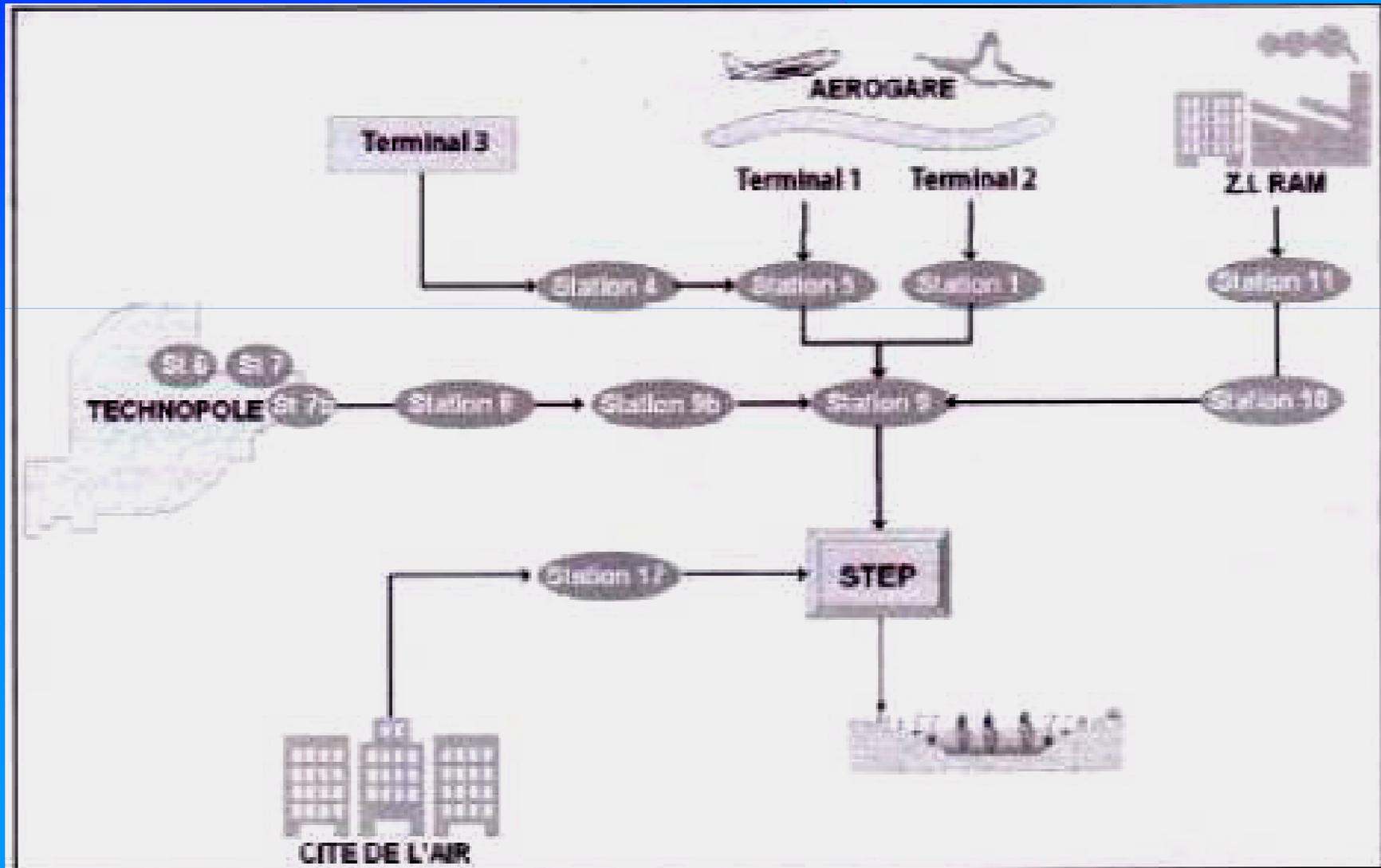


The wastewater generated by the platform is collected in a separated sewer system. The total volume of wastewater is the order (2010) :

- 4000 m³/d of domestic wastewater (DWW).
- 1500 m³ /d of industrial wastewater (IWW).



The quality of wastewater produced is characterized by:

	Domestic wastewater DWW	Industrial wastewater IWW (discharge from the Aeropole)
Temperature (°C)	18 - 24	19 - 27
pH-Value	6.3 – 6.8	6.1 – 6.4
BOD ₅ (mg/L)	530	1700
COD (mg/L)	914	3700
SS (mg/L)	584	614
Nitrogen TKN (mg/L)	50	66
TP (mg/L)	32	82

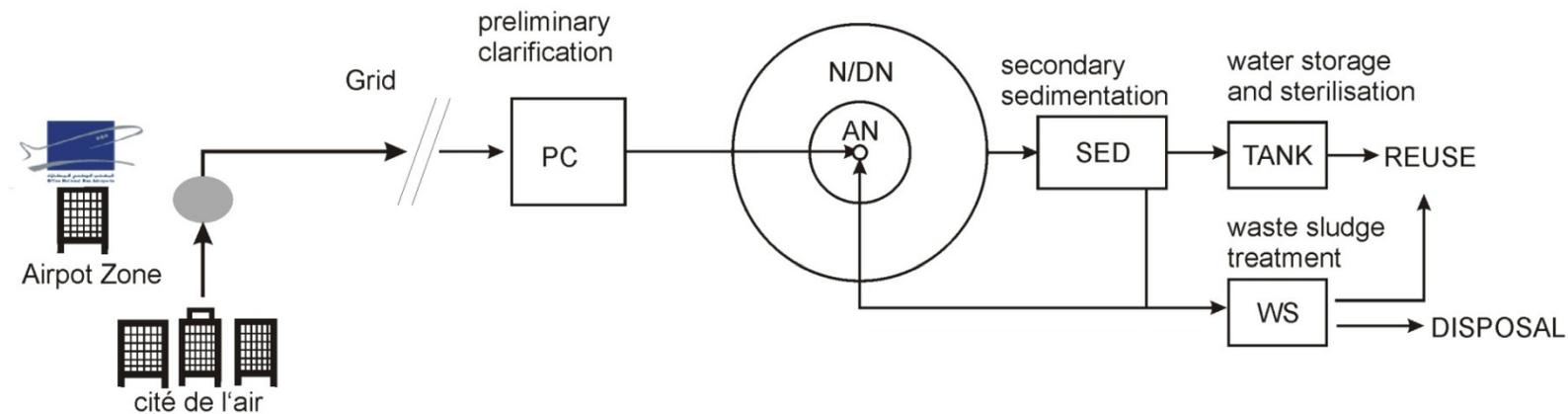
The reported COD/BOD₅ equals 1.72 for the DWW and 2.17 for IWW, which shows that the total wastewater in the area are biodegradable.

The ONDA launched in 2008, a project to build a new wastewater treatment plant (wwtp) consisting of a secondary treatment using the activated sludge with two processing lines:

- One for DWW to treat 4000 m³/day with possibility to reuse treated water in agriculture.
- One for the IWW to treat 1500 m³/day with a perspective to reuse treated water in agriculture or other activities.

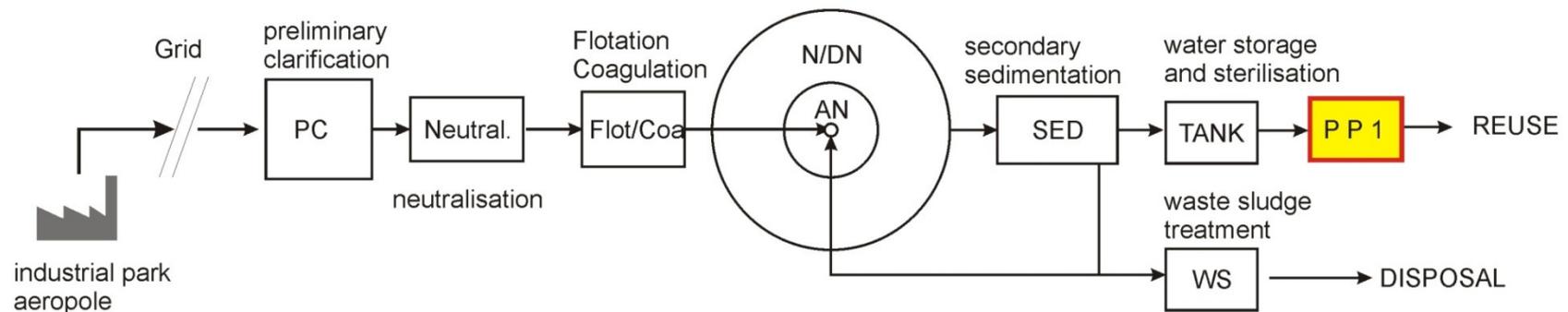
a) Domestic wastewater (DWW) treatment

Phase 1 4,000 m³/d
Phase 2 7,200 m³/d



b) Industrial wastewater (IWW) treatment

Phase 1 1,500 m³/d
Phase 2 1,920 m³/d



In the medium term, the ONDA conventional treatment plant will treat about 1.8 million m³/y in 2012 which could irrigate an agricultural area between 450 and 800 ha

- By 2025, the annual volume of treated water would be about 3.2 million m³/y resulting in an irrigable area between 750 and 1500 ha.



At the PP1/project UAC, we experiment with a tertiary treatment and agricultural reuse of industrial wastewater by MBR system.



2- The town of Deroua

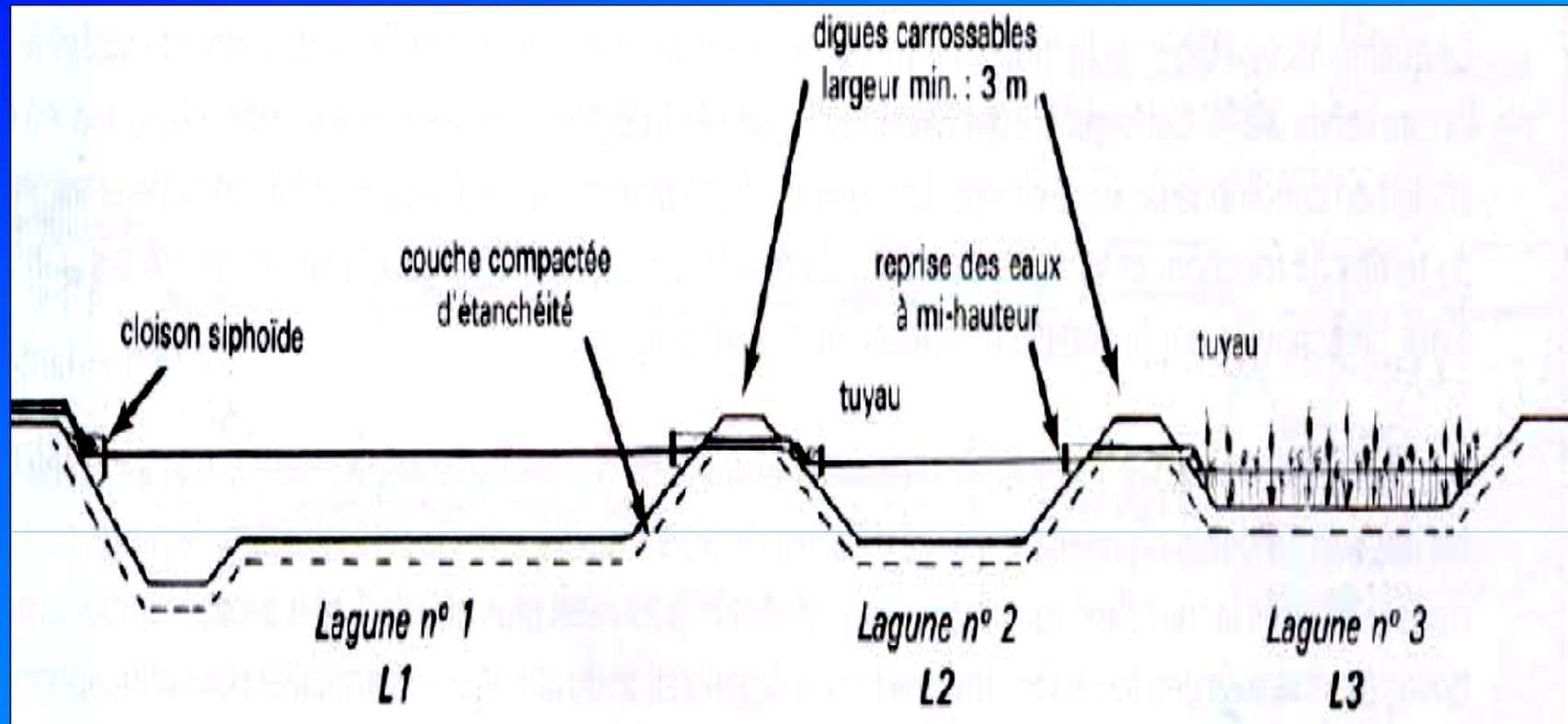
- Located at 25 km South of Casablanca .
- Population: about 25.000 inhabitants.
- Activities: Agriculture, Commerce and some small industries manufacturing building materials.
- Wastewater: About 2000 m³/day
- Sewerage: Septic tanks with cesspools replaced recently by a new network connected to the new wwtp.



The physical and chemical analysis of the wastewater shows an essentially domestic origin as the average ratio COD/BOD₅ equals to 1.24.

	Minimum	Maximum	Average
Temperature (°C)	14	29	21.6
pH-Value	5.39	7.73	6.48
Conductivity (µs/cm)	1650	4740	2965.8
SS (mg/L)	8.5	76	412
COD (mg/L)	615	1840	1354.9
BOD₅ (mg/L)	138	1385	1089.2
Nitrogen TKN (mg/L)	30.4	123.28	75.3

In Deroua, the wastewater treatment plant is a natural lagoon.

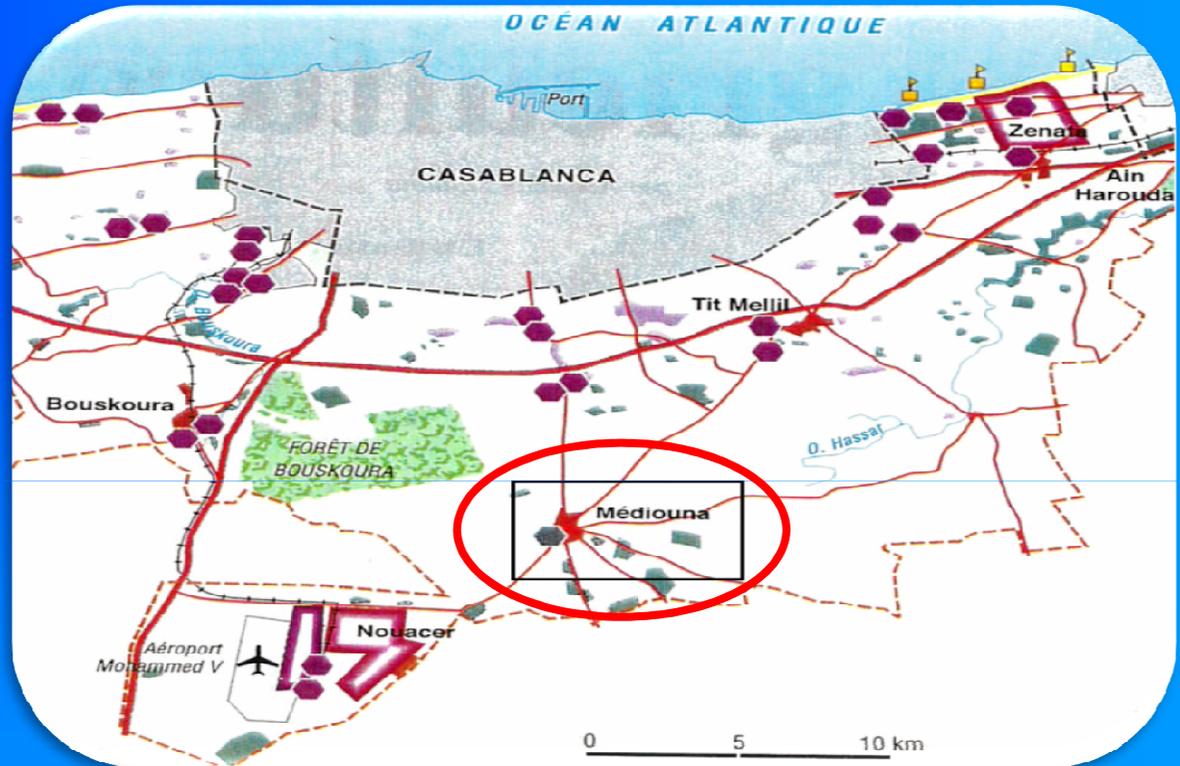


The volume of purified water by this WWtp is going to be 550.000 m³/y at present and the irrigable area would reach about 130 ha in traditional mode and 250 ha using modern irrigation technology.

By 2025, the annual volume of treated water would reach 630.000 m³ to irrigate about 150 ha traditionally and almost 300 ha using modern irrigation.

3- The City of Médiouna

- + It is located at 17 km south of downtown Casablanca .
- + This city is situated in the middle of agricultural land.
- + Population : About 20.000 inhabitants.
- + Socio-economic activities:
Agriculture, trade and small industry (textile, mechanics, metallurgy and building materials).



- + Potable water consumption (in 2009): 2500 m³/day.
- + Volume of wastewater generated approximately 2000 m³/day
- + The quality of wastewater produced is characterized by:

	Minimum	Maximum
Temperature (°C)	17	28
pH-Value	6.97	7.4
Conductivity (µs/cm)	2830	6500
Salinity (mg/L)	1300	2900
BOD₅ (mg/L)	409.66	
COD (mg/L)	804.77	
Nitrogen TKN (mg/L)	41.66	98.8
TP (mg/L)	7.95	13.625

The report COD/BOD₅ is the order of 2 (1.96) confirming that the produced wastewater has a domestic character and is biodegradable.

For several years, the wastewater generated was collected and discharged directly into the small river Hassar and reused untreated in agricultural land with all risks to humans, animals and the environment in general.



But this situation will be change because the wwtp that Lydec (Company for water and electicity in Casablanca) chose to set up is an membrane bioreactor (MBR). The separation of the sludge is done by a membrane filtration chamber allowing higher biomass concentrations and adaptation of the sludge to the wastewater.

The effluent quality allows the irrigation in agriculture and the absence of suspended solids will facilitate an efficient reuse of the water by drip irrigation systems.



The plant currently in construction will be treated about 2000 m³/d but is designed to treat up to 4000 m³/d by 2017.

In 2012, the volume of produced treated water will reach 730.000 m³/y and therefore resulting in an irrigation potential of 170 ha by traditional and up to 340 ha by modern method.

By 2025, the throughput would reach approximately 2.5 million m³/y and its potential for irrigation would sum up to 600 ha through traditional and about 1200 ha by modern technology.



In the near future (2012), there are first three treatment plants will be operational at the suburban Casablanca.



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