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Conference-debate IME in partnership with ONEE June 3rd, 2021 (16h to 18h, CET)

Concept note

ONEE experience in terms of water desalination

Face to the growing demand on drinking water and the conventional water resources scarcity in several regions of Morocco, the National Office of Electricity and Drinking Water (ONEE) has embarked on a proactive approach and has resorted to other treatment techniques, in particular desalination and demineralisation, which constitute an alternative to meet the ever-increasing water needs.

It should be noted that water desalination is an internationally proven and safe solution for the mobilisation of additional water resources in Morocco, particularly in the South where fresh water resources are limited.

Recourse to desalination is therefore necessary for the drinking water supply of the country's coastal regions, as is the case of the Southern Provinces, for reasons of aridity of the climate, scarcity of conventional water resources, pollution of the available resources, availability of the seawater resource and competitiveness of the cost of desalination compared to other means of drinking water supply.

ONEE has, since 1976, carried out several seawater desalination and brackish groundwater demineralisation projects which allowed it to acquire an undeniable know-how in water desalination useful for the development of its future desalination programme.

Thus, ONEE has capitalized, during more than 40 years, a convincing experience in the realization, operation and maintenance of desalination plants, especially the reverse osmosis units.

In conclusion, desalination in Morocco remains a solution among others for the mobilisation of water resources, in a context of scarcity of conventional resources, and the technological innovations of the last few years have enabled a substantial reduction in investment and operating costs. Also, ONEE has capitalized an undeniable know-how in this field and integrates the planning of water desalination infrastructures in the panel of technical solutions able to ensure the sustainability of the drinking water service on the scale of the Kingdom.

The ONEE presentation will provide answers to the following points:

1. How many water desalination plants exist today in Morocco?
2. Where are they installed?
3. How much drinking water do these installations produce each day?
4. For whom is this drinking water intended?
5. How much has been invested in this field since the beginning of water desalination in Morocco?
6. At what cost is this desalinated water sold?
7. How many desalination projects are currently underway?
8. What is the total cost of these future investments?
9. At what stage of their concretisation are they (launch of calls for tender, start of works, etc)?
10. What is the energy cost?
11. What efforts are being made by ONEE to reduce the energy consumption of desalination?
12. ONEE's strategy for the use of renewable energy as an energy source for desalination.
13. What is the impact on the environment due to salt discharges?
14. What are the solutions established by ONEE for the fate of the brine of the discharge for the demineralisation stations far from the coastline? Case of Zagora
15. What is Morocco doing to promote its vision of sustainable development?



Kharif Mohammed

Since April 2012, Head of the South Development Division at the Technical and Engineering Department of the National Office of Electricity and Drinking Water (ONEE) in charge of the follow-up of major projects in the south of Morocco, in particular the realization of demineralization desalination plants for the biological elimination of ammonium and conventional treatment plants as well as the laying of pipes and the realization of pumping stations and raw water intakes at dams.

Education: Doctorate (Ph.D.) in Industrial Biotechnology (membrane and biological treatments) and State Engineer in Industrial Biotechnology from the Technological Institute "Technical University" of Saint Petersburg State.

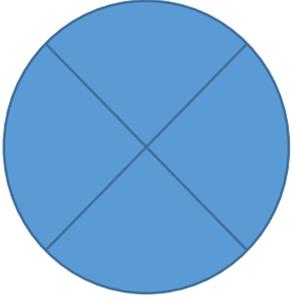
Interested in scientific research in the field of new water treatment technologies consisting in developing and adapting treatment processes and channels to the Moroccan context and providing assistance to the operator in his optimisation reflections.



Ignacio González-Castelao Martínez-Peñuela

Ignacio González-Castelao Martínez-Peñuela is a dedicated Master Civil Engineer skilled in the water cycle and environmental issues. He has worked in different private and public Spanish engineering organizations, both within the water sector and in the infrastructure of roads and railways. Ignacio has held various positions in Aguas de las Cuencas Mediterráneas S.M.E., S.A., since August 2002. Currently, he is Deputy to CEO.

He is committed to internalization and collaboration with technical communities, multilateral banks, and international organizations to share knowledge and learning. Ignacio has been a member of the Board of Directors of the Civil Engineers Association of Spain, and member of various committees of the Engineering Institute of Spain (IES), such as the Committee on Energy and Natural Resources, Committee on Engineering and Sustainable Development and the International Committee. He is also the representative of the IES at the Pan-American Union of Associations of Engineers and a member of the Working Group on Water of the World Federation of Engineering Organizations. Last year, he completed his term as Chairman of the Standing Committee on Water of the World Council of Civil Engineers. These efforts to disseminate knowledge and learning have led him to be selected by the Department of State of the United States of America as an International Leadership Visitor and later Secretary-General of the VIA Jefferson Circle Association.

	<p>To be confirmed (Malta)</p> <p>...</p>
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