

## Fisheries rely on threatened salt marshes

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Salt marsh ecosystems and the seascapes in which they are embedded serve as critical habitats for species harvested by fisheries (1), which provide food and economic security for hundreds of millions of people (2). Historical marsh losses coupled with increasing pressures from coastal development and climate change place these intertidal ecosystems and surrounding uplands under growing threat (3). Preventing further losses of salt marshes and associated fisheries production will require greater public awareness and difficult choices in coastal policy and management, underpinned by greater understanding of marsh function. Quantifying the value of salt marsh habitat to fisheries production is challenging. Many fisheries species feed and shelter in the salt marsh only as juveniles, and it is difficult to assess the marsh's effect once they have moved to a new location (1). It is also unclear how marsh landscape fragmentation under sea level rise will affect fisheries; it may boost fishery production, at least temporarily (4), but it could also disrupt food web processes that support fisheries (5).

Projections of marsh expansion offer hope (6) but are largely dependent on changes in coastal watershed management. For instance, human development may prevent marshes from migrating upland with sea level rise and thus lead to marsh drowning (7). Adequate sediment supply is also essential for marsh resilience, but many coastal areas in the world are sediment-starved (8). Much effort has been made to restore natural riverine flow and other sources of sediment delivery into marshes, although such efforts may have negative impacts on the very fisheries these marshes support (9). To design effective policies for salt marsh restoration and conservation that protect fisheries production, we need to better understand the role of salt marshes. Researchers should continue to explore the fundamental linkages between salt marshes and fisheries (10), the marsh habitat value within the context of the interconnected and increasingly urbanized mosaic of coastal ecosystems, and the value of salt marshes created by upland transgression and active engineering. Restoration and conservation planning must take a long-term view that specifically recognizes sea level rise and its interaction with other anthropogenic stressors.

