



City Assessment: Waste management in Abidjan

Gaïa Ludington, Gevalor
December 2014



1. Abidjan

- Abidjan is the economical center of Côte d'Ivoire
- Considered a cultural hub of West Africa, Abidjan is characterized by a high level of industrialization and urbanization
- Ca 6 million inhabitants (tbc in 2015)
 - 13 municipalities, grouped to form the District of Abidjan
 - There is no city of Abidjan:
 - Geographically Abidjan is the 13 municipalities (ca 1370 km²)
 - Politically, the District of Abidjan represents the 13 municipalities.
- GDP per capita : ca 1800\$



2. Institutionnal aspects: before 2007

Policy / Politics /
Legal framework

- Ministry of Environment

Collection
Waste final
disposal

- District of Abidjan

Pre-collection
Street sweeping

- Municipalities

In 2007 ANASUR (Agence Nationale de Salubrité Urbaine : National agency for urban salubrity) is created

2. Institutionnal aspects: After 2007

Policy / Politics /
Legal framework

- General Direction for Urban Sanitation

Collection
Waste final
disposal

- ANASUR

(Pre-collection)
Street sweeping

- Municipalities

2. Institutionnal aspects

- The General Direction for Urban Sanitation (GDUS) is part of the Ministry of Environment. Decision maker.
- ANASUR (National Agency for Urban Sanitation) is a commercial and industrial public institution. Also a decision maker. Applies instructions given by the GDUS.
- Specificity of Abidjan: the municipalities are only in charge of street sweeping. The state is in charge for waste management in the Country.

Operating aspects: from municipal waste production to disposal

3. Waste production

- Population of Abidjan produce around **0,8 kg / day waste**, official data, consistent with regional figure
- 6million inhabitants should produce **1.7 million tons** of waste per year
- « Official figure » : around **1.2 million tons** produced per year
 - No consistency. *ANASUR* launched a study that should give accurate figure



3. Waste pre-collection

- Households pay a fee to get waste collected.
- Pre collection structures come from once a day to once a week to collect waste.
- Depending on the geographic situation they'll bring waste in three different spots:



« Trunk »



« transfer site »: poste de groupage



On the ground (place defined)

- Food waste and other biodegradable matter : 40%
- Sand and other <20mm : 16%
- Green waste : 9%
- Plastics : 8%
- Paper and cardboard : 6%
- Textiles : 3 %
- Other inerts (glass, metal, coal...) : 18%

- Trunks:

- Mostly used
- Ca 300 available
- 7m³ to 20m³
- Privately owned by collectors

- Transfer sites:

- 5 existing (2 in Treichville, 2 in Koumassi, 1 in Yopougon)
- Privately owned by collectors: pre-collectors pay a fee

- Supposedly 80 to 90% of waste produced is precollected.

→ Where does waste goes ?

- Depending on the geographic area pre collectors don't have the same fleet:
 - Urban center: wheel barrow.
 - Residential / business center: motorized tricycles
- Represents around 6000 direct jobs
- Pre collectors are federated per municipality but do not have a global federation representing them → data uncertain.
- Are mainly informal: do not exist officially in contracts (pre collection is collectors job).
- One municipality has officially delegated pre-collection to pre-collectors.

3. Link between pre-collection and collection

- For a « trunk » pre-collector structures and collectors agreed on the geographic position – pre-collectors bring waste to the trunk, collectors pickup the trunk and leave an empty one. Often the place is rented.
- For transfer sites, usually, the collector is also a pre-collector. He then build the transfer site for his own use and other pre-collectors have to pay a fee to dump waste there. 100F per dumping seems to be a usual number.
 - Pre collectors then don't get another choice as they are not allowed to dump anywhere else...

3. From collection to transportation: Transfer center (Centres de groupage)

- 3 transfer center (\neq transfer site) are under construction

Goal:

- Deposit waste between pre-collection site and final disposal
 - Waste sorting (Planned for 2017)
 - Waste valorisation (planned for 2018)
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- Will be equipped with sorting platforms and engines
 - Will be equipped for waste valorisation by AD.



- Ca 10 collection firms in Abidjan.
- Are federated
- Carry waste from where the pre-collectors leave them to final waste disposal site.
- Are under contract with ANASUR for one year, renewable
- Get paid per ton they bring at the SWDS – depends on the distance between the collection point and the dump (special tarification for green waste)
- Collection represents between 2 000 and 3 000 jobs

- If Abidjan produces 1,2 million tons waste /year, 70% of waste collected.
- If Abidjan produces 1,7 million tons waste / year, 50% collected

→ Apparently, in some neighbourhoods, pre-collectors do not bring waste to grouping points but throw them away in thalwegs.

Grouping points too far from collection points

Fee to access transfer site to high.

3. Akouedo's Dump

- When collectors trucks get to the dump, they get weighed. ANASUR is present at the dumpsite as well as PISA IMPEX, the firm in charge of Akouedo's dump since 1998



3. Akouedo's dump

- Around 300 trucks get to the dump per 24h.
→ between 3000 and 4000 tons / day
- Waste is directed to specific places, leveled and compacted. 21 engines on site.
- Akouedo's dump is opened since the 1960's
→ is almost full: 5 month left with 3000 tons/day. (data: december 2014)

3. Akouedo's dump: waste pickers



3. Akouedo's dump: waste pickers

- Around 1 000 waste pickers on the dump
- Ivorians – Malians – Burkinabe etc.
- Waste picking: different jobs : picking – sorting / washing – reselling
- Depending on reselling prices different waste are picked up

3. Akouedo's dump: closing programm

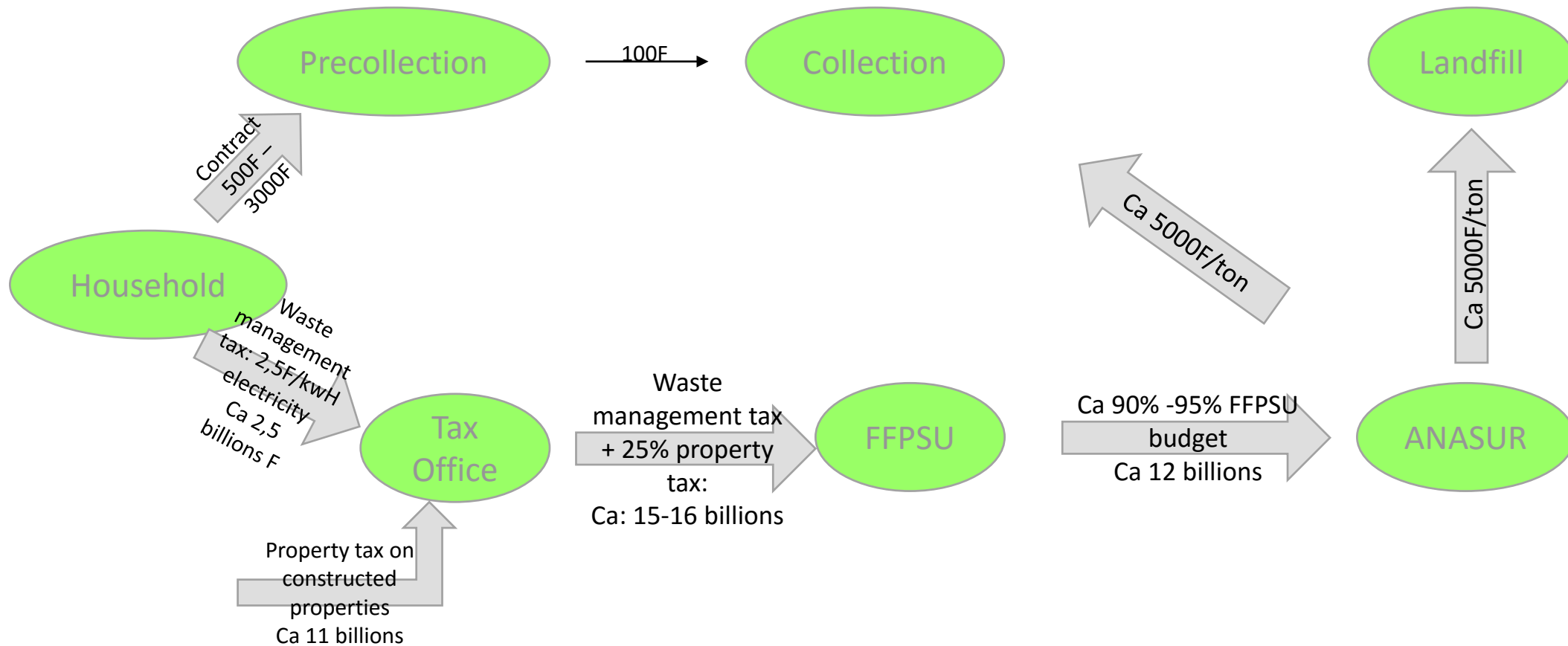
- Aderci's project: landfill gas recuperation
 - Not working at the moment
 - Registered on CDM
 - Involves one part of the dump



3. Akouedo's dump: closing programm

- In December 2014, 5 month left (3000tons /day)
- Study launched?
- Waste pickers future?
- Landfill gas recuperation?

4. Financial circuit diagram

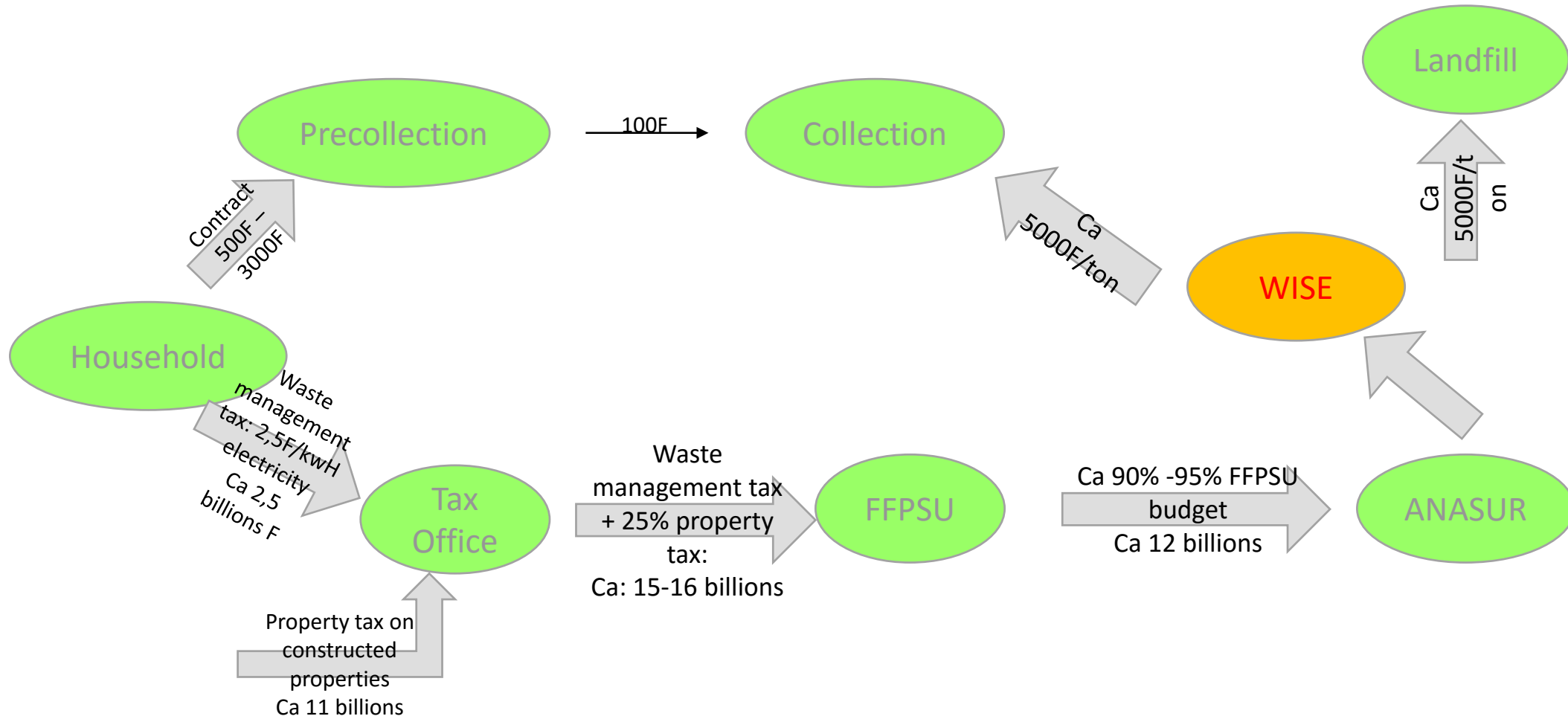


5. What for the future?

- Service not good enough → integrated waste management system – circular economy
- WISE SOLUTION CDI*
 - Wise Solution : US consortium
 - Public service delegation agreement for 15 years with exclusivity on the 13 municipalities
 - Reduce burried waste
- Agreement starts on August 25th 2015.
- Will be in charge of the entire system.

*Information not confirmed by all the actors.

New financial circuit



- first 3 years: 2015 – 2018: waste burying
- After 19 month: first waste sorting unit
- After 29 month: waste AD

- Regularity of payment by the State
- Land availability for new installations
- The minister **suggested** to Wise to work with local firms.



Thanks for your attention

- Questions ?

- **General**

- Diagnostic, options de valorisation et d'élimination et plan directeur – Déchets ménagers à Abidjan. Pierre Lacroix, 1987
- Plan de gestion des déchets dangereux pour le district d'abidjan, 2010. PNUE
- Female waste pickers in Côte d'Ivoire, Sandra Brechbühl, 2011
- Etude stratégique pour la gestion des déchets solides dans le district d'Abidjan, Burgeap, 2011

- **Waste characterization**

- Diagnostic, options de valorisation et d'élimination et plan directeur – Déchets ménagers à Abidjan. Pierre Lacroix, 1987
- Etude de caractérisation des déchets urbains du district d'Abidjan. Terrabo, mai 2010
- December 2014, ANASUR : « a waste characterization study is being launched » To be confirmed.