

## 因應極端氣候之水韌性提升與推動(1/2)

### Enhancement and Action Promotion of Water Resilience in Response to Extreme Climates (1/2)

主管單位：經濟部水利署

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#### 摘要

近年，氣候變遷影響加劇，國際許多城市所遭受之天然災害衝擊往往已超過工程與非工程防治的極限。因此我們必須體認，未來面臨極端氣候造成的水患時，城市恐難單純透過工程與非工程保護措施而倖免於災害衝擊。基此，聯合國減災策略組織(UN Office for Disaster Risk Reduction; UNDRR; 原 UNISDR)於 2005 年發布「兵庫行動綱領」與 2015 年發布「仙台減災綱領」中，特別強調「提升韌性」是降低氣候變遷影響下災害風險衝擊之重要基礎。城市除了重視「預防災害發生」與「減低災害衝擊」等方向持續努力外，也希望地方政府首長能準備好，自己的城市已經具有水韌性的能力。在未來面臨極端氣候的巨大衝擊下，自己的城市除減少災害衝擊，並能迅速從災害中重新恢復城市功能，亦能從災害中學習加以調適，使城市比災害前更具有水韌性。

本計畫現階段挑選雲林縣政府為第一個案例城市，並在雲林縣長率領下成立韌性評估工作團隊，此工作團隊整合跨領域服務團隊與縣府行政團隊合力進行雲林縣的水韌性評估，採用水利署「韌性水城市評估與調適研究」所發展的「韌性水城市評估-地方政府首長參考手冊」為基礎，配合雲林縣現況與環境資源條件修正韌性評估指標，同時也擬定出各指標的對應負責單位，並在服務團隊協助下由行政團隊進行韌性自我評估，各構面的韌性表現尚可，其中以組織韌性與基礎設施韌性的表現較佳，並針對相關韌性缺口提出韌性提升方案與行動策略。其中，由於雲林主要經濟為農業，因此經濟韌性以提升農業韌性為主。根據雲林縣需要改善的方向，以雲林縣韌性水城市為主軸共提出 15 個提升方案與 25 個行動計畫，搭配「優化組織調度」、「強化防災意識」、「提升洪旱對應」、「永續都市利用」、「韌性復原重建」、「健全收容安置」、「提升社區自救」、「農業災後復原」、「強健農業防災因應」等韌性政策推動綱要來持續推動。

本計畫第二個案例城市為臺南市，初步進行臺南市的水韌性缺口評估作業，臺南市各

構面的韌性表現相當完整，其中以組織韌性表現最佳，基礎設施與社會韌性表現良好，目前已初步完成臺南市政府的韌性缺口評估，將於第二年度針對相關韌性缺口提出韌性提升方案與行動策略。

**關鍵詞：**水韌性、極端氣候、災害風險減緩

### **Abstract**

In recent years, the impact of climate change has intensified, and disasters suffered by many international cities have often exceeded the limits of engineering and non-engineering prevention. Therefore, we must recognize that, when we faced with floods caused by extreme weather, the city is difficult survive from the disasters simply through engineering and non-engineering protection measures. Based on this, the United Nations International Strategy for Disaster Reduction (UNISDR) released the "Hyogo Framework for Action" in 2005 and the "Sendai Framework for Disaster Risk Reduction" in 2015, with special emphasis on "improving resilience" to reduce the impact of climate change, is an important basis for disaster risk shocks.

Yunlin County is selected as the first demonstrated city in this project. County mayor lead the resilience executive team to evaluate the water resilience of Yunlin County. This team consists two sub-teams, the service team and the administrative team. Following the "Water Resilience City Guide for Taiwan" provided by WRA, the resilience executive team adjusted the water resilience indexes to fit the present situation of Yunlin County. The resilience performances for all aspects are acceptable. The resilience of organization and infrastructure shows the best performance. The resilience executive team has already evaluated the gaps of each resilience indexes. The strategic review and drafting water resilience action plans have been done, which can be provided to local government for improving its water resilience. The economic resilience will focus on the agriculture that is the major economy source of Yunlin County. Fifteen strategies and 25 action plans are proposed to enhance the resilience disaster prevention. Basically, they can push forward to achieve the resilience city under nine action agenda. 1. Government management optimization, 2. Enhance the awareness of disaster prevention, 3. Response to flood and drought, 4. Sustainable urbanization, 5. Resilient recovery and restoration, 6. Robust shelters and settlement, 7. Enhance the self-rescue ability of community, 8. Post disaster recovery of agriculture, 9. Disaster prevention for agriculture.

Furthermore, this project has finished the resilience evaluation of the second demonstrated city, Tainan. The strategic review and drafting water resilience action plans will be excuted in the second-year project.

**Keywords :** Water Resilient, Extreme Climate, Disaster Risk Reduction.