

摘要

台灣養殖漁業自 1970 年代起，進入快速成長時期，而在 1980 年代為台灣養殖漁業全盛時期，造就台灣成為「養蝦王國」、「養殖王國」揚名國際之美名，也為台灣沿海農漁村地區開拓新的漁業契機，而讓農漁民累積不少財富，故當時養殖漁業儼然成為台灣農業結構上重要之一環，對繁榮沿海農村經濟，安定農村社會，極具貢獻。

然而，諷刺的是，1980 年代卻也是台灣耕地轉供養殖池之情況快速蔓延的時代，形成台灣沿海逐漸形成養殖區域性發展，卻也因為養殖漁業對於水土資源超限使用下，而超抽地下水而引起地層下陷及地下水體汙染等永世災難及耕地轉供養殖池諸多問題產生，導致環境不永續之後果，值得謀求解決之道。

本研究以質化研究中之個案研究法，以永續發展理念為基礎，運用文獻分析法及深度訪談法交互分析。先探討台灣養殖漁業管理及養殖漁業用地管理制度之演進及衍生出問題；再以宜蘭縣五結鄉季新村、錦眾村個案研究地區，深入探討台灣及宜蘭養殖漁業發展牽動五結鄉養殖區範圍擴散之可能原因及其影響，並就其耕地轉供養殖池之產業營運、違規使用、養殖環境轉變、養殖池棄養等不永續利用問題予以分析，最後提出「台灣養殖漁業與其用地管理制度改進策略」及「五結鄉養殖漁業與用地管理策略」。

經由研究發現，台灣超抽地下水及地層下陷問題最為嚴重之縣市，申請經營養殖漁業竟不需審核地下水之合法用水資格，而經個案地區研究也發現台灣及宜蘭養殖漁業發展牽動五結鄉耕地轉供養殖池之擴散，而經耕地轉供養殖池後，在養殖漁業沒落後，欲將棄養養殖池回復耕作環境困難重重，當地逐漸形成一片荒涼景象。

最後建議政府漁業單位應設計優良養殖環境之制度，即應先規劃養殖生產區並『主動』興建完成養殖專用之進水（海水、地下水）、排水之共同管線系統等相關養殖公共設施，並劃為非都市土地使用分區「養殖漁業生產區」（建議新增非都市土地使用分區），而該分區內之養殖池，有別於一般農地申請做養殖池，不應依據相同之法令規範，應放寬該養殖生產區內養殖池就地合法或是簡易申請程序以方便並快速取得合法養殖之資格，以有效管理養殖漁業減少違規使用情形發生及促進養殖漁業朝向永續發展方向邁進，並促進水土資源永續性利用。另建議政府漁業單位經全面性可行性評估後，認為不適合繼續養殖之地區應投入資源積極輔導該地區轉型，協助並引導該地區轉供較為永續利用之方向（如生態旅遊等）。

關鍵字：養殖漁業、地層下陷、永續發展、耕地轉供養殖池、養殖生產區

Summary

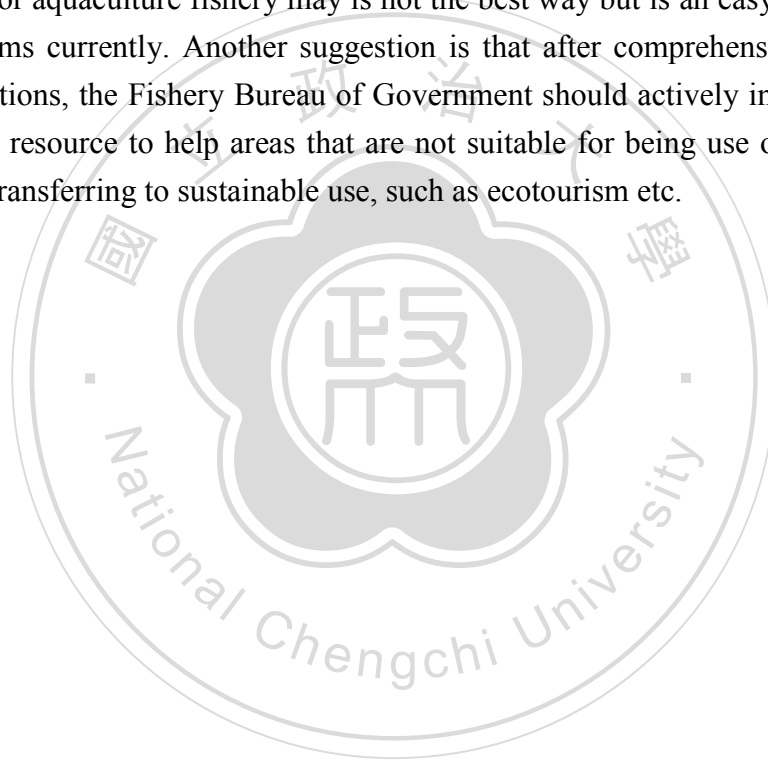
Since 1970's the aquaculture develops rapidly in Taiwan, and becomes prevailing as the golden age of the aquaculture fishery in the 1980's. At that time Taiwan is well known of the kingdom of shrimp and aquaculture fishery in the world, and fishermen and farmers near the coast areas gain a new chance of incomes, so aquaculture fishery has become a very important chain of Taiwan's agriculture. It also has great contribution to flourishing village's economy and society stabilization.

However, ironically, in 1980's many farms become aquaculture ponds quickly, that result in regional development of aquaculture fishery along the coast of Taiwan gradually, but overuse the resource of water and soil. Tapping groundwater inappropriately causes terrible disaster which lead to land subsidence and contamination of groundwater. The conversion of farms to aquaculture ponds cause many problems, that leads to environment being not sustainable. There is an urgent need to find out relevant solutions.

This research is based on two cases study the ideas of sustainable development. We adopt the modes of literature review and analysis, and depth interview. Firstly, we inquire into management system of the aquaculture industry and aquacultural land and the regarding problems. Secondly, we select the areas of Ji-sin village and Jin-jhong villege in Wujie Township Yilan County , in order to thoroughly inquire into possible reasons and influences that how aquaculture development in Yilan County and Wujie Township lead to the spreading of the areas for aquaculture production zone. Thirdly, we analyse problems of being not sustainable use of resources, such as the operation of the aquaculture pond, violating the rules of farmland use, changes of the cultivation environment, discard of aquaculture pond etc. Lastly, we put forth improvement strategies of aquaculture and its land management system both in Wujie Township and Taiwan.

Through the research, we find in counties with the most serious problems of tapping groundwater inappropriately and land subsidence in Taiwan, the government doesn't need to examine the legality qualifications of the groundwater use when people apply for aquaculture fishery. We also find that aquaculture development in Yilan and Taiwan result in farmland conversion into aquaculture pond in the areas of Wujie Township . Because it is very difficult to make discarding aquaculture pond return to farmland, the region becomes a slice of desolate prospects gradually when the aquaculture decline.

Finally, we suggest the Fishery Bureau of Government should design better institution for aquaculture environment. That is, they should plan for aquaculture production zone first and build public facilities of aquaculture fishery, such as the common pipeline system of using sea and groundwater for aquaculture fishery .The government should review the classification of non-urban land usage since the attributes of aquaculture ponds in "Aquaculture Production Zone" are different from others. In order to manage aquaculture fishery effectively, we also give some suggestions concerning decrease the occurrence of violating the rules, promoting the aquaculture fishery moving forward to sustainable development, and improving the sustainable use of water and soil resource. We think to simplify application procedure of getting legal qualifications for aquaculture fishery may is not the best way but is an easy way to solve problems currently. Another suggestion is that after comprehensive feasibility evaluations, the Fishery Bureau of Government should actively invest administration resource to help areas that are not suitable for being use of aquaculture pond transferring to sustainable use, such as ecotourism etc.



Key words: aquaculture, land subsidence, the sustainable development, the conversion of farmland into aquaculture pond, aquaculture production zone