**Mapping Ocean Wealth – Infographic Series**

Science behind the infographics

1. **Natural barriers save money and reduce impacts of storms, erosion and flooding**

* Coral reefs are the first line of defense for nearly 63 million people globally: unpublished data based on the total number of likely receiving some level of protection due to their close proximity (<3km) from fringing or near-continuous offshore barrier reefs, and who live within 4km from the shore and <10m elevation
* Coral Reefs – on average, reduce 97% of wave energy (Ferrario *et al.* 2014)
* Mangroves - regularly reduce up to 66% of wave height (McIvor et al. 2012)
* Oysters – where used in place of artificial breakwaters, oyster habitat can be worth up to $85,000 per hectare per year, with combined values for multiple services including non-oyster fisheries enhancement and water quality improvement creating combined values of between $5500 and $99,000 per hectare per year. These figures have been used to show that reefs recover their median restoration costs in 2-14 years (Grabowski et al. 2012)

1. **Protecting fish habitat supports livelihoods, economies and food security**

* The $190 billion global seafood industry: <http://www.nature.org/ourinitiatives/habitats/oceanscoasts/howwework/marine-conservation-inspiring-stories-sustainable-fisheries-1.xml>
* Worldwide 210 million people live in low-lying areas within 10km of mangroves: unpublished TNC data calculated from global mangrove and population maps
* Seagrass – a single hectare of seagrass in Australian Bays produces an extra $24,00USD of commercially important fish per year compared to the bare seabed. Based on ~$A31,650 (Blandon and Zu Ermgassen 2014).
* Oysters – $4,000 per hectare in commercial fish production (Grabowski *et al.* 2012)
* Coral Reefs – healthy, well-managed reefs in the Indian and Pacific Oceans can generate 5 to 10 tonnes of fish per year in perpetuity. TNC summary statistic from a review of ~80 publications

1. **Scuba diving, fishing and other tourism drives coastal economies**

* Globally, coral reefs likely generate up to $30 billion annually in tourism. Estimate based on a preliminary model of global reef tourism (Spalding *et al.* 2014). In a separate study it has been estimated that the Great Barrier Reef alone generates >$4Billion annually <http://www.gbrmpa.gov.au/__data/assets/pdf_file/0006/66417/Economic-contribution-of-the-Great-Barrier-Reef-2013.pdf>
* Diving – the roughly 100 sharks that inhabit the prime scuba dive sites of Palau were each worth $179,000 annually to the island nation’s tourism industry, and that each shark had a lifetime value of $1.9 million. (Fished, they would have a one-off value of $108)(Vianna *et al.* 2012)
* Catch-and-release fishing for bonefish contributes around US$1 billion per year to Florida’s economy (Ault et al. 2010).
* Caribbean island tourism, which is almost entirely coastal and depends on clean, healthy coastal conditions, is worth $49Bn, or 14% of the entire GDP and directly or indirectly employs over 1.9 million people (2013 figures from WTTC, 2014)

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