

**THE WASTEWATER MANAGEMENT IN ALGIERS.  
WHEN THE RURAL BECOMES ENCRUSTED IN THE URBAN.  
AL-HARRASH MUNICIPALITY CASE STUDIED.**

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**Abstract**

The municipality of al-Harrash is situated southern of the capital Algiers at the very mouth of Wad al-Harrash river. It encloses some informal settlements where the population is living with a level of commodity designating not only a rural world but a dangerous life conditions.

The precariousness of that habitat as much as the healthy conditions indicate many deficiencies related to the local wastewater management for what concerns both the technologies used and the strategy adopted. In parallel, some social behaviours contribute to aggravate the vulnerability face to the water related risks as the population unlawfully invests unfavourable sites

The present paper's objective is to explore and assess the strategy followed by the municipality to locally manage the wastewaters and improve the public health and the environment salubrity especially within those quarters.

**Introduction**

Al-Harrash municipality is situated southern the Capital Algiers, at about twenty kilometres of the city centre and the very mouth of al-Harrash river. That's to say that the plain it occupies had been for a long time the rural hinterland providing not only foods but also water for irrigation and drinking.

The site has been urbanised in the beginning of the XIXth century in the form of a French colonizing village after a large operation of marshland draining. Since then, al-Harrash municipality, that was named Maison Carrée, has been regularly exposed to flood hazards threatening inhabitants, buildings and economic activities. Later, many factories and workshops have been established on the bank initiating the river's pollution that's still going on today.

Such a degraded urban environment has constituted and still does a pretext for the proliferation of some informal settlements within an urban area that finally has never really benefited of all urban commodities. In fact, within some quarters, the wastewaters threaten seriously the public health and the environment salubrity. Now the question is whether the sanitation system is structurally insufficient or mismanaged or the both.

The principal stakes are here related to the social and environmental components as well as the economic and urban ones. In such quarters, the population density and building's decay, the

river's polluting ratio and the inadequate space occupation constitute the very aggravating risk's causes that one has to prevent. Besides, the measures introduced by the municipality seem to be insufficient neither in term of technology nor strategy. Then the objective of the present paper is to analyze these management measures with regard to three criteria related to efficiency, profitability and sustainability.

## Methods

The multicriteria analysis here used aims to reach two objectives:

- First: Describing the wastewater management strategy and assessing the performance of the measures adopted with regard to three criteria: efficiency, profitability and sustainability.
- Second: Focusing the informal quarters, proposing some urban planning and arrangement to locally improve the resilience face to the wastewater related risks.

## Results and discussion

The next table shows expected results of the multicriteria analysis giving the relative performance level of the local wastewaters management measures.

*Table 1: Assessing the local wastewater managing measures\**

Wastewater managing measures		Efficiency	Profitability	Sustainability	Global note
1	Collection	note	note	note	
2	Treatment technology				
3	Purification level				
4	Natural area transfer				
5	Reuse				

*\*Notation scale :*

Note	Level of management	Performance
3	Efficient preventing measures, reducing the risk causes	Sustainable performance
2	Efficient protecting measures, reducing the impact of the risk	Medium term performance
1	Inefficient existing measures	Short term risk
0	Lack of any measure	Failing political strategy

The relative performance level is then confronted to the real situation observed *in situ* to show how some of the wastewater management measures could be (or not) compromised by the social behaviors or an inadequate planning strategy and application programme.

## Conclusions

The present state diagnostic related to the local wastewater management let's augure of some deficiencies that cannot be acceptable within the urban area with regard to the public health, the security and the environment salubrity standards. Even if some of these measures are efficient and profitable in short term, they cannot guaranty the population nor the environment security in long one. Yet, within the programme of the urban development and the

pecariousness eradication, the municipality has to adopt and adapt a sustainable wastewater strategy based on some low impact technologies and the communal participation in the framework of an urban sustainable development.

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