

Urban Shorelines

Marine Ecology

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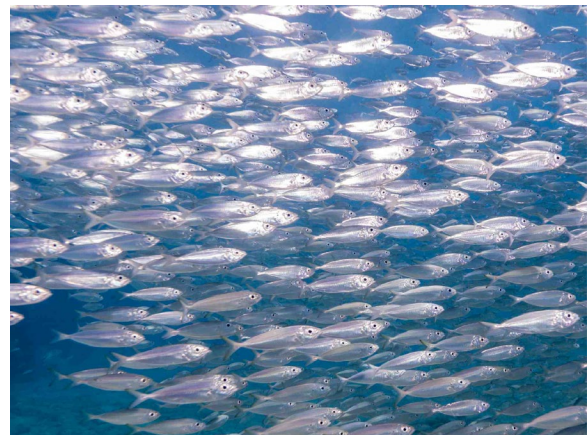
Seawalls are built to protect cities, but the simple designs currently in use do not facilitate ecological function of those shorelines. Our innovative *Urban Shorelines* designs will introduce better surfaces, complex shapes, and materials that encourage attachment and lush growth of marine reef animals and algae, and provide fish food, shelter, and spawning habitat, and thus produce ecological and physical resilience in urban waters.



Mussels, sponges, sea squirts, and hydrozoans are among the many animals that could be growing on urban seawalls and contributing to good water quality, increased protection, and sustainable seafood production.



Small fish can live in the structure provided by seawalls that are encrusted with animals and algae (above). They contribute to a diverse ecosystem that includes larger fish (below).



Confidence in our system comes from extensive work along natural and constructed seawalls, laboratory experiments, and literature review.

