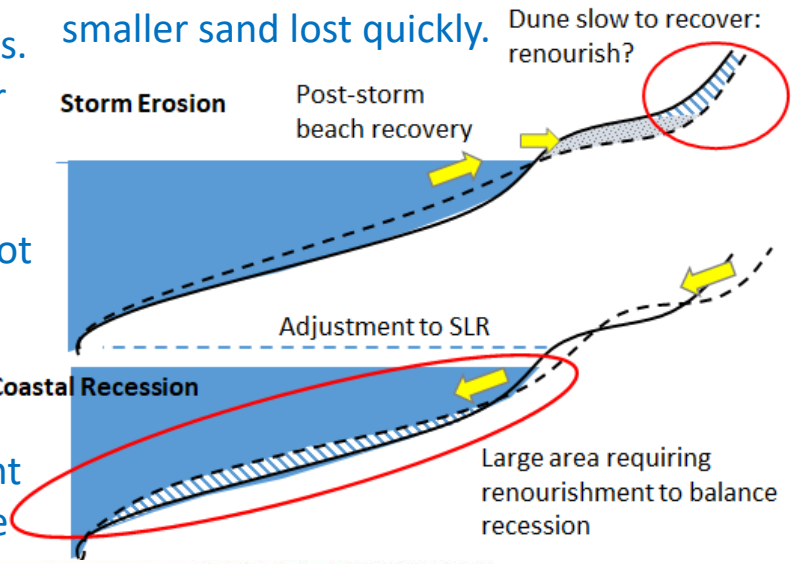
Beach Renourishment

Beach nourishment has long been used as a 'correction tool' for coastal engineering. However, increasing interest in softer techniques has given greater popularity and public acceptance to sand placement to offset erosion.

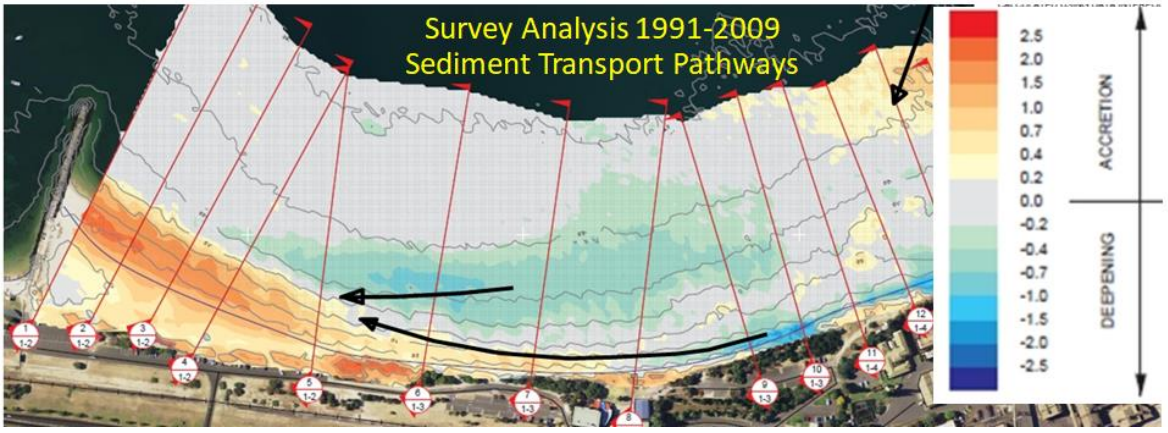
Renourishment needs are typically identified by survey difference analysis. When used for post storm recovery or sand bypassing, the area of accretion provides an obvious source. However, for coastal recession, accretion may not occur and much larger sediment volumes are typically required.

Sources for renourishment should be assessed to ensure they have sufficient volume, are not polluted, and that the material is generally consistent (size, colour) with the sand it is replacing. An understanding of provenance is useful to establish the sustainability of ongoing renourishment. Sediment size is critical to stability, usually with smaller sand lost quickly.



Placement of sediment is also crucial, with material placed above or below the intertidal zone moving more slowly. Placed on the upper beach, a scarp will usually develop, affecting amenity.

Discrete placement often results in sediment moving 2-3 times faster than erosion originally occurred.



Preferred modes of renourishment include post-storm recovery, placement as a buffer in front of protection, complementary to traditional protection or at a regional scale.

Long-term sustainability of renourishment may need to be considered carefully, due to competing needs and increasing demand.

Damara WA Pty Ltd