

# 農田水利事業推動與展望

## Irrigation Promotion and Prospect

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### 摘 要

農田水利事業為農業發展基礎，對於保障糧食安全、提高農業生產效率及因應氣候變遷具有重要意義。二戰時臺灣農田水利設施受損，故光復後由政府補助修復設施為主。1950 至 1960 年代，政府加強水利建設，除修復受災區域並擴大灌溉面積，開墾新農地。1960 至 1980 年代，啟動農地重劃計畫改善農業生產環境，提高土地利用效率和經營效率。至 1980 年後，隨著社會體制變遷、工商業發展及農作物價格調整，逐漸減少新灌區開發，但農業在提供生活空間、綠色景觀、促進生態平衡及保障糧食安全方面之功能仍不可替代，因此政府推動農田水利設施更新改善，以促進現代化管理，並發揮綜合效益。

自 2001 年起，政府推動「加強農田水利建設計畫」等多期計畫，涵蓋灌溉設施更新改善、農地重劃、推廣現代化灌溉技術及提升農業灌溉用水效率等，旨在確保農業生產環境改善和生態環境保護，並為因應 WTO 帶來農業變化做好準備。隨時代變遷及經濟發展，臺灣農田水利事業持續改革創新，目前大型建設及組織發展已趨穩健。政府採取設施更新計畫，以維持大型灌溉設施正常運行，並進行灌溉用水管理精確化，推廣現代化旱作灌溉技術。然而，面對高溫、暴雨、長期乾旱等環境情境及農業環境變化，農田水利事業面臨問題更趨複雜，健全的農田水利設施及良好的灌溉管理服務是農業永續發展的基礎，除用心維護前人成果，更應正視所面臨的挑戰，

為加速研擬農業水資源調適作為，積極推動跨域合作及資源整合，系統性地完善重要農業生產區基礎設施，農田水利署推動「農田水利跨域整合永續發展計畫」，並奉行政院 2024 年核定，在依循「把水留住，灌溉大地」願景下，提出「蓄豐濟枯」、「引水廣佈」、「智慧灌溉」、「取清防污」、「永續共好」等策略，以強化氣候變遷調適能力，確保灌溉用水品質及穩定，維護農產品食用安全，改善農業生產環境，維護農民用水權益，並降低農業經營成本，降低碳排放量，減少對傳統能源依賴，保育生態環境及維護生態多樣性，實現農田水利事業永續發展目標。

關鍵詞：加強農田水利建設、永續發展、農田水利跨域整合

## **Abstract**

Irrigation is the foundation of agricultural development, and is significant for ensuring food security, improving agricultural production efficiency, and responding to climate change. During World War II, Taiwan's irrigation facilities were damaged, so the government subsidized the restoration of these facilities after the restoration of Taiwan. During the 1950s and 1960s, the government strengthened irrigation construction, in addition to restoring damaged areas, the government also expanded irrigation areas and reclaimed new farmland. During the 1960s and 1980s, the government initiated the farmland readjustment programme to improve the agricultural production environment and to increase the efficiency of land use and operation. After 1980, with the change of social system, industrial and commercial development and crop price adjustment, the development of new irrigation areas was gradually reduced. However, the functions of agriculture in providing living space, green landscape, promoting ecological balance and guaranteeing food security are still irreplaceable, so the government promotes the renewal and improvement of irrigation facilities to promote modern management and give full play to the comprehensive benefits.

Since 2001, the government has promoted the "Strengthening Irrigation Infrastructure Plan" and other plans covering irrigation facility renewal and improvement, farmland readjustment, promotion of modern irrigation technology, and enhancement of irrigation water use efficiency, etc., with the aim of ensuring the improvement of the agricultural production environment and ecological protection, as well as preparing for changes in the agricultural industry brought about by the World Trade Organization (WTO). Taiwan's irrigation has continued to reform and innovate in response to changes in the times and economic development, with large-scale construction and organizational development now becoming more stable. The government has adopted a facility renewal programme to maintain the normal operation of large-scale irrigation facilities, as well as to refine irrigation water management and promote modern dry irrigation techniques. However, in the face of high temperatures, heavy rains, prolonged droughts and changes in the agricultural environment, the problems faced by irrigation have become more complex. Sound irrigation facilities and good irrigation management services are the foundation for the sustainable development of the agricultural industry, so in addition to maintaining the achievements of our predecessors with all our heart and soul, we should also face up to the challenges we encountered.

In order to accelerate the development of agricultural water resource adaptation, actively promote cross-regional co-operation and resource integration, and systematically improve the infrastructure of important agricultural production areas, Irrigation Agency has promoted the "Irrigation Cross-regional Integration Sustainable Development Plan". With the approval of the Executive Yuan in 2024, and following the vision of "Keeping Water and Irrigating the Earth",

we propose the strategies of "Storing Water in Abundance and Providing Relief in Drought", "Diverting Water for Wider Dissemination", "Intelligent Irrigation", "Drawing Clean Water and Preventing Pollution ", and "Sustainable Co-operation", to strengthen the ability to adapt to climate change, ensure the quality and stability of irrigation water, safeguard the safety of agricultural products, improve the agricultural production environment, protect farmers' water rights and interests, and reduce the operating costs of agriculture, reduce carbon emissions, reduce reliance on traditional energy sources, conserve ecological environments, and maintain ecological diversity, the objective of sustainable development of irrigation is realized.

Keywords: Strengthening irrigation infrastructure, sustainable development, irrigation cross-regional integration