

# LOCAL THREATS TO CORAL REEFS

## COASTAL DEVELOPMENT



Coastal development is usually associated with a growing or urbanizing population and is linked to human settlements, industry, aquaculture, and infrastructure.

Coastal development can degrade land-based habitat and have detrimental effects on coral reefs, especially when construction projects are not properly assessed and their effects result in unforeseen impacts.

When piers for shipping, tourism, or fishing have been constructed directly on top of coral reefs, this type of coastal development is considered a direct impact. Other direct impacts include dredging of marinas to ensure the channels are deep enough for ships to pass through. Dredging can tear into the reef structure or disturb nearby corals by smothering them with sedimentation. A process called land reclamation creates land to build on by purposefully pushing dirt and debris into the water; this may be carried out in order to provide the space needed to construct airports or buildings. In some areas, land reclamation has resulted in these structures being built atop or very close to the coral reefs.

Because of hard coral's similarities with brick, sometimes pieces of hard coral may be removed from the ocean to be used instead of bricks during construction projects. Hard coral has also been used as road-fill or ground up and used when making cement for new buildings.

Placement of roads and other development projects may require altering the natural flow of water. For example, a river or wetland's flow will be altered by removing a natural buffer, such as a mangrove forest. By altering the natural flow of water, freshwater and other runoff from the watershed may move more swiftly into the ocean and at a higher rate. Freshwater causes stress to corals and, in large amounts, can be toxic as it alters the salinity levels around the coral.

