
雲林縣環境保護局計畫成果中英文摘要（簡要版）

一、中文計畫名稱：

103 年度雲林縣濁水溪河川揚塵防制及改善推動計畫

二、英文計畫名稱：

Prevention and promotion to improve river dust project of Zhuoshui River in 2014.

三、計畫編號：

YLEPB-103-011

四、執行單位：

昱山環境技術服務顧問有限公司

五、計畫主持人（包括共同主持人）：

施志恆

六、執行開始時間：

103/04/18

七、執行結束時間：

104/04/17

八、報告完成日期：

104/04/23

九、報告總頁數：

541 頁

十、使用語文：

中文，英文

十一、報告電子檔名稱：

103-011.DOC

十二、報告電子檔格式：

WORD 2010

十三、中文摘要關鍵詞：

濁水溪，懸浮微粒，空氣污染物

十四、英文摘要關鍵詞：

Zhuoshui River, Particulate Matter, Air Pollutants

十五、中文摘要（約三百至五百字）：

本計畫執行期程為 102 年 4 月 11 日至 103 年 4 月 10 日，各項工作均於預計期程內完成，茲將成果摘要說明如后。

分析崙背測站數據顯示以懸浮微粒為指標之不良站日($PSI > 100$)自 98 年後逐年減少，由 14 站日降至 99 年的 5 站日、100 年的 1 站(非河川揚塵)、101 年 3 站日，但 102 年卻增加至 11 站日。統計 103 年度則有懸浮微粒(PM_{10})不良站日共 8 站日，其中 6 站日受到濁水溪揚塵影響，2 站日為境外污染源影響，其中不良站日分別集中於 1 月、10 月至 12 月。

為掌握濁水溪裸露灘地變化情形，透過衛星空照圖資分析河床裸露情形。經相關資料判讀，裸露灘地面積由 1 月份的 2,281 公頃至 4 月份因農民種植西瓜緣故減少為 1,132 公頃、8 月份西瓜收成後則增加為 1,807 公頃，顯示裸露面積與農民種植有直接之關聯性；在受到降雨量減少導致濁水溪本流流量減少的影響下，裸露灘地面積於 103 年 12 月增加為 2,963 公頃，至 104 年 1 月小幅增加至 3,021 公頃，唯 104 年 1 月份已有瓜農進行大範圍之插草作業，待西瓜長成後預計可減少超過 1,500 公頃之裸露灘地面積。

辦理兩場次中央與地方協商會議，協請第四河川局、環保局及縣府各局處針對揚塵管制及因應作為進行協商討論；103 年 10 月 8 日邀請專家學者於環球科技大學辦理一場次「濁水溪河川揚塵防制工法研討會」，以濁水溪現況問題分析、河川揚塵工法探究及河川灘地種植之可行性及其經濟效應等三大方向討論揚塵防制策略。

本計畫共計完成 38 次 213 點次之巡查作業，其中包含例行性巡查及不良日巡查工作，經巡查後發現現地有揚塵情形者計有 48 點次，占整體巡查次數的 23%。分析其原因為 103 年度降雨量減少，濁

水溪主河道流量減少，部分原有之植生因而枯死，濁水溪出海口受到流量減少影響而出現大範圍裸露灘地，受到東北季風及海風影響下，麥寮地區揚塵情形為歷年最嚴重。

為加強揚塵來臨期間沿岸村里長對於揚塵通回報之基本流程及應變措施熟悉度，辦理村里長(或村里幹事)揚塵應變教育訓練，共計辦理 3 場次出席 61 人次，訓練對象主要以村里長、村里幹事為主。於 103 年 7 月 14 日辦理一場次河川揚塵通回報演練作業，演練對象以西螺鎮 27 里之里長及里幹事為主。

於 103 年 11 月 11 日辦理一場次「濁水溪河川揚塵防護演練」，以情境模式模擬揚塵事件發生進行演練，使縣府各單位能在實際揚塵災害中充分發揮相互協調、聯繫等防災救護應變作業，共出動縣府 15 單位、參與人員達 120 人次。

為強化民眾對於濁水溪揚塵影響的瞭解，本計畫共計執行有線電視跑馬燈插播 30 天次、於雲嘉廣播電台播放共計 300 檔次(播放天數計 30 天)之廣播宣導，藉以宣導民眾濁水溪揚塵防護觀念。

十六、英文摘要：

This plan was from April 18, 2014 to April 17, 2015, all the works has been completed within schedule.

Statistics shows Lunbei monitor station's unhealthful days ($PSI > 100$) has gradually decreased after 2009. From 14 days in 2009, 5 days in 2010, to just one day in 2011 (non river dust), 2012 has 3 days, but 2013 has 11 days where the air condition are classified as unhealthful days. As of December 30th of 2014, there has been 8 days in total and it all happened in January and October to December, which receive Jhuoshuei River rivers affected by dust has 6 days, where Northeast winds was polluted by the fugitive particles outside of Taiwan and result in bad condition of air has 2 days.

The project uses satellite aerial map to analyze the exposed beach area of Zhuoshui River over time, the area of the exposed beach has decreased from the 2,281 hectares in January to 1,132 hectares in April because the farmer was planting watermelons. But the area did increase

after August's harvest of watermelon to 1,807 hectares, suggesting the direct association between the exposed beach area and the farmer's crop. Due to reduced rainfall in Zhuoshui River by this stream flow reduction under the influence of area exposed in December increased to 2,963 hectares.

There have been two meetings where the central and the district government invited the Fourth River Management Office of WRA and Environmental Protection Department to discuss about the problem of suspended particulates. There was also a conference at October 8th of 2014 in Transworld Technology University on the "preventative method of Zhuoshui River's suspended particulates", this conference analyze the preventative strategy on three key elements: the analyzation of the current status of Zhuoshui River, the engineering methods for river dusts, and also the possibilities of planting on river banks and the economic benefits.

Overall it completed a total of 106 actual inspections, including the routine inspections and the inspections on an unhealthful day. To collect and record the situation of the floating dust of the Zhuoshui River for further analyzes.

To strengthen the awareness of the basic rundown procedure and the familiarity of the reaction protocol of coastal village chiefs, the training exercise for the village officials and village chiefs was held 3 times with the participants of 61 people. There has been a drill for notification procedures of the operation in July 14th, 2014, the drill targets are mostly the 27 village chiefs and village officials in the Shiluo Township.

In November 11th, 2014, there was a drill on "Protection of Zhuoshui River's dust" where scenario recreates the possibility of suspended particles of Zhuoshui River, so that every department of the County Government can work cooperative efficiently at crisis like this, overall units deployed in this exercise were 15 units, the participating staff of 120 people.

During the duration of the report, the news ticker on television broadcast for 30 days, the local radio stations for 300 times, to advocate the general public on the awareness of the protection and prevention of the floating dust of Zhuoshui River.