



## The Urban Littoral Frontier

**Brian HUDSON**, Dr, Adjunct Professor  
Queensland University of Technology, School of Urban Development, Australia  
b.hudson@qut.edu.au

The urban waterfront may be regarded as the littoral frontier of human settlement. Typically, over the years, it advances, sometimes retreats, where terrestrial and aquatic processes interact and frequently contest this margin of occupation.

Because most towns and cities are sited beside water bodies, many of these urban centers on or close to the sea, their physical expansion is constrained by the existence of aquatic areas in one or more directions from the core. It is usually much easier for new urban development to occur along or inland from the waterfront. Where other physical constraints, such as rugged hills or mountains, make expansion difficult or expensive, building at greater densities or construction on steep slopes is a common response. This kind of development, though technically feasible, is usually more expensive than construction on level or gently sloping land, however. Moreover, there are many reasons for developing along the shore or riverfront in preference to using sites further inland.

The high cost of developing existing dry land that presents serious construction difficulties is one reason for creating new land from adjacent areas that are permanently or periodically under water. Another reason is the relatively high value of artificially created land close to the urban centre when compared with the value of existing developable space at a greater distance inland.

The creation of space for development is not the only motivation for urban expansion into aquatic areas. Commonly, urban places on the margins of the sea, estuaries, rivers or great lakes are, or were once, ports where shipping played an important role in the economy. The demand for deep waterfronts to allow ships to berth and for adjacent space to accommodate various port facilities has encouraged the advance of the urban land area across marginal shallows in ports around the world. The space and locational demands of port related industry and commerce, too, have contributed to this process.

Often closely related to these developments is the generation of waste, including domestic refuse, unwanted industrial by-products, site formation and demolition debris and harbor dredgings. From ancient times, the foreshore has been used as a disposal area for waste from nearby settlements, a practice that continues on a huge scale today. Land formed in this way has long been used for urban development, despite problems that can arise from the nature of the dumped material and the way in which it is deposited. Disposal of waste material is a major factor in the creation of new urban land. Pollution of the foreshore and other water margin wetlands in this way encouraged the idea that the reclamation of these areas may be desirable on public health grounds.

With reference to examples from various parts of the world, the historical development of the urban littoral frontier and its effects on the morphology and character of towns and cities are illustrated and discussed. The threat of rising sea levels and the heritage value of many waterfront areas are other considerations that are addressed.

**KEY WORDS:** Land reclamation, urban waterfronts, urban expansion, global perspective.