

農田水利 ESG 新做法

Integrating ESG into agricultural water management

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摘要

近年來因應全球氣候變遷問題，臺灣政府部門在各領域也擘劃相關政策推動減碳措施，自 109 年農田水利署成立，農田水利會升格公務機關後，在農田水利基礎設施改善亦納入減碳措施，並配合國家淨零轉型政策，結合企業力量共同維護農田水利設施永續發展，推動媒合企業於水圳旁隙地種植喬、灌木，並持續植樹養護，全民共同參與營造綠廊為水域緩衝帶，創造碳匯，保護珍貴農業水資源。

過去農田水利設施側重於灌溉輸送灌溉水源之功能，近年來結合整體農田水利基礎設施改善及淨零碳排政策，辦理農田水圳改善同步於圳旁改善後隙地種植喬、灌木，減少硬體工程整體碳排及環境影響；其次結合農田水利埤塘設施清淤改善，規劃埤塘沿岸隙地植樹，綠廊營造及適地適種景觀植生，由在地關係企業認養，共同創造自然碳匯，於鄰近村落之埤塘空間，選擇具景觀價值之植生樹種以創造休憩空間，除可發揮水資源涵養、提升生物多樣性環境、生態價值及創造在地區民休憩空間等多元功能。

本研究試以 114 年度完成媒合企業農業 ESG 場域為例，說明圳旁植生及埤塘沿岸營造之作法，分別於桃園及新竹地區擇合適場域推動，考量當地氣候環境及在地生活需求，營造綠廊並持續養護以作為水域緩衝帶，以落實農田水利淨零排放政策推動，並以具體行動支持國家 2050 年淨零排放目標。

關鍵詞：圳路植樹、埤塘營造、減碳量、農田水利減碳

Abstract

In recent years, in response to global climate change, the government has implemented carbon reduction policies across various sectors. Since the establishment of the Agricultural and Irrigation Agency in 2020 and the re-designation of local irrigation associations as public entities, carbon reduction measures have been integrated into the improvement of farmland irrigation infrastructure. In alignment with the national net-zero transition policy, these efforts have brought together the private sector to jointly promote the sustainable development of agricultural water facilities.

This new approach facilitates partnerships with corporations to plant and maintain trees and shrubs in unused spaces along irrigation canals. This collective action aims to create green corridors that serve as waterway buffer zones, generate carbon sinks, and protect precious agricultural water resources.

While agricultural water facilities traditionally focused on the primary function of conveying water, recent initiatives combine infrastructure improvements with net-zero emissions policies. For instance, the improvement of farmland irrigation canals now includes planting trees and shrubs in adjacent areas, which helps reduce the overall carbon emissions and environmental impact of the engineering projects. Furthermore, these efforts extend to the desilting and improvement of agricultural ponds, where green corridors are planned and suitable landscaping is carried out along the banks. Local companies are encouraged to adopt these sites to jointly create natural carbon sinks. In ponds located near villages, scenic tree species are selected to create recreational spaces, which also serve multiple functions such as water resource conservation, enhancing biodiversity, increasing ecological value, and providing recreational areas for local residents.

This study will present a case study of an agricultural ESG project, completed in 2025, that successfully partnered with a corporation. It will detail the methods used for vegetation planting along irrigation canals and the development of green corridors around ponds. The research will focus on suitable sites in the Taoyuan and Hsinchu areas, considering the local climate and community needs. The goal is to demonstrate how creating and maintaining these green corridors can function as waterway buffer zones, effectively implementing the net-zero emissions policy for agricultural water management and providing concrete support for the nation's 2050 net-zero emissions goal.

Keywords: Planting trees along irrigation canals, Pond landscaping and restoration, Carbon reduction volume, Carbon reduction in agricultural water management