


# On land reclamation - Denis Camilleri

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Opinion

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The Maltese archipelago is a small island state of 316 square kilometres with the total population standing at 475,701 people, up by 3.6 per cent when compared to 2017. Of these, 55,000, or 11.15 per cent, are non-Maltese nationals, an increase of 354 per cent over the 2005 census, when the number of non-Maltese nationals stood at 12,112, or three per cent of the total population. In the coming years, 13,000 new foreign workers are expected annually.

Due to its small size, together with its population, Malta by far ranks first among all EU member states in terms of population density, with an average 1,507 persons/square kilometre, compared with the EU average of 117 persons/square kilometre.

The second most-densely populated country within the EU is the Netherlands, with 495 people per square kilometre, whereas Sweden was the least densely populated, with an average of 23 people per square kilometre.

The high-density rate was even more pronounced when analysed at regional and locality level. Mainland Malta was more densely populated than Gozo, with an average 1,602 people per square kilometre, compared with Gozo's 557 people per square kilometre. The channel tunnel, if and when undertaken, will probably address this regional anomaly.

The above population densities pale into insignificance when compared to similar island states in Asia. Singapore, which has gone for 24 per cent of land reclamation, has a population density of 8,155 people per square kilometre. There are more than 300 parks

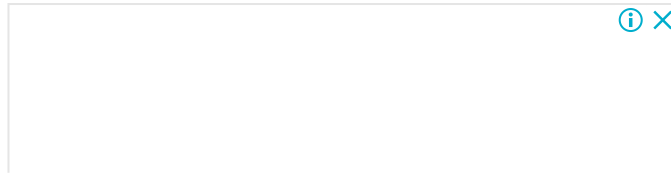
and four nature reserves in Singapore, with many trees planted, and almost 40 per cent of the country is covered by greenery. Having a built-up area of 60 per cent, Singapore is paradoxically known as a Garden City.

Its government has used land reclamation to supplement the country's available commercial, residential, industrial and governmental properties (military and official buildings). Land reclamation in Singapore also allows for the preservation of local historic and cultural communities, as building pressures are reduced by the addition of reclaimed land.

On the other hand, Singapore's industrialisation (particularly in terms of coastal development) and land reclamation projects have resulted in the extensive loss of marine habitats along the city-state's shores. Many offshore islands have been changed, often through the filling of waters between small islands to create cohesive land masses. An enormous loss in coral reefs as a result of extensive land and coastal development has also occurred. Since coral reef monitoring was first instigated in the late 1980s, a clear overall decline in live coral cover has been noted, as has a decline in the depths at which corals thrive.

Coral reefs are valued for their work towards carbon sequestration and shore protection (particularly in the dispersal of wave energy), as well as for their contribution to fisheries production, ecotourism and scientific research.

With 7,014 people per square kilometre, Hong Kong has gone for six per cent land reclamation and Macau, with 20,821 people per square kilometre, opted for a staggering 160 per cent of land reclamation. Hong Kong expanded the limited supply of usable land with a total of about 60 square kilometres of land created. Disneyland Resort, Hong Kong International Airport and its predecessor, Kai Tak Airport, were all built on reclaimed land employing techniques designed to stabilise the new coastline against erosion. In addition, as the city expands, new towns in different decades were mostly built on reclaimed land.



“ Malta by far ranks first among all EU member states in terms of population density ”

So what should Malta be heading for at a population density of 1,507 people per square kilometre? Being guided by the Hong Kong model, which, for a population density of 7,014 people per square kilometre went for six per cent land reclamation, should Malta endeavour to reclaim acceptable seabed that can accommodate two per cent of the present land mass, mainly an additional six square kilometres? On a maximum depth of 15 metres, this averages out at 50 million cubic metres of backfilling material.

Circa half of this seabed area may be achieved along the stretches from Pembroke to Ghallis, Ricasoli to Marsacala's Siberia point (highlighted in red in the map). These seabed areas have been calculated up to seabed depths of 15 metres because as beyond this depth of reclaimed land the project would become highly expensive and not cost-effective. Along the Ghallis stretch, the backfilled area extends for circa 300 metres while along the Xghajra stretch it extends about 200 metres.

The question is where to go now?

It is to be noted that the extent of the built-up area in Malta increased from 4.5 per cent in the mid-1960s to 23 per cent by 2001, edging up presently to 30 per cent. On the other hand, less than 25 per cent of Hong Kong's land area is built up.

Hong Kong has some outstanding, easily accessible country parks and rural scenery. These built up percentages should be compared with Singapore's 60 per cent.

Hence, noting Malta's increasing population density together with the present built up area, with brownfield sites being redeveloped to greater heights to conserve the ODZ areas, the government must at some point in time give due consideration to land reclamation, unless our growing population/economy will eat into existing ODZ locations.

It is to be noted that present allowable building heights are already at their maximum; building materials in use will cause stability problems if one were to go higher.

What is certain is that land reclamation is a long-term expensive project which does not make economic sense for it to be undertaken via private initiative. It has to be State driven if the important facilities required by Malta are to be placed there and also develop larger outdoor spaces without eating into our ODZ areas.

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*This is a Times of Malta print opinion piece*

