

To ensure consistency in language among reports, when using the unknown bycatch matrix, please use the template language below, modified as needed to fit the specific fishery you are assessing.

Synthesis:

The bycatch and retained species caught in the _____ fishery are generally unknown. Bycatch is scored according to the Seafood Watch unknown bycatch matrix, based on a synthesis of peer reviewed literature and expert opinion on the bycatch impacts of each gear type. More information is available in Appendix 3 of the [Seafood Watch criteria](#). [Opt: Where noted, these scores have been modified based on information specific to the fishery]. The taxa that are most likely to interact with the _____ fisheries include: [list all taxa that come up in the matrix with a score of 3.5 or below for each gear type, unless there is some reason to leave it out, e.g. fishery occurs in an estuary and so does not interact with marine mammals. Separate gear types if there are multiple ones used the fishery. Include more regionally specific information if available in each taxon section – see examples below]. For the [gear type] fishery, [worst-scoring taxon] limit the score for Criterion 2 due to [state reason, e.g. their high vulnerability and unknown stock status, and high potential to interact with this gear type]. [Include statement for each different gear type].

Example section for 2.1-2.3 for three taxa. Boiler plate text is underlined; other text will be specific to each report but examples illustrate the kind of information to provide, where some additional information is available (sea turtle example), as well as where scores are solely based on the matrix (benthic invertebrate example), and finally where the scores from the matrix are overridden (finfish example).

Sea Turtles

2.1 All sea turtles are considered by Seafood Watch to have high inherent vulnerability (Seafood Watch criteria 2012).

2.2 Sea turtles are listed as **endangered or threatened** throughout the world (NOAA 2012, SFW 2012 criteria document), therefore a **‘very high conservation concern.’**

[Note: sea turtles are always very high conservation concern because nearly all species are endangered or threatened. Sharks, seabirds, corals/biogenic habitats, and marine mammals will be a high conservation concern due to the combination of unknown status and high vulnerability. Forage fish, finfish and benthic invertebrates will be considered a moderate conservation concern because their statuses are unknown (unless there is specific reason for concern; e.g. information that there are a number of overfished fish species in the area).]

2.3 Five of the seven worldwide sea turtle species are found in the BSC and RSC fishing regions (State of the World’s Sea Turtles 2011). A review by Wallace et al. (2010) found that sea turtles are caught as bycatch in longlines, gillnets, and trawls in the BSC fishing regions. For example, the BSC fishery in Vietnam takes place close to green and hawksbill turtle nesting sites (Fish

Source 2012c). Hawksbill turtles are known to feed on BSC (Kailola et al., 1993; Poseidon 2010), which suggests that there are some risks of entanglement.

It is unknown how many sea turtles are actually caught as bycatch in trawl BSC fisheries, but due to their high potential to be caught in trawl gear, sea turtle mortality from trawl fisheries is a **'high conservation concern'** (SFW 2012 criteria document, Appendix 3). Regions that use trawl gear include India and Indonesia. In India, turtle excluder devices (TEDs) are required on trawlers to reduce turtle interactions; however, enforcement for TEDs is lacking (FishSource 2012d; Mathews 2009). In Indonesia, small trawls are used rarely and expert opinion has concluded that interactions with protected, endangered and threatened (PET) species are unlikely (FishSource 2012a; Anggraeni 2012; Crawford 2012). Therefore, because there is either some management in place or PET bycatch is thought to be low, these fisheries do not receive a critical score for this factor.

Benthic invertebrates

2.1 _____ gear type is likely to interact with benthic invertebrates, but the species of benthic invertebrates affected by the _____ fishery is unknown. [If likely species are known, e.g. based on geographic distribution, list here]. Unknown species of benthic invertebrates are considered to be of medium inherent vulnerability according to the Seafood Watch criteria.

2.2 The stock status of unknown species of benthic invertebrates is considered to be of moderate concern according to the Seafood Watch criteria. [If applicable, can list likely species and override this score if merited].

2.3 The impact of gillnet fisheries on unknown species of benthic invertebrates is scored s a moderate concern according to the Seafood Watch unknown bycatch matrix, based on a synthesis of peer reviewed literature and expert opinion on the bycatch impacts of each gear type.

Finfish

2.1 Unknown species of finfish are considered to be of medium inherent vulnerability according to the Seafood Watch criteria.

2.2 The stock status of unknown species of finfish are considered to be of moderate concern according to the Seafood Watch criteria.

2.3 The unknown bycatch matrix suggests a score of "high concern" for fishing mortality for finfish bycatch in drift gillnets; however, this does not take into account specific regulations in the California fishery. In particular, the nearshore gillnet closures appear to have improved the stocks of several nearshore predatory fish, including white seabass, giant seabass, leopard shark and soupfin shark, which all appear to be rebounding {Pondella and Allen 2008}. Given these regulations, fishing mortality on unknown finfish in the gillnet fishery is considered a "moderate concern."