

Title: **Rock Lobster Lease Quota Market: A Network Analysis**

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Abstract: ITQ introduction has had several effects on fisheries in terms of, for example, changes in the composition of the fishing fleet and fishing efficiency gains. After ITQ introduction in the Tasmanian rock lobster industry in 1998, an increasing number of fishers have become dependent on quota leasing to catch fish (Putten van and Gardner Accepted). At the same time quota owners who lease out their entire quota, increasingly characterises the fishery. The economic, social and cultural implications of structural changes observed in ITQ fisheries around the world (Eythórsson 2000) also apply in Tasmania, although the particulars of these developments vary. Changes in the Tasmanian industry are also observed in terms of the characteristics of the lease quota market and market participants. Brokers have an increasingly important role in trading lease quota thereby reducing the number of personal interactions. The role of processors in the lease quota market is also pertinent not only in terms of price developments but also in market interactions and dependencies. The change in market relationships and connections, in parallel with increasing dependence on lease quota by a large component of the industry, may be particularly relevant as strong social connections characterise this fishery. In this research, social networks in the quota lease market of the ITQ managed Tasmanian rock lobster fisheries are analysed. Changes in lease quota trade networks and network characteristics proceeding quota introduction in 1998 are analysed. The economic characteristics of different lease quota fisher types are also considered in this context. Network parameters indicate that the lease quota market can be represented by a scale-free network. Over time the market has become more strongly dependent on internal networks, in particular processors who take on the roles of pseudo brokers to ensure fisher loyalty. The change in network structure of the lease quota market indicates that a small number of quota owner investors and processor quota redistributors appear to be in an increasingly powerful position in this market. This development is surprising because disproportionate quota ownership by processor, as observed in many other ITQ managed fisheries, has been averted in Tasmania. Processor control in the lease market cannot be gained by purchasing quota due to a successful input control where quota ownership by one legal entity was capped. Because market control cannot be gained through investment in quota, it has been gained by virtue of redistributing lease quota.