Maltese coastal salt pans:

Measurement, Mapping and Management of Xwejni Salt Pans at Marsalforn, Gozo.

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Salt has been a foremost natural resource for millennia with a wide range of uses from preserving edible foods, and cooking with it, to cleaning, laundry, hygiene, and as a medicinal balm. In small islands having poor natural resources the production of salt from sea water, through insolation, aeolian processes and intense human endeavour, offered economic benefits and created a socio-environmental cultural heritage around the sites of production of this staple resource.

The Mediterranean has a long history in relation to salt with huge underwater deposits as remnants of the desiccation 7-10mya, labelled geologically as the Messinian Salinity Crisis. Salt water intrusion, wave impacts and spray also condition coastal vegetation, state of repair of urban facades and road surfaces. Over the last millennia salt production from surface marine waters has been an important activity. The Mediterranean, with its long indented coastline, numerous islands and a distinctive climate has been a favourable area that for salt production from sea water. It was the source of supply of salt to the Eurasian land mass, and trekking it through to sub-Saharan Africa. With a salinity of around 36 ppt, the

Mediterranean is one of the most productive areas in the globe for salt yield per volume of water.

The Maltese Islands are no exception to this activity with rectangular or oblong pans etched on the softer surface limestone of Malta and Gozo. Located strategically on the foreshore, the rectangular (0.5-1.5 m^2), shallow pits (15cm), supplemented by larger reservoirs occupy significant areas as near to the shoreline as possible. There are about 40 artisanal sites along the littoral varying in area from one thousand to 17,000 m^2 and with their nearest point located between one and ten metres from the water's edge. Some are no longer in use. Their total area is about 170,000 m^2

This aim of this paper is to explore the multiple geographies of salt pans especially the ones found along the Marsalforn coast in Gozo. The processes of salt panning is based on sea water irrigation either through storm wave action or rope-and-pail, or a system of pumps. The latter method reaches higher levels of the stepped coast and decrease toil. Furrows dug between the pans channel surplus water from the reservoirs to the smaller pans or into the sea. This research aims to map out the traditional but complex management system present at Marsalforn Xwejni salt plans, which are considered as one of the best preserved salt panning sites on the Islands. The mapping and management analysis aims to highlight the unique industrial setting behind this industry and provide additional impetus to geo-heritage conservation status.

Keywords: salt pans, limestone, foreshore, Marsalforn, Xwejni, Gozo, Maltese Islands.