



Preface

We, as the people of the world, are facing real environmental challenges today which must be taken seriously. These challenges are numerous and can no longer be ignored. Some of the most pressing challenges are freshwater scarcity, groundwater depletion and salinization, climate change, loss of biodiversity and fertile soils, and food supply in competition with biofuels. This is not science-fiction – this is real and present danger to us, and to our children.

UNESCO has already produced two volumes on Sabkha Ecosystems, dealing with the sabkhas of the Arabian Peninsula and adjacent countries, as well as West and Central Asia. This is a laudable effort, trying to make scientific information available on various aspects of sabkhas including how to utilize sabkhas for biosaline productivity, and describing the educational, heritage, and ecosystem value of sabkhas.

Sabkhas belong naturally to many dry areas in the world, including the dry zones of Africa and Southern Europe, and their agricultural potential is considered quite low. However, with research and development in saline irrigation and good drainage it is possible to convert at least coastal sabkhas into agro-systems with mangrove, seagrass, and algal biomass. This can contribute to land-based fish and shrimp production, livestock fodder, carbon sequestration, and production of charcoal and biofuels on currently non-productive soils. It would also provide jobs and income in dryland agriculture using high-saline irrigation and drainage, assisted by a non-corrosive irrigation system and solar energy for seawater pumps.

There are examples and success stories with biosaline productivity. However, more needs to be done to obtain knowledge on seawater-based seagrass productivity in coastal seagrass-terraces, as well as mangrove and salt marsh crops as livestock fodder. It is therefore important to continue research and experiments into this field since it can potentially make hundreds of thousands of square kilometers of salt-deserts green using saline soils and seawater for the production of cash-crop-halophytes.

In this context, sabkha development can make a significant contribution to reduce dependency and wastage of freshwater in agriculture, which is globally the highest freshwater consumer.

I highly welcome this new volume entitled "*Sabkha Ecosystems Vol III: Africa and Southern Europe*", and encourage further studies into this subject, with a particular view towards enhancing professional environmental management, and impact assessments.

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Sabkha Ecosystems

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