

Research on *Plectropomus leopardus* in Solomon Islands

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Plectropomus leopardus are highly targeted both for the Solomon Islands local market and for the live reef fish trade in Hong Kong. *Plectropomus leopardus* in the Pacific and Southeast Asia region specifically has been listed as near threatened on the IUCN red list. Anecdotal landings of *Plectropomus leopardus* in Solomon Islands appear unsustainable. This study determined aspects of the life history of *Plectropomus leopardus* in Nggela, Solomon Islands, which will form the basis for: i) an awareness programme to inform fishers, consumers and coastal communities about the need to protect and conserve this species and ii) regulations to protect the species.



Plectropomus leopardus

The study involved fishermen interviews to determine social factors driving the exploitation of *Plectropomus leopardus* and biological studies using ear bones (otoliths) and gonads from fish samples to determine growth and sexual maturity of the species. Income generation is the main driver for targeting this species, as it commands high prices at local markets. Preliminary results show that recruitment of this species into the local fisheries begins at a total length of 26cm which is at an approximate age of 1 year old. Modal recruitment is between total lengths of 35-40cm which is between the ages range of 2-6 years. Size range landed by the local fishers is between total lengths of 21-56cm, which is an age range of 1-15 years.



Typical Nggela coastal village

Plectropomus leopardus normally begin life as females and later undergo transition to become females. Female sexual female maturity begins at a total length of 29cm which is at an age of 2 years, 50% female sexual maturity is attained at a total length of 34cm. Sexual transition occurs at an age range of 3-14 years. Not all females undergo sexual transition. Males compose only 25% of the sample studied.

Local fishers are landing individuals which have not attained sexual maturity; this can have long term consequences on the species' population. Regulations should be established prohibiting landing fishes below 34cm. A maximum size limit should also be established to protect the male population.



A fisherman demonstrates a fishing method to catch *P. Leopardus*



A fisher's landing of *P. leopardus* mixed with *Variola albimarginata*



Researcher collects fish samples from fishers



Typical dugout canoes used by Nggela fishermen