

漁電共生對於因應極端強降雨事件調適效益探討之研究

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摘要

全球面臨氣候變遷所帶來的挑戰，其中極端強降雨事件發生日趨頻繁，傳統養殖漁業備受考驗，為尋求具經濟效益的產業調適策略已是當務之急。我國於2020年積極推動漁電共生政策，該政策以「漁業為本、綠能加值」為核心價值，故於養殖魚塢上架設不同類型的光電板，為魚塢提供遮蔽。為探討在魚塢上設置光電板是否能調適極端強降雨事件，本研究選定高雄市彌陀區為主要研究區域，透過問卷調查，以半封閉式問卷調查比較組「漁電共生案場」以及對照組「傳統養殖魚塢」兩組。以2024年凱米颱風為例，探討漁電共生對於極端強降雨事件所受災害之調適能力。結果將以SPSS統計軟體進行獨立t檢定。

H0：相較於傳統養殖魚塢，漁電共生案場對於極端強降雨事件無調適效益。

H1：相較於傳統養殖魚塢，漁電共生案場對於極端強降雨事件具調適效益。

Abstract

The world faces significant challenges from climate change, with extremely heavy rainfall events occurring with increasing frequency. Traditional aquaculture is severely tested by these events, making it an urgent priority to find economically viable adaptation strategies for the industry. In 2020, Taiwan actively promoted the Aquavoltaics policy, centered on the core value of "fisheries first, with added value from green energy." This policy involves installing various types of solar panels over fish farm, providing shade for the fish. To investigate whether the installation of solar panels over fish farm can adapt to extremely heavy rainfall events, this study selected Mituo District in Kaohsiung City as its primary research area. Through a questionnaire survey, semi-closed questionnaires were used to compare an experimental group, "Aquavoltaics sites," and a control group, "traditional fish farm." Taking Typhoon Gaemi in 2024 as an example, this study explores the adaptation capacity of Aquavoltaics to damages caused by extremely heavy rainfall events. The results will be analyzed using independent t-tests with SPSS statistical software.

H0: Aquavoltaics sites have no adaptation benefits to extremely heavy rainfall events compared to traditional fish farm.

H1: Aquavoltaics sites have adaptation benefits to extremely heavy rainfall events compared to traditional fish farm.

Keywords: Adaptation benefit, Aquavoltaics, Climate change, Heavy rainfall events.