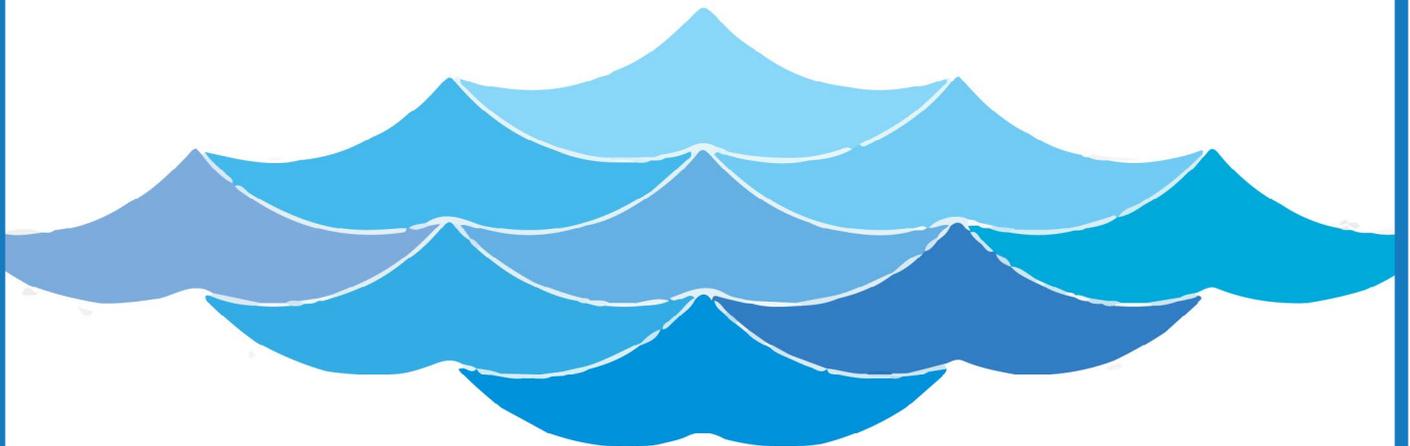




Water in Oman

‘SPOTLIGHT ON’ Oman’s Green Economy Series brought to you by



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Matthew Minshall, [Beyond Language Translucidus](#)

Water is a precondition for human existence and the sustainability of the planet. Leonardo da Vinci stated: “water is the driving force of all nature”.

There is an ancient Omani saying:

سكن على الماء ولا تسأل عن رزق

(Live near water and ask not about sustenance).



If we manage water everything else is easier to realise. This short article discusses water in Oman but this a vast subject and will be limited to an overview of water essentials and using the Batinah region as an example.

Al-Batinah occupies an important location on the coast of Oman. Traditionally this region was the most populated, because of the green plains between the Mountains and the sea. The regional capital, Sohar – rumoured to be the birthplace of Sindbad the Sailor - now has a vast deep-sea port which is within easy reach of the growing economies of the Gulf, the Indian sub-continent, and wider and thus able to reach over two billion customers.

The once renowned green Batinah has been affected by the rapid development of Oman and the increase in the demand for water. Alya Al-Hosni knows well the need for efficient water management. In conversation, she recounted her memories of childhood on the farms of her family on the Batinah Coast. She remembered with pride the wonderful and abundant produce of citrus fruits and dairy cows from land which now supports only goats and dates. This is simply because the precipitation and irrigation methods that supported a relatively sparse farming community can no longer cope or meet the dramatic rises in demand that a growing population experiencing rapid social change brings. But it is reversible if we seek a long-term concept such as the 2040 vision instigated by Sultan Qaboos and endorsed by Sultan Haitham, balanced with hard work, patience, and the intelligent use of technology.

Water is mankind's most important resource. If the twentieth century was the era of oil, then the twenty-first will surely be that of water. Water is complex as it is linked to almost everything in the world, but complexity must not hinder understanding.

Only three per cent of the world's water is fresh. Ninety-seven per cent is saltwater, of which seventy-seven per cent is frozen and twenty-two per cent is deep underground in aquifers. That leaves only one per cent easily accessible and much of this is systematically polluted through mismanagement.

As populations grow and evolve the water demand grows, as is apparent and acknowledged in Oman. Traditional methods cannot cope and the need for innovative sourcing and efficient smart system management supported by renewable energy methodology, and efficient recycling of waste is key for the future. Groundwater in Oman has been overused. Continuous abstraction lowers the water table depth and, in some cases, deteriorates water quality due to seawater intrusion, as in the case of Batinah. A significant factor is the increase in agricultural demand which is predicted to rise dramatically in Oman over the years 1990, 2000 and 2025.

Oman Past and Projected Water Demand in Million Cubic Metres (MCM)
For 1990, 2000, and 2025

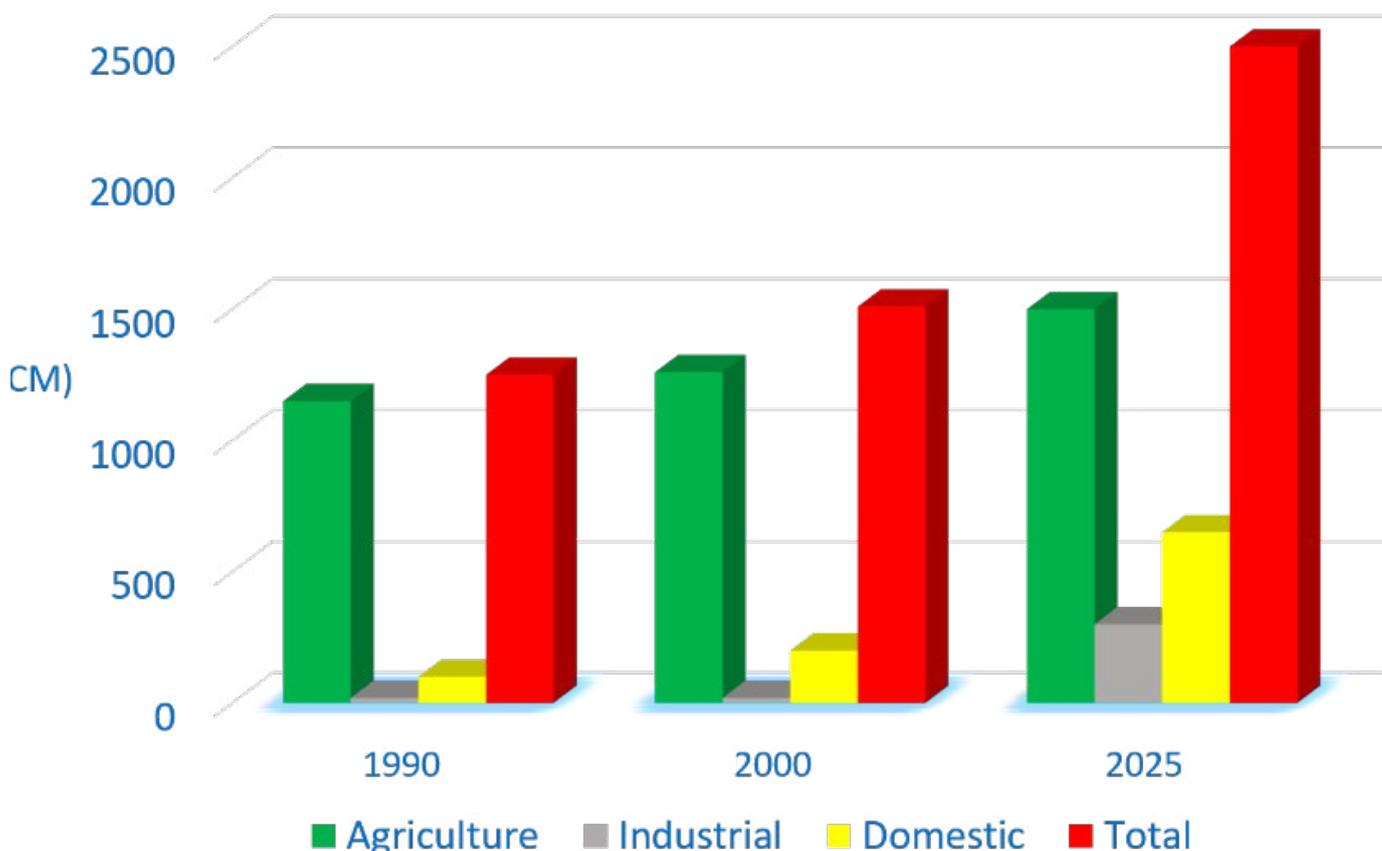


Image: Matt Minshall – Information Source: Fanack - Water Challenges in Oman - accessed 270421

As recognised clearly in the 2040 Vision water is a key element of critical national infrastructure and supported ably by strategic companies such as Haya Water. Oman is already rated high for domestic food provision and with extended smart use of water capture, storage, and distribution she may achieve total self-sufficiency.

Like oil and gas, there is plenty for all; the only challenge is accessing it intelligently and economically. There are many ways to harvest, preserve and distribute water in a manner that will ensure life and provide economic benefit. Many of the global technological innovations have been swiftly adopted by Oman and the country is proving to be a global leader in demonstrating the courage and ability to do what is both right and future proof. An example is the Nimr Water Treatment Project in south Oman which is the largest industrially constructed wetland system in the world and may reduce greenhouse emissions by 2%.

Desalination is proven and effective; it preserves current freshwater supplies, having the oceans as its source, and is not dependent on changing factors. But the plants are expensive, require considerable energy, and can contribute to greenhouse gas emissions and have an environmental impact. But advances in technology are

alleviating this through smart recycling and the energy bill may be managed by the sensible use of renewable energy.

Lack of precipitation has always been a challenge for most of Oman. The Dhofar region benefits from an annual monsoon – Khareef - during which time there is frequently natural fog and there are innovative projects using mesh nets to collect and store water – up to a million litres per season - for its use afterwards for irrigation. While the greater part of Oman is much drier in terms of precipitation it is not necessary to wait for fog or rainfall.

A huge supply of water is floating in the atmosphere; a cumulus cloud may contain over two million litres of water.



Cumulus Clouds over Al-Jebal Al-Akhdar near Izki - Image Matt Minshall 1987

But water is not just in the clouds. All air contains some water, and many areas of Oman, particularly the coastal regions, are enduringly humid and water may be harvested, powered by green energy in a manner wholly sustainable. The Mayamn project which is underway in South Africa seeks to prove the collaborative advantage of using all technologies. Power sources include the power of light and wind, with eco-friendly packaging and distribution.

Water is vital for basic survival, food production, industry, and transport. In reference to the Omani proverb at the beginning if we solve the water problem all other challenges decline in complexity. As in many places, globally water provision is a problem for Oman, but the task is being addressed intelligently, without the constraints of legacy limitations and most importantly with the vision to adopt all the smart capabilities that make the key differences for people, the country and thus regional and global prosperity and harmony.