempt from corporate income tax, including profit s of permanent establishments of Ivory Coast companies situated

abroad or not subject to the 25% standard rate where tax incentives are granted by the Investment Code or the General Tax Code; and

- 2% on other distributions;
- Subject to the application of double tax treaties, the tax due is increased by 25% if the taxable amounts are paid to an individual or a company located in country defined as a tax shelter (tax heavens).

9.1.5 Tax on Interests

Tax levied interest payments:

- 1%, 5%, 10% and 16.5% for interest on bank deposits accounts according to the term of the account;
- 16.5% on interests paid on current bank accounts; and
- 18% on other interests.

9.1.6 Value added tax

Value added tax (VAT) is levied on transactions carried out in Cote d'Ivoire for consideration by persons who, either regularly or occasionally, purchase goods for resale or render services, other than as employees or farming workers.

VAT is levied only in respect of business activities that are carried on in Cote d'Ivoire at a standard rate of 18%. The company pays VAT on its purchases, then charges the VAT on its sales to the clients. The tax is then netted off in the return. In case of VAT credit, the company can claim the difference when the requirements listed under article 382 of the GTC are met.

In ICSPV's case, the import of the goods by ICSPV would be subject to VAT at the rate of 18% (regardless of the country from which the goods are imported). ICSPV shall also collect VAT on the sale of these goods to the customer in Cote d'Ivoire.

The article 355-34 of the GTC provides that the social bund of consumption of delivered water invoices to a household is VAT exempted.

9.1.7 Custom duties

As a member state of the West African Economic and Monetary Union (WAEMU), Ivory Coast applies the customs rates specified in the community regulations. Since January 1st 2015, all goods imported by WAEMU member countries from non-member countries are subject to the same

uniform customs regime (tariff extérieur commun).

This common tariff is composed of two types of levies and taxes, namely temporary levies and taxes (the preferential community tax) and permanent levies and taxes.

Please find below the types of customs duties that would apply to ICSPV at import (circulairn°1687/MPMB/DGD dated 29 December 2014):

Categories of the preferential community tax	Taux
Category 0 : duty free products (books-medicine)	0 %
Category 1 : Essential goods, raw materials and equipment goods	5 %
Category 2 : Inputs and intermediate goods	10 %
Category 3 : Consumer goods and others not included in other categories	20 %
Category 4: specific items used for economic development	35%
Permanent levies and taxes	
Statistical fee on CIF value « Redevance statistique (RS) »	1% *
Community Solidarity Levy on CIF value « Prélèvement Communautaire de Solidarité (PCS) »	1% **
CEDEAO community levy on CIF value « Prélèvement Communautaire CEDEAO (PCC) »	(0,5%)*
VAT on CIF value	(18%)* **

9.1.8 Withholding taxes

(1) Withholding taxes on international transactions

The article 92 of the Ivorian General tax code provides that, subject to international tax treaties, some Ivorian income received by nonresident companies are subject to withholding tax at an effective rate of 20%. This provision refers in particular to:

- Compensation paid for services of any kind provided or used in Côte d'Ivoire (maintenance and repairs, technical assistance, trade promotion, etc.);
- Royalties listed in the article 85-2 of the Ivorian GTC, i.e. payment to an owner for the use of property, especially patents, copyrighted works, franchises or natural resources.

(2) Withholding taxes on local transaction

The Ivorian GTC provides for a requirement to withhold taxes from payments made to some

categories of independent professionals listed under articles 93 to 98 such as:

- Medical and paramedical professions,
- Consultancy or expertise services realized by individuals/Freelancers,
- Lawyers, bailiff, legal advisor, accountant, notary, auctioneer acting as individuals.

The tax is 7.5% of the gross income to be paid to the independent professional.

Since 2018, the rate has reduced to 5%.

9.2 Tax Incentives

In order to encourage investment, the Investment Code provides for various tax incentives, including exemptions from, or reductions in, for instance corporate income tax.

9.2.1 Incentives provided by the Investment Code

The investment code provides for two tax relief regimes: the «Régime de Déclaration» and «Régime d'agrément», the last one being more comprehensive than the first one.

Three (3) tax regimes are applicable in Ivory Coast depending on the turnover of companies:

- The synthetic regime(IS) is applicable to companies with a turnover ranging between FCFA5,000,000 and FCFA50,000,000;
- The simplified regime(RSI) is applicable to companies with a turnover ranging between FCFA50,000,001 and FCFA150,000,000;
- The normal regime(RNI) is applicable to companies with a turnover beyond FCFA1,500,000

Only companies under the common tax scheme (the RNI and RSI) may request these advantages. Investors are required to make investments in new tools, to keep their books according to the legislation and to respect environmental norms.

The advantages granted are total exemptions during a specified period. The location of the investments also impacts the level of advantages. Under the «Régime de déclaration», only specific direct taxes are concerned, whereas under the «Régime d'agrément», direct and indirect taxes and customs duties are included.

The Code provides for specific incentives available to eligible enterprise depending on the location of their business and the amount of their investment. For this purpose, the Ivorian territory is divided into three zones: A (Abidjan district), B (cities with at least 60,000 inhabitants) and C (cities with less than 60,000 inhabitants or special economic zones). The list of the special economic zones must be determined by a decree however, no decree has been taken for the moment in this regard.

Regardless of the investment zone, companies benefit from the following advantages under the «Régimé d'agrément»:

- Reduction of 50% of the amount of customs duties due on equipment and materials and on the first batch of spare parts, for an amount lower than the upper threshold, excluding Community levies. Community levies correspond to statistical fee(RS), community solidarity levy(PCS), CEDEAO community levy(PCC). Therefore, only the preferential community taxes can be reduced.
- Reduction of 40% of the amount of customs duty payable on equipment and materials and on the first batch of spare parts for an investment at least equal to the upper threshold, excluding community levies.
- Total exemption of VAT. This exemption applies to the equipment acquired locally or imported.

The article 382 of the Ivorian General tax code provides that VAT credit refund is not authorized. However the legislation provides that the following situations can be subject to VAT refund procedure.

- Exports operations;
- Cessation of business;
- Investments realized by industrial companies subject to VAT;
- Leasing operations;
- Investment realized by trading companies in respect of investment code;
- Acquisition of goods;
- Operations subject to the VAT reduced rate;
- Operations benefiting from a contractual exemption.

Therefore, if the ICSPV benefits from the investment code provisions, the company will be able to request the reimbursement of the VAT. This exemption only applies to local purchases.

➤ Incentives for investment amounts of FCFA 1 billion at least

- Zone A:
 - Exemption from corporate income tax(CIT) and business license tax. For both, it is a degressive rate, meaning that the CIT and business license tax are not due at all for 3 years, then it is due at 50% the 4th year and 75% the 5th year.
 - Reduction of 50% of the payroll tax (except FDFP part of the payroll tax);
- Zone B:

- Exemption from corporate income tax, real estate tax and business license tax.
- Reduction of 75% of the payroll tax (except FDFP part of the payroll tax);
- Zone C:
 - Exemption from corporate income tax, business license tax, and real estate tax (related to staff accommodations).
 - Reduction of 90% of the payroll tax (except FDFP part of the payroll tax)

The exemptions in Zone A are granted for 5 years;

The exemptions in Zone B are granted for 8 years;

The exemptions in Zone C are granted for 15 years.

Regarding zone C, the article 46 of the investment code provides that the exemptions related to corporate income tax and business license tax are reduced at 50% at the penultimate year and 25% at last year. This provision applies to zones A, B and C.

In relation to the project, the plant will be established at Tiassalé.

In this regard, the article 34 of the investment code provides that the zone is determined based on the place of realization of the investment. The CEPICI (Investment Promotion Center), the authority in charge of delivering incentives authorizations issue a document determining which countries is included in each zone. According to this document, Tiassalé is included in zone C.

Therefore, ICSPV would likely be in Zone C and would therefore benefit from 15 years of exemptions as Tiassalé is less than 60000 inhabitants.

The situation taken into account to determine the number of inhabitants is the one at the date of the submission of the request for the investment code, therefore even if the population of Tiassalé increases after the submission, ICSPV will always benefit from the exemption.

ZONE A	ZONE B	ZONE C	ZONE C	ZONE C
Abidjan	Abengourou	Bangolo	Afféry	Aboisso
Anyama	Adzopé	Biankouma	Agnibilékro	Aboisso-Comoé
Bingerville	Agboville	Bouna	Akoupé	Adiaké
Songon	Bondoukou	Bounafla	Arrah	Azaguié
	Bouaflé	Boundiali	Belleville	Bonoua
	Bouaké	Duékoué	Béoumi	Dagadji
	Dabou	Fatchédougou	Bongouanou	Djapadji
	Daloa	Gbapleu	Bonon	Gabiadji
	Danané	Guiglo	Buyo	Glibéuadji
	Dimbokro	Katiola	Daoukro	Grand-Lahou
	Divo	Mankono	Diégonéfla	Hiré
	Ferkessedougou	Monoko-Zohi	Gnatroa	N'douci
	Gagnoa	Ouangolodougou	Gonaté	Sassandra
	Grand Bassam	Pélézi	Grand-Zatry	Tiassalé
	Issia	Tafiré	Kononfla	Touba
	Korhogo	Tanda	Lakota	Touhy
	Man	Tengréla	Lénoufia	Waté
	Odienné	Tortya	M'batto	
	Oumé	Touba	Méagui	
	San Pedro	Varoua	Saïoua	
	Séguéla	Zagné	Tiébissou	
	Sinfra	Zéaglo	Toumodi	
	Soubre	Zouan-Hounien	Zaïbo	
	Yamoussoukro	Zuénoula	Zaloruan	

Zone A: Abidjan District

Zone B: Cities with more than 60 000 inhabitants

Zone C: Cities with less than 60 000 inhabitants

*Table issued from CEPICI

9.2.2 Procedure to apply for the investment code provisions

The company must file a folder in ten (10) copies to the CEPICI. The folder must include documents such as registered articles of association, registered trade register, inventory of equipment, etc...).

Then the CEPICI will analyse the file and during 21 days maximum.

At the end of the procedure, if the decision is favorable, an approval certificate will be issued.

This document describes the exempted taxes, the length of exemption etc.

ICSPV can apply for the investment code provision during the procedure creating the company or after.

9.2.3 Other incentives

The contract signed between a company and the Ivorian Government may provide also with tax exemptions. As a matter of fact, the company cannot benefit from both the investment code provisions and the contractual tax exemptions. However, if the CEPIC see the contract they may be able to make an exemption.

However, concerning the subcontractors of the company, as the provisions of the investment code

only apply to the applicant, if the contract with the government provides with tax exemptions extended to subcontractors, they will be able to benefit from these exemptions.

CHAPTER 10 ENVIRONMENTAL AND SOCIAL IMPACT ASSESMENT

10.1 Current environmental and social situation

We carried out a research on environmental and social impact assessment regarding the project by appointing INGEROSEC as advisor with our own funds. INGEROSEC took survey around the project target area from 25th to 30th June 2018.

As a result of the survey, we fulfilled “Appendix4 Screening Format” of “JICA GUIDELINES FOR ENVIRONMENTAL AND SOCIAL CONSIDERATIONS (hereinafter refers to as the “ESC Guideline”)” in order to grasp current environmental and social situation on the target area. The Screening Format is attached in Appendix 8.

We do not find any major environmental problems or matters that may impact the project during this preliminary survey, except that certain scale of involuntary resettlement and relocation of private properties may be required, if water transmission pipeline would be installed along the national road (A3) as currently planned by the government. Many villages are scattered along the road, since it is an old main road connecting Abidjan with north part of the country.

As an alternative route of the water transmission pipeline, the North Highway could be proposed, for which the RoW (Right of way) is settled 100.0m from the edge. The highway is relatively new, and consequently, few private properties are observed along the highway, comparing with the old national road (A3).

Unlike the pipeline route along the national road (A3) currently proposed, this alternative route along the highway could significantly avoid involuntary resettlement and relocation of private properties.

We proposed the North Highway pipeline route to the government, in order to minimize the compensation and time for negotiation.

10.2 Environmental and social organization and laws/regulations in Cote d'Ivoire

10.2.1 Environmental and Social Impact Assessment (ESIA)

(1) Institutional Framework

(a) Ministry of Environment and Sustainable Development

Ministry of Environment and Sustainable Development (Ministère de la Salubrité, de l'Environnement et du Développement Durable: MINSEDD) is the responsible ministry to establish legal systems and to implement general policies related to environmental management in Cote d'Ivoire. There are National Environment Agency (Agence Nationale de l'Environnement: ANDE), Ivorian Office for Parks and Reserves (Office Ivoirien des Parcs et Réserves: OIPR) and Ivorian Centre for Antipollution (Centre ivoirien antipollution: CIAPOL) as executing agencies of the environmental administration under MINSEDD.

(b) National Environment Agency

National Environment Agency (Agence Nationale de l'Environnement: ANDE) is the responsible agency to manage Environmental and Social Impact Assessment (ESIA) in Cote d'Ivoire. ANDE reviews and controls ESIA report of any public and private projects. An ESIA certification of the project will be issued from ANDE after examination of ESIA report.

(c) Ivorian Office for Parks and Reserves

Ivorian Office for Parks and Reserves (Office Ivoirien des Parcs et Réserves: OIPR) is the responsible agency to control National Parks and Reserves in Cote d'Ivoire.

(d) Ivorian Centre for Antipollution

Ivorian Centre for Antipollution (Centre ivoirien antipollution: CIAPOL) is in charge of control of regulations and standards for industrial waste, water quality, air and soil. In Cote d'Ivoire, these kinds of regulations and standards with some reference values have been already established.

(2) Laws and regulations

(a) Law No. 96-766 of October 3rd, 1996

This law is bearing code of the environment to establish principle of Environmental and Social Impact Assessment (ESIA). Article 39 of obligates an ESIA to any projects which

likely to have impacts on the environment.

(b) Decree No. 96-894 of November 8th, 1996

This decree determines the rules and procedures applied by ESIA to specify the modalities of application of the Article 39 of the law No. 96-766 of October 3rd, 1996. The annex 1 of this decree also identifies twelve types of project that ESIA is obligated. According to the article No. 11 of the Anne 1, this Project includes construction of a water transmission pipeline, and therefore, the Project is required to an ESIA.

(c) Arrete 972 of November 14th, 2007

This order provides application of the decree mentioned above to specify provisions for improving the quality of ESIA report and strengthening the activities of ANDE.

(d) Environmental Regulations

Other environmental regulations in Cote d'Ivoire related to the Project are as follows:

Regulation	Contents
Decree No. 2005-03 January 6 th , 2005	Regulation related to the Environmental and Social Management Plan(ESMP)
Law No. 88-651 July 7 th , 1988	Control of hazardous and toxic industrial west
Law No. 2002-102 February 11 th , 2002	Creation of the National Parks and Reserves
Law No. 98-755 December 23 rd , 1998	Regulation of management of water environment
Law No. 2014-424 July 14 th , 2014	Regulation of protection of forest
Law No. 66-122 March 31 st , 1966	Determine protected trees and forests
Law No. 65-255 August 4 th , 1965	Protection of fauna, determine protected animals and control hunting
Arrete No. 01164 November 4 th , 2008	Regulation of discharges and emissions of Exhaust gas, Wastewater, Noise and Vibration

Source : INGEROSEC

Table 4 Environmental Regulations

(3) Procedure of ESIA

A project which is required an ESIA is listed in the Annex 1 of Decree No. 96-894. However, ANDE will determine necessity of ESIA study for every project. The procedure of ESIA is as follows:

Step 1: Project Promoter (owner) should officially inform project information to ANDE by official letter or email.

Step 2: Preparation of Terms of Reference (TOR) of ESIA Study.

- (a) TOR could be prepared by the Project Promoter and submitted to ANDE for validation;
- (b) or Project Promoter can directly ask ANDE to prepare the TOR;
- (c) At the end of this step, ANDE will conclude whether an ESIA study is required or not for the project.

Step 3: If an ESIA is required, Project Promoter should select an ESIA consultant accredited by ANDE to conduct ESIA.

- (a) Project Promoter can contract the company directly from the list of 20 accredited ESIA consultants;
- (b) or make a call for tender.

Step 4: An accredited ESIA consultant shall implement a study:

- (a) to conduct public consultation;
- (b) to evaluate environmental and social impacts and to prepare an ESIA report to be submitted to ANDE including Environmental and Social Management Plan (ESMP);
- (c) to organize Public Hearing (Law-based) conducted by the prefect and inter-ministerial committee to inform project information to population and collect their opinions.

Step 5: Review and approval ESIA report and Public Hearing report simultaneously by an inter-ministerial committee.

10.2.2 Land Acquisition and Involuntary Resettlement

(1) Institutional Framework

- (a) Ministry of Construction, Housing, Sanitation and Urbanism

Ministry of Construction, Housing, Sanitation and Urbanism (Ministère de la Construction, du Logement, de l'Assainissement et de l'Urbanisme: MCLAU) is responsible for expropriation related to the projects for public utility, especially in urban area.

(b) Ministry of Agriculture and Rural Development

Ministry of Agriculture and Rural Development (Ministre de l'Agriculture et du Développement Rural: MADR) is responsible for expropriation related to the projects for public utility, especially in rural area.

If cities and towns have urban plan and/or master plan, it determines the limit of urban area. Beyond that limit, remaining area is considered as rural area. During the process of expropriation, several authorities will be involved, including MCLAU, Ministry of Agriculture and Prefect of the Region under the Ministry of Interior.

(c) Rural Land Agency

Rural Land Agency (Agence Foncière Rurale: AFOR) is responsible for the registration of private estates in rural area. AFOR takes actions to determine border of villages, land of villagers and to provide certificate of ownership to landlords.

(2) Laws and Regulations

(a) Decree November 25th, 1930

This decree provides regulation of expropriation aimed at the public utility and specifies applicable conditions and procedures in the case of expropriation intended for the public utility.

The first article specifies the conditions on which expropriation is applied and the declaration of public utilities. The article 2 stipulates procedures for consultation and negotiation during expropriation. The article 3 stipulates how to determine the amount of compensation. And the fourth article stipulates procedures of compensation and expropriation.

(b) Decree No 2014-25 January 22nd, 2014 modifying Decree No 2013-224 March 22nd, 2013

This decree provides regulation for purge of the customary rights of land for public utility and determines maximum land price to be paid for compensation.

Land price differs from rural area and urban area. Unit prices for compensation by types

of land are detailed in following table:

Types of Land	Unit Price
Land within Abidjan Special Autonomous Region	2,000 FCFA/m ²
Land within Yamoussoukro Special Autonomous Region	1,500 FCFA/m ²
Land within capital of Region	1,000 FCFA/m ²
Land within capital of Department (i.e. Tiassale)	750 FCFA/m ²
Land within capital of Sous-Prefecture	600 FCFA/m ²
Land located within 1,000m from Public Domain along River and Maritime Public Domain	2,000 FCFA/m ²

Source : MCLAU

Table 5 Maximum Unit Price for Compensation

(c) Public Domain

According to the Ivorian law, if the project will be implemented in a public domain (a part of state-owned lands), there is no need to pay compensation for the land. Also, if the public domain is occupied by some economic activities by local people illegally, there is no need to pay compensation for land. On the other hand, compensation for economic activities is required even activities and properties in the public domain are considered illegally.

ESC Guideline and World Bank's safeguard policy also requires compensation for any economic activities affected by the project.

Types of major public domain in Cote d'Ivoire are detailed in following table:

Type of Public Domain	French Name	Area
Public Domain along Road	Domaine Public Routiere	Determine by AGEROUTE
Public Domain along River	Domaine Public Fluvial	100 m wide from border of the river
Public Domain around Lagoon	Domaine Public de la Lagune	25m width from border of the lagoon
Maritime Public	Domaine Public	100m width from

Domain	Maritime	coastline
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Source: MCLAU

Table 4 Public Domain in Cote d'Ivoire

(3) Procedure of Expropriation

Step 1: When a project is implemented as public utility, a declaration of expropriation will be issued by the Government of Cote d'Ivoire based on the Decree November 25th, 1930.

Step 2: An ESIA consultant will be selected by the Project Promoter to conduct ESIA. The consultant will identify all land, economic activities and their owners affected by the project and the consultant should submit ESIA report to ANDE.

Step 3: Based on the identification of affected land, activities and their owners, the consultant or public entity (i.e. MCLAU, MADR) will calculate value of private properties by using the latest land price estimated by MCLAU and equivalent price for economic activities (farms) estimated by MADR.

Step 4: Before the project start, negotiations between the Government and land / business owners will be carried out to compensate all affected people.

10.3 Project Promoter Responsible for ESIA and Land Acquisition

The term "Project Promoter" defined in the Ivorian law, such as environmental law mentioned above, generally refers to the "Owner" of the project. This project will be implemented as a project for public utility according to the National Development Plan (PND 2016-2020) and controlled by the Government of Cote d'Ivoire based on the framework of PPP. After completion of the feasibility study, the government will recruit a Special Purpose Company (SPC) / Special Purpose Vehicle (SPV) which provides services of Engineering, Procurement and Construction (EPC); and Operation and Management of the Project facilities. Regarding the legal procedure in Cote d'Ivoire, prior to identifying a SPC/SPV, ESIA and land acquisition will commence during the feasibility study. In this context, the Ministry of Hydraulics, as a responsible ministry of the Government of Cote d'Ivoire, will be the Project Promoter during feasibility study including ESIA and land acquisition. On the other hand, business right and ownership of the Project will be transferred from the government to the SPC/SPV after establishing the concession contract

between the government and the SPC/SPV. Therefore, from a contractual point of view, it is reasonable that the SPC/SPV will be assigned as the Project Promoter after transition of business rights. Taking into consideration the contractual process relating to the transition of business rights mentioned above, a detail implementation structure for the Project, including Project Promoter responsible for ESIA and land acquisition, shall be identified and agreed after negotiation between the Government of Cote d'Ivoire and Mitsubishi Corporation during the JICA PPP preparatory survey.

10.4 Planning of the second phase of preparatory survey

10.4.1 Terms of Reference (TOR)

Although project facilities will be planned to install mainly in the public domain (a part of state-owned lands), certain size of relocation of private properties could be assumed. However, it is possible to minimize the impacts on private assets by selecting the alternatives for water treatment plant site and pipeline route. Subject to the application of these alternatives, the Project can be classified as the Category B at this moment, according to the ESC Guideline.

According to the ESC Guideline, an environmental and social considerations survey to satisfy Initial Environmental Examination (IEE) level shall be conducted during the JICA PPP Preparatory Survey based on the results of the basic design after completion of topographic survey and geotechnical survey.

As an environmental and social considerations survey during the second phase of preparatory survey, following Terms of Reference (TOR) are proposed.

According to the main check items evaluated as A-, B- and C in the Preliminary Scoping (Table 4-1) in Appendix 7, the survey shall be conducted:

1. To measure baseline data of:
 - (1) Water quality and quantity of the Bandama River;
 - (2) Noise level around project sites for facilities that use machineries that generate noise, such as water treatment plant and pumping stations.
2. To confirm endangered species around the project sites;
3. To confirm scale of tree cutting;
4. To confirm scale of necessary land acquisition and involuntary resettlement for the project;

5.	To analyse institutional gap between environmental law in Cote d'Ivoire and JICA Environmental and Social Considerations Guideline (April 2010).
6.	To conduct scoping to determine environmental and social considerations items to be followed which likely to have impacts;
7.	To evaluate assumed impacts based on the scoping;
8.	To examine alternatives, including "no go option";
9.	To examine mitigation measures;
10.	To prepare Environmental and Social Management Plan (ESMP), including monitoring plan;
11.	To identify financial resources to implement ESMP;
12.	To assist Project Promoter to conduct ESIA including public consultation. If any, to prepare Abbreviated Resettlement Action Plan (ARAP),, in case the project involves involuntary resettlement (not large scaled) or land acquisition including:
(1)	Inventory survey for all owners of affected private assets
(2)	Population survey of affected people
(3)	House income survey targeting at least 20% of project affected people
(4)	Condition for receiving compensation
(5)	Compensation procedure
(6)	Livelihood recovery measures based on Needs survey
(7)	Grievance redress mechanism
(8)	Identification of executing agency
(9)	Implementation schedule
(10)	Costs and financial resources
(11)	Monitoring system by executing agency
(12)	Strategy to secure participatory approach

Source: INGEROSEC Report

Table 5 TOR for Environmental and Social Considerations Survey

10.4.2 Proposed timeline and public/private responsibility for Environmental and Social Considerations of the project (not disclosed)

References

- Oriental Consultants Global CO., Ltd., CTI Engineering International Co., Ltd., and CTI Engineering Co., Ltd., “The Final Report of Survey for Abidjan City Water Supply Ver.2”, July 2017
- Deloitte Touche Tohmatsu Limited, “Invest in Côte d’Ivoire, A business guide for Africa’s fastest-growing economy” March 2017

Appendixes (not disclosed)

1. Summary Chart of Demand and Supply
2. Estimation on Future Population in Abidjan City
3. Volume of Production of Portable Water in Abidjan City
4. Clifford Chance, “BANDAMA RIVER -- BOOT WATER TREATMENT AND SUPPLY PROJECT RISK MATRIX“
5. Egis, Mitsubishi Corporation, Metito, “PPP ALIMENTATION EN EAU POTABLE D’ABIDJAN & DE VILLES SECONDAIRES DEPUIS LE FLEUVE BANDAMA “, November 2018
6. “HEADS OF TERMS OF THE CONTRACTUAL ARRANGEMENTS FOR THE CONCESSION TO DEVELOP - ON A BOOT BASIS - THE BANDAMA RIVER WATER TREATMENT AND SUPPLY PROJECT IN THE REPUBLIC OF COTE D'IVOIRE (Draft)”
7. PJ Bandama_Financial Model_Draft v2 Summary
8. INGEROSEC, “ENVIRONMENTAL AND SOCIAL CONSIDERATIONS SURVEY ON THE BANDAMA RIVER WATER TREATMENT PLANT BOOT PROJECT IN THE REPUBLIC OF COTE D'IVOIRE”, July 2018