

高速鐵路

Taiwan High Speed Rail From The Air

空中導覽





高速鐵路

交通部高速鐵路工程局編著

空中導覽

Taiwan High Speed Rail From The Air

高速鐵路建設成果系列畫冊3

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HSR Project Results Pictorial Volume 3
Taiwan High Speed Rail From The Air

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交通部高速鐵路工程局編著



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Taiwan High Speed Rail From The Air

序 · PREFACE



部長序

2007年3月2日全線通車營運的南北高速鐵路，就好像是一尾活力靈動的長龍，騰越在田疇綠野與大小城鄉之間，串連起西部走廊各大都市，拉近你我之間的距離，形成一日共同生活圈，其所提供之快速、安全、舒適、便捷與高品質的服務，不但開創我國城際運輸的新里程碑，也將帶動區域與產業之發展，有效消弭城鄉發展差距。

已完成之高鐵建設只是一個開端，後續政府將持續推動高鐵站區的開發，讓各地的高鐵車站能夠成為區域的門戶；同時也強化高鐵、台鐵、捷運及公路系統間之銜接，整合構建出高效率、無接縫的公共運輸網絡，以擴展高鐵的連結範圍，縮短區域與城際間的旅行時間，讓高速鐵路能充分發揮出全島運輸骨幹的功能。

高速鐵路「空中導覽」是第一本由空中鳥瞰高速鐵路沿線景觀的影像集，也是高鐵建設成果記錄的一部分，透過極具高度與廣度的視野，忠實呈現出台灣高速鐵路路線中，各種橋梁、隧道、車站、車站特定區等硬體建設的動人樣貌，精緻優美的影像構圖以及精要簡潔的文字說明，闡述著台灣高鐵的非凡成就，也為高鐵通車初期沿線生態景觀留下記錄。

高速鐵路是創新的體現，也是進步的象徵，這股快速飛躍的動力，帶來增值，也帶來願景；未來高速鐵路必將與社經發展緊密結合，成為進步生活的一部分，且讓我們拭目以待。

交通部 部長

毛佐國 謹識

Preface by Minister

When Taiwan's north-south High Speed Railway (HSR) rolled into full operation on March 2, 2007, it seemed to resemble an energetic dragon leaping through and over the fields, countryside, cities and towns. Since then, the HSR has established a tight link between the major urban areas of Taiwan's western corridor, brought people closer together and has provided all communities of western Taiwan an easy access to each other within the same day. Thus, the HSR's fast, safe, comfortable, convenient, high-quality service has set a new milestone in Taiwan's inter-city transportation and at the same time has reduced the developmental gap between urban and rural areas by stimulating widespread regional industrial development.

The completion of the HSR line is only the beginning of a new era for transport in Taiwan; the Government will continue to promote development of station areas in the future to ensure that the HSR stations will serve as regional gateways. In the long-term, the linkage and integration of the HSR, Taiwan Railways, metro systems and highways to form a seamless, highly efficient public transportation network will extend the versatility of the HSR's connections, shorten local and inter-city travel time and enable the HSR to perform its complete role as the island's main transportation backbone.

This volume, "Taiwan High Speed Rail From The Air", is the first collection of aerial photographs that captures the landscape along the HSR route and faithfully displays Taiwan's many different bridge structures, tunnels, stations and station district from a grand perspective. The exquisitely composed images and accompanying text underscore the HSR's extraordinary achievements while documenting the ecological scenery along the HSR's path.

As an embodiment of Taiwan's innovation and a symbol of its prosperity and success, the rapid movement of the HSR continues to bring about more benefits and inspire new visions for the people of Taiwan and all of us can look forward to an even brighter future as it becomes more closely linked with our socio-economic development and uplifts our progressive way of life.

Minister
Ministry of Transportation and Communications

Preface by Director General

"High Speed Rail Project Pictorials" contain a collection of photographs of the Taiwan High Speed Railway commissioned and compiled by the Bureau of High Speed Rail after the system went into operation. The first volume, "Taiwan HSR Launches a New Era", records the beauty of the stations during the first year of operation, portrays the system's service facilities, chronicles the HSR's historic first official trip and expresses the feeling of joy and achievement that prevailed during the initial period of operations. The second volume, "The Beauty of Construction", assembles images of important construction methods and technologies from the time the HSR was built. It displays the imposing scale of the construction process together with the magnificent HSR infrastructure. By this, it ensures that distant memories of the project and its formidable challenges could be revived and passed on to future generations.

The "Taiwan High Speed Rail From The Air" includes aerial photographs of the HSR, its stations and depots. It is supplemented with narratives on the major rivers, railways, roads, cities and surrounding areas along the route. It presents to the readers a bird's-eye view of a new transportation corridor while capturing the grand landscape scenery of Western Taiwan. Passing through an expanse of natural scenery on its journey from the North to the South, the HSR rolls past the mountains of Northern Taiwan, across the rivers and streams of Central Taiwan, and into the expansive plain of Southern Taiwan. Amongst the heavily populated urban areas of the North, Central and the South, the HSR meanders past Taiwan's distinguished technology centers, science parks and the vital rice-growing area of the Chianan Plain.

Because of the diversity of terrain and in order to keep potential impact and interference to local traffic, agriculture, industry and development to a minimum, 76.2% of the HSR line is elevated and another 14.3% is in more than 50 tunnels running through the mountains and hills. The remaining 9.5% of the line comprises other types of track structures. The HSR sets a fine example of how a large infrastructural project with its difficult engineering feats and complex construction activities could, by considering the environment, conquer and maintain ecological harmony with the natural surrounding.

The books in this series have consistently maintained a high quality standard thanks to the tireless dedication of an exceptional team of editors and contributors. This reflects the same commitment made by all of the HSR construction teams in ensuring that passengers on the HSR are able to enjoy a comfortable and high quality service. We are grateful to the Taiwan High Speed Rail Corporation (THSRC) for their professional assistance for their review and to all of the colleagues within the Bureau of High Speed Rail (BOHSR) who have put so much effort into the book. Finally, we would like to express our utmost respect for all those personnel who participated in the planning, design and construction of the HSR project. We hope that the publication of these books will collectively allow all to appreciate the magnitude and challenges of the HSR project, recognize the unique and delicate coexistence between the system and nature and continue to marvel at the beauty of "Taiwan, Formosa, Beautiful Island".


Daniel H. Ju
Director General
Bureau of High Speed Rail, MOTC

局長序

「高速鐵路建設成果系列畫冊」是交通部高速鐵路工程局於高鐵營運階段所著手彙編的高鐵畫冊，先前已出版之「台灣高速鐵路啟航新紀元」，紀錄通車元年各車站建築之美、相關營運服務設施及通車首航歷史畫面，呈現通車營運初期之喜悅與感恩情懷；「工程之美」乃彙編高鐵興建過程重要施工法及工程影像，呈現工程之雄偉浩大及張力美感，使逐漸被遺忘之重要工程畫像及施工管理經驗得以傳承。

高速鐵路「空中導覽」畫冊係以空中視野檢閱高鐵路線站廠之建設成果為主題，輔以沿線經過之重要河川鐵路城鄉等地理采風撰文，帶領讀者飛閱台灣西部地區嶄新之快速運輸走廊新風貌，不僅呈現高速鐵路全線建設成果空中樣貌，亦能一覽台灣西部走廊大地景觀。台灣高速鐵路貫穿西部走廊，自北而南呈現不同地貌，北部多山、中部多溪流、南部則為廣大帶狀平原；途經人口密集的北中南主要都會區、科技產業重鎮-科學園區；穿越西部重要稻米農作生產區-嘉南平原等。工程必須跨越無數經由中央山脈冲刷而下之大大小小河川溪流，於西部主要河川興建河川橋；為了不阻礙路線兩側交通、農作、產業發展，造成區域阻隔，所以路線結構大量採用橋樑佔76.2%；穿梭山區丘陵地區共施築50餘座隧道佔14.3%；其他路工結構佔9.5%。不但需克服工程困難，還要考量生態環境，是我國重大工程建設成果與自然大地輝映的重要見證。

透過編審團隊鍥而不捨的努力，才能使本系列畫冊呈現一貫高品質的成果，就如同高鐵工程施工團隊於每一環節的堅持，才能提供乘客舒適快捷的優質運輸服務。本書可以順利付梓，特別感謝在審查期間提供專業協助的台灣高鐵公司代表，及局內為此書不辭辛勞努力付出的同仁。最後要對曾經參與規劃設計施工及勞苦功高的工程人員獻上最高的敬意，期盼本書的出版，可以引領國人體驗高鐵工程的浩大與艱辛，並感受工程建設成果還給大地與大自然共生的風貌，延續「台灣，福爾摩莎，美麗之島」的畫像。

交通部高速鐵路工程局 局長



謹識









導言 · INTRODUCTION

莊子曰：「天地與我並生，萬物與我為一。」

台灣高速鐵路計畫從民國79年開始正式推動，原規劃由政府出資興建，最後採BOT的方式推動，工程於89年3月1日開工，96年3月2日全線通車營運，實現台灣西部走廊一日生活圈的願景，並帶動區域均衡發展及縮短城鄉差距。

長達345公里的高速鐵路，沿途經過14個縣市及77個市鄉鎮。在工程建設過程中，曾經對沿線及周邊環境造成不同程度的衝擊，這是大型交通建設難以避免的過程，但經由施工團隊的努力及政府民間相關團體的協助，致力於生態環境的保護及加強周遭環境的復原措施，工程完成時大地容貌已經復原。交通部高速鐵路工程局配合工程進展，定期於沿線執行空中紀錄攝影，監控各階段工程進行前後地形地貌變遷，期能如中庸所云：「萬物並育而不相害，道並行而不相悖。」

本書冊以高速鐵路建設為主軸，精選通車營運初期階段，從空中俯瞰高鐵全線的各项重要設施及沿線景觀紀錄照片。由北到南概分為北部、中部、南部三大章節，以大視野、觀全貌、展望願景的角度飛閱高鐵建設成果。包括有大都會城市景觀、穿梭綠地藍天間的高鐵路線結構長龍、具意象與地方特色的新穎車站建築、投資人最關切的高鐵車站特定區及苗栗、彰化、雲林車站預定地、寬敞的維修基地、跨越重要河川的高鐵橋梁、穿越層巒的隧道群及綠意盎然的隧道洞口護坡、重要鐵公路交通幹道立體交會點、聯外交通建設等100餘張空中影像，帶領讀者以空中視野閱覽沿線地理采風及高鐵建設概要。

從空中看高速鐵路建設成果有別於地面170公分視野，是令人震撼的，在讚歎工程浩大之餘，更驚豔台灣地貌、景觀之美。當按下快門的那一刻，也為參與高鐵建設的無名英雄留下了永恆的見證。如今，隨著高速鐵路開始承擔台灣西部走廊快速運輸交通大動脈的同時，沿線將隨著人口遷入及相關產業發展，又將面臨另一型態之環境景觀衝擊及威脅，大地容貌也正快速變遷中，有待相關單位及早配合因應，期許經過30甚至50年後，我們的子孫看到的景觀依然是美麗的福爾摩莎。

To paraphrase the words of the ancient Chinese philosopher Zhuang Zi, "The earth and sky were brought forth with me, and the multitudes of things are as one with me". Or, to put it more mildly, we must (alternative:- conserve our natural habitat), otherwise we will suffer the consequences. With the increasing awareness of environmental protection and the need for conserving our resources, it is therefore no secret that preserving our environment is one crucial aspect of engineering construction. Indeed, the success of the Taiwan High Speed Railway (HSR) project not only depended on building a fast, convenient and comfortable link between northern and southern Taiwan, but at the same time also retaining all of its majestic beauty.

Taiwan's High Speed Railway project began formally in 1990. The original plans called for a government-led construction but it was ultimately decided to build the HSR in partnership with the private sector on a Build-Operate-Transfer (BOT) basis. Seven years later after the commencement of construction on 1st March 2000, the entire HSR line opened for commercial operation on 2nd March 2007. It realized the government's vision of turning Taiwan's western corridor into a "one-day living circle" facilitating a more balanced development of and across Taiwan's regions by reducing the pace of development between urban and rural areas.

The 345-kilometer HSR line passes through 14 cities and counties and 77 villages and townships. To varying degrees, some of these communities and its surrounding environment were naturally subjected to the negative impact of having such a large type of infrastructure built right next door but thanks to the dedicated efforts of the construction team and assistance from private and public groups, environmental protection and restoration measures were a success. As a result, the land along the HSR line has already been fully restored to its original conditions. In fact, to monitor the situation, the Bureau of High Speed Rail (BOHSR) regularly took aerial photographs along the line while the HSR was being built. This was to observe any changes in the topography before and after the HSR construction to ensure that, as in the words of the Zhongyong, "The things of the earth can grow without harming each other, and roads can pass without interfering with each other".

This volume contains aerial photographs along the HSR line from the early days after commencement of operation. It includes photographs of major facilities and the landscape scenery along the line. The book is divided into three separate north-to-south sections focusing on northern Taiwan, central Taiwan, and southern Taiwan. It depicts the results of the HSR project seen from the broadest possible angle. The more than 100 images in this volume include scenes from major cities; the long "dragon-like" form of the HSR shuttling against a backdrop of green earth and blue sky; the novel and distinctive forms of the stations; the surrounding station districts which are of great importance to investors; the planned sub-division of land parcels in Miaoli, Changhua and Yunlin Stations; the spacious maintenance depots; bridges crossing major rivers; tunnels penetrating the mountains; lush slopes at the tunnel entrances; intersections with highways and other railways; and the access roads. These images provide the readers views of the topography of the land from an aerial perspective and appreciate the enormous magnitude of the HSR project.

As you will soon see, an aerial view of the HSR is stunningly different from the view at ground level. Apart from appreciating the noteworthy achievements of this project, this book also reveals the beauty of Taiwan's landscape and natural scenery. In the moments when these photographs were taken, the photographers bore eternal witness to all of the nameless heroes who made the HSR a reality. Nowadays, as the HSR has established itself as a major fast artery of transportation along Taiwan's western corridor, more and more people and industries are moving to adjacent areas. This has led to the possibility of more threats and negative impact to the ecology and to sustainability of the environment. The landscape is rapidly changing. It is hoped that the relevant agencies will respond quickly to resolve any harmful ramification to this situation so that our future generation in thirty or even fifty years from now, will still be able to appreciate and experience the timeless beauty of Formosa.





飛閱高鐵串起的城鄉
忽而婉約 忽而剛毅
忽而繁華 忽而靜謐
馮虛御風
驚豔台灣風情四季
見證福爾摩沙的容顏
美麗如昔



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Wurih Depot



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Inspection & Repair Workshop



Nankang

Taipei

Banciao

南港站

台北站

板橋站

Taoyuan

桃園站

Hsinchu

新竹站

Miaoli

苗栗站

Taichung

台中站

Changhua

彰化站