

2007- Page 106 Excerpt from Chaloupka and Balazs (2007) Ecological Modelling:

"If the Hawaiian stock is currently around 83% of carrying capacity (Fig. 2a), then there might currently be ca. 61,000 green turtles resident in Hawaiian coastal habitats. There is ca. 2800 km² of potential shallow-water coral reef habitat in the Hawaiian Archipelago (Rohmann et al., 2005) and ca. 50% of this estimated area is considered suitable habitat for green turtles in coastal waters (Balazs, unpublished). Therefore, green turtle density in this habitat is 42 km², which is similar to density estimates for other green turtle populations resident in similar algae-dominated coastal habitats such as the southern Great Barrier Reef (Chaloupka and Limpus, 2001). The estimated coastal habitat abundance is also consistent with the number of females nesting each year at the East Island rookery (Fig. 1b) assuming that mature females comprise ca. 0.6% of a green turtle stock (Chaloupka, 2004), a 1:1 sex ratio (Wibbels et al., 1993) and that ca. 33% of mature females nest each year at the regional rookery (Balazs, 1980; Balazs and Chaloupka, 2004a). So, while all these estimates are uncertain they are highly plausible for population parameters that are extremely difficult to derive for a widely dispersed marine species."