

氣候變遷下北部沿近海漁業風險管理之研究

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本研究分析漁民對氣候變遷的風險來源、生產不確定性及調適措施的認知與關連性，以作為沿近海漁業風險措施決策之依據。基此，本研究以基隆市、新北市及宜蘭縣沿近海漁民為研究對象，透過問卷調查，訪問 273 位有海上作業經驗之漁民。透過採用敘述統計、因素分析及線性結構方程式 (SEM) 等統計方法進行實證研究，線性結構方程式架構中分為前置變數「風險來源」、中介變數「生產不確定性」及結果變數「風險管理措施」。結果顯示，41.8%受訪者強烈認為氣候變遷會對漁業產生影響，但只有 34.8%受訪者強烈表示會採取調適措施。SEM 分析中，風險來源與管理措施之關係超過九成呈負向顯著($t\text{-value} < -1.96$)的關連性，顯示受訪者認為各種風險來源與管理措施的選取是負向關係。然而，生產不確性在漁業風險管理中扮演著中介效果，使整條風險鏈產生正向效果($t\text{-value} > 1.96$)。

中文關鍵詞：氣候變遷、風險管理、生產不確定性、漁業管理
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Risk Management of Northern Coastal and Offshore Fisheries under Climate Change

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This study analyzed the relationships among fishermen's perceptions of risk sources, production uncertainty, and adaptation measures under climate change. Because of the importance of fishing production in Keelung City, New Taipei City, and Yilan County. We conducted a questionnaire survey to interview 273 fishermen who have experiences of capture fishing. Descriptive statistics, factor analysis, and structural equation modeling (SEM) were used for empirical analysis. The structure of SEM was divided to three parts, including: risk sources" as antecedent variable; "production uncertainty" as mediator variable; and "risk management measures" as consequence variable. According to our results, 41.8% respondents strongly agreed that fishery resources were affected by risk sources under climate change. 34.8% respondents strongly agreed that they will make some adaptations to against climate change. Moreover, the results of SEM reveal that over 90% of the relationships between risk sources and adaptation measures were negative significant ($t\text{-value} < -1.96$), which means risk sources cannot directly influence respondents' selection for management measures. However, the production uncertainty could be an important mediator for the risk management, which make significantly positive effects in the whole risk chain ($t\text{-value} > 1.96$).

Key words: Climate change, Risk management, Production uncertainty, Fishery management

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