

CHAPTER 6

第 六 部



TZUCHI FOUNDATION

助學安身

以愛相助 關懷陪伴

PREFABRICATED CLASSROOMS
FOR STUDENTS

THE LOVE AND CARE FOR ALL

除九二一地震賑災以外，慈濟在國內外賑災中也累積大量的援助經驗，從而在尼泊爾的中長期規劃與急難救助得以同步進行。賑災初期，慈濟就開始關注學生復學及受災鄉親安居的需求，於勘察訪視後，提出簡易教室、簡易屋的規劃。這次尼泊爾強震，不僅造成數萬棟磚造房屋倒塌，學校教室也嚴重受損。據聯合國兒童基金會評估，尼泊爾有近百萬學童沒有教室可上課，兩萬多間教室毀損。重建經費龐大，雨季已屆，政府和部分非政府組織緊急援建以竹子搭建的簡易教室暫時過渡，讓大部分學童能在6月1日順利復學，然而，後續簡易教室援建需求仍非常殷切。

由於尼泊爾是內陸國家，交通不便，加上大多數建材都須從國外進口，簡易教室的費用居高不下，原本教育資源就普遍不足的學校，只能利用帳篷、走廊，甚至在已毀損的危樓中繼續上課。

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即使是向政府申請經費，或是一些慈善組織捐助以竹片搭建的臨時簡易教室，或是燠熱難當的鐵皮屋，也都難以過渡到學校永久教室完成，一間能夠遮風蔽雨、安心上課的教室是師生們共同的期待。



1. 由其他非營利組織所提供的簡易教室以竹片為材質。(攝影 黃宗保)
Temporary bamboo-framed classrooms by a NGO. (Photo credit: Tsung-Pao Huang)

PREFABRICATED CLASSROOMS FOR STUDENTS

THE LOVE AND CARE FOR ALL

Learning from previous efforts, such as 921 Earthquake relief and other efforts inside and out-side Taiwan, with the Nepal earthquake, Tzu Chi began planning its Mid/Long-Term Assistance program at the same time as the initial emergency relief activities. From the beginning, Tzu Chi Relief and Medical Team paid special attention to homeless families and school children. After all, prefabricated houses and schools will be in great demand after the initial relief effort is over.

Not only did the Nepal earthquake cause tens of thousands of brick houses to collapse, but it also severely damaged school classrooms. According to UNICEF, there are nearly one million students in Nepal who do not have classrooms to go to. More than 20,000 classrooms were damaged. The cost of rebuilding was great and the rainy season was starting, so the government and some non-governmental organizations assembled classrooms using bamboo to temporarily accommodate students and get them back to school by June 1. Even with this effort, the need for prefabricated classrooms remains urgent.

Nepal is a land-locked country and inefficient in transportation. Majority of building materials has to be imported, which result in high construction cost for building temporary classrooms. For some of schools that did not have enough resources in the first place could only held classes in tents, hallways, or even in damaged buildings.

Even they had applied fund from government or received assistances from charity organizations, current bamboo-framed or metal-sheet classrooms only could temporarily settle current problems. For a long run, sturdy and comfortable classrooms are needed before permanent school building is built.



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2. _____
學生在竹片搭蓋的臨時簡易教室上課的情形。(攝影 陳志強)
Bamboo-framed classroom. (Photo credit: Chi-Keong Tan)

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3. _____
慈濟志工前往莎瑞達學校勘察受災情形，發現該校十三間教室已全毀，學校在空地建四間竹編簡易教室，分上下午兩段式上課。(攝影 黃宗保)
Tzu Chi volunteers visit Sharada Higher Secondary School and discover that its 13 classrooms are fully damaged. School section has to be divided into morning and afternoon sections in four bamboo-framed classrooms. (Photo credit: Tsung-Pao Huang)

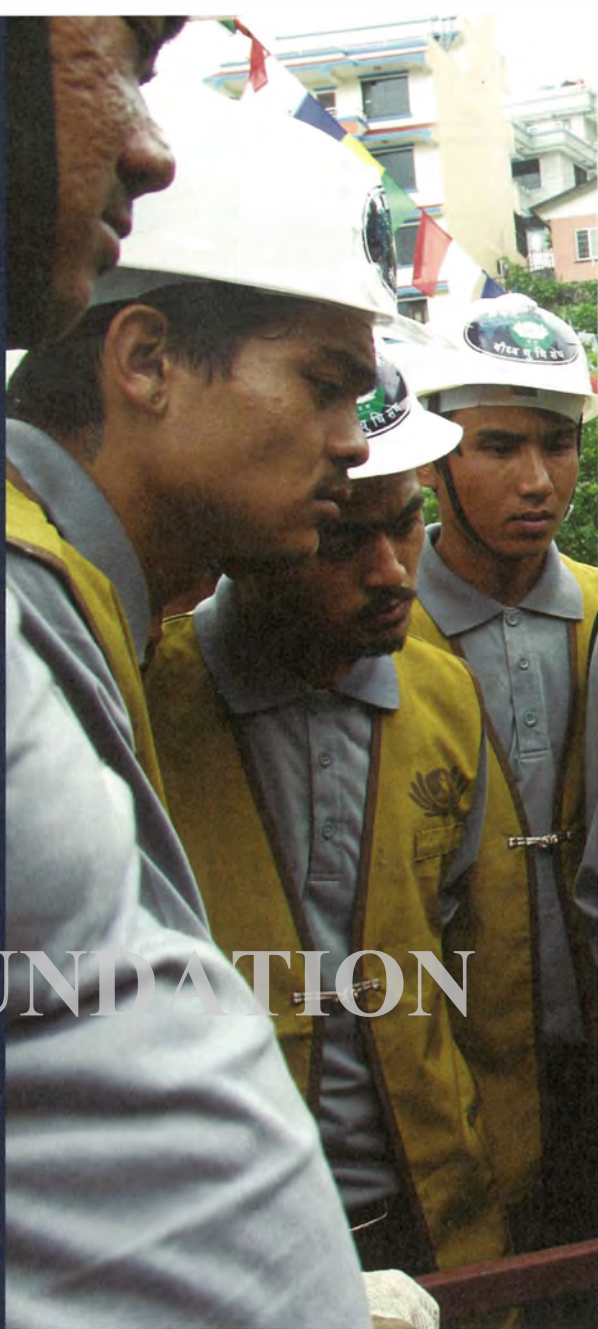
團隊研發 在地援建

慈濟賑災醫療團從尼泊爾賑災初期，即積極進行校園、社區重建的勘察評估，並尋訪搭蓋簡易教室或簡易屋的土地，同時研擬適合當地需求的材質及設計。於是除了臺灣慈濟基金會營建處之外，也以慈濟馬來西亞分會執行長郭秋寶等檳城慈濟志工為主組成一支簡易教室、簡易屋研發團隊。

相較於臺灣，馬來西亞鄰近尼泊爾，而且在2014年底馬國水災時，馬來西亞營建團隊向臺灣慈濟志工學習簡易教室及簡易屋的組裝製造技術，並研發、生產適用於馬來西亞的簡易屋，於重災區吉蘭丹州進行援建。

考量到尼泊爾進口建築材料成本高，運輸、時效不易掌握，馬來西亞研發團隊盡量取材自當地，透過尼泊爾實業家納瑞許·杜加與巴山·查德理的協助，就地尋訪適合的建材及廠商。

簡易教室的規格，完全遵照尼泊爾教育局的規定，建材是採用鋼架結構、牆面以水泥板施作，而屋頂則是選擇鋅板及PU泡棉，以達到防熱、隔音效果。最重要的是，這些材料完全是當地可取得的建材，而且希望能讓當地學校使用五至十年，銜接至永久教室完成。



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1. 馬來西亞慈濟志工張栢林，教導當地以工代賑鄉親，如何操作機器切割鋼材。（攝影 許妙如）

Malaysian Tzu Chi volunteer Pail Lim Teo teaches local people how to operate a steel cutting machine. (Photo: Miao-Ru Hsu)

2. 為搭建簡易教室樣品屋，尼泊爾本土志工圖西正在瞭解機器操作原理。（攝影 陳國麟）

Building a sample of prefabricated classroom. Local volunteer Tushi Narayan Matang is learning how to operate a machinery. (Photo credit: Kuo-Lin Chen)

R&D TEAM ARRIVED NEPAL

Tzu Chi Relief and Medical Team came to Nepal early in the disaster relief effort. They investigated and evaluated what needed to be done to help schools and communities rebuild. They looked for land suitable for prefabricated homes and classrooms. At the same time, they looked for building materials and designs that more suitable for local environment. Tzu Chi Malaysia CEO Chiew Poh Koay leaded a group of volunteers working with staff of Construction Department, Tzu Chi Foundation in Taiwan on this research and development effort

Geographically, Malaysia is closer to Nepal then Taiwan is. At the end of 2014, Malaysia faced a severe flood. Tzu Chi Malaysia team used techniques learned from volunteers in Taiwan to build prefab classrooms and houses in the State of Kelantan, Malaysia. During the construction, they had researched and developed the houses more suitable for the need of local people.

Due to the high cost of importing building materials and the inefficiency in transportation, the Malaysian Team has worked with local businesspeople Naresh Dugar and Basant Cahudhary to locate suitable building materials.

To comply the regulations of Nepal's Bureau of Education, they use building materials such

as steel framing, cement plates as walls, zinc plates for the roof, and PU foam to insulate from both heat and noise. Most importantly, all of the materials come from local sources and will last for five to ten years. By then, construction of permanent schools should be complete.



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3. 慈濟基金會援建特里布文大學帕坦分校簡易教室。上工前，馬來西亞慈濟志工梁玉權細心叮嚀以工代賑鄉親各項工作事宜。(攝影 吳碧珠)

4

At the Patan Multiple Campus of Tribhuvan University, Tzu Chi agrees to build prefabricated classrooms. Before starting the work, Yoke-Knuin Leong carefully reminds everyone construction related details. (Photo credit: Pi-Chu Wu)

4. 尼泊爾以工代賑鄉親學習將心比心，把自己當成使用者的心情，來為簡易教室上漆。(攝影 吳碧珠)

The participants of cash aid livelihood program carefully paint the classrooms. (Photo credit: Pi-Chu Wu)





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5、6. _____

慈濟援建巴基索里學院簡易教室，以工代賑鄉親，還有二十多位土木工程系的師生，合力把簡易教室的骨架豎直起來。（攝影 蕭耀華）

Building prefabricated classrooms in Bagiswori College. The 20 and more of civil engineering students and the participants of cash aid livelihood program work together to lift up the steel frame. (Photo credit: Yiu-Hwa Hsiao)

7. _____

馬來西亞慈濟志工陳廣東教導以工代賑鄉親如何切割鋼條。（攝影 許妙如）

Malaysia volunteer Kong-Tong Tan shows locals how to operate a machinery in cutting steel frames. (Photo credit: Miao-Ru Hsu)

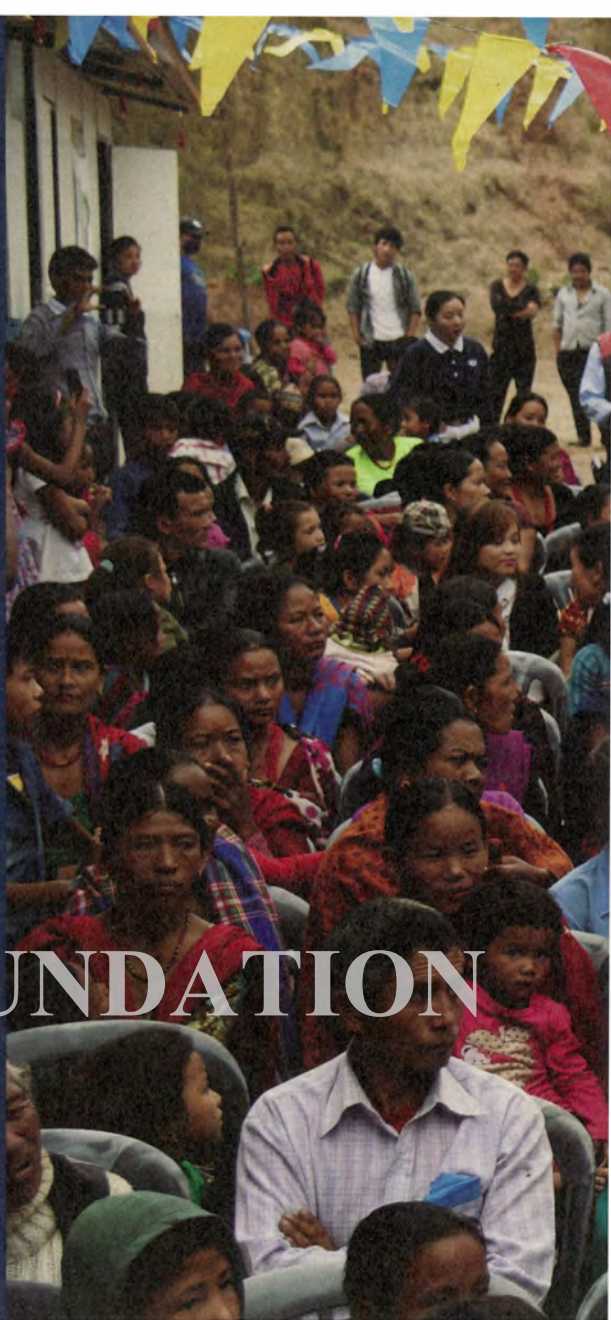
人文移交，百年樹人

簡易教室每間可容納三十至四十人，屋頂採用鋅板加PU泡棉，不只具降溫效果，還能避免下雨時，雨滴落在鋅板造成噪音。

尼國教育部主任拉禎德拉·鮑德爾與工程師賈博星現場勘察後，肯定慈濟的設計及施工品質，並邀請志工參與教育部主辦的「學校建築安全設計全國研討會」。

每當完工時，所有援建學校師生都迫不及待進入教室上課，慈濟志工亦把握機會，在啟用典禮上安排奉茶儀式，促進親師生之間的關係，達到人文教育的效果；期許每所慈濟援建的學校，在人文的薰陶下，都能成為品德兼備的典範學校。

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PREFABRICATED CLASSROOMS HANDOVER CEREMONY

Each prefabricated classroom is enough to accommodate 30-40 students. The roof is made from zinc plates with PU foam to insulate the classroom from the heat and from outside sounds such as rain.

Nepal's administrator of the Bureau of Education, Rajendra Kumar Paudel, investigated the

site and approved the design. He invited volunteers to attend a School Architecture Safety and Design Conference sponsored by Education department.

As teachers and students entered the classroom, Tzu Chi volunteers took the opportunity to hold a tea ceremony to bring teachers and students even closer. They hoped to bring moral education into school.



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1. 佳佳德學校8月6日舉行的簡易教室移交典禮上，慈濟志工整齊列隊出場，展現人文教育的精神。(攝影 游錫璋)
On August 6, a prefabricated classroom handover ceremony is held in Gadgade Lower Secondary School. Tzu Chi volunteers walk into in neat lines, which represents Tzu Chi's culture. (Photo credit: Si-Jhang You)





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2、3.

慈濟在巴基索理學院援建的簡易教室，6月28日舉辦移交典禮。慈濟志工安排學生準備為來賓及師長奉茶。(攝影 黃宗保、周幸弘)

On June 28, a prefabricated classroom handover ceremony is held in Bagiswori Higher Secondary School/College. (Photo credit: Tsung-Pao Huang, Hsing-Hung Chou)

3

4.

巴基索理學校簡易教室啟用移交典禮上，慈濟志工郭秋寶參與剪綵，並代表慈濟基金會將簡易教室權利書交給校長克斯那·帕薩·丹查（左起），巴塔普教育局長然瑪·肯塔·沙瑪及國會議員藍·帕薩·普亞見證觀禮。(攝影 黃宗保)

The prefabricated classrooms handover ceremony held in Bagiswori Higher Secondary School/College. Tzu Chi volunteer Chiew Poh Koay (right) hands the papers for the new classrooms to the school. From left: Principal Krishna Prasad Dhanchha, Bhaktapur District Education Officer Rama Kanta Sharma, Constituent Assembly member Ram Prasad Phuyal. (Photo credit: Tsung-Pao Huang)



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5. 莎瑞達學校移交典禮中，校長伍道夫（左一）親自參與奉茶給督學潘・國保，引導學生學習尊師重道的生活態度。（攝影 游錫璋）

The handover ceremony in Sharada Higher Secondary School. Principal Uddhav Sujakhu join the tea ceremony and serve a cup of tea to the Resource Person Prem Gopal. He personally shows students the spirit of respect for teachers. (Photo credit: Si-Jhang You)



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6、7.

梓因中學簡易教室移交典禮，十對親子代表，由孩子回饋母愛，輕輕按摩紓解母親的疲勞，也安排幼童幫媽媽洗腳，表達感恩之意。（攝影蘇門）

7

During the handover ceremony in Zing Secondary School, as showing the students how to show their love and appreciation to parents in a simple way, Tzu Chi volunteers arranged students to massage or wash their mothers' feet. (Photo credit: Suman Prajapati)



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8. 尚堤中學簡易教室移交典禮，學校師生以圓形圍繞，舉辦敬師的奉茶活動。
(攝影 游錫璋)

The handover ceremony in Shanti Niketan Secondary School. In circles, students serve tea to teachers as showing their gratitude. (Photo credit: Si-Jhang You)

9. 特里布文大學帕坦分校馬哈校長（中）和慈濟志工在8月5日簡易教室移交典禮後，一起合影。(攝影 游錫璋)

On August 6, after the prefabricated classroom handover ceremony at the Patan Multiple Campus of Tribhuvan University, the Principal Madhab (center) have a group picture with Tzu Chi volunteers. (Photo credit: Si-Jhang You)

10. 慈濟志工施啟智（右），將象徵簡易教室的鑰匙轉交給梓因中學哈利瑞校長，圓滿儀式。(攝影 蘇門)

The key handover ceremony in Zing Secondary School. Volunteer Chi-Chih Shih (right) hands over the key to Principal Hari Ram Dangol. (Photo credit: Suman Prajapati)

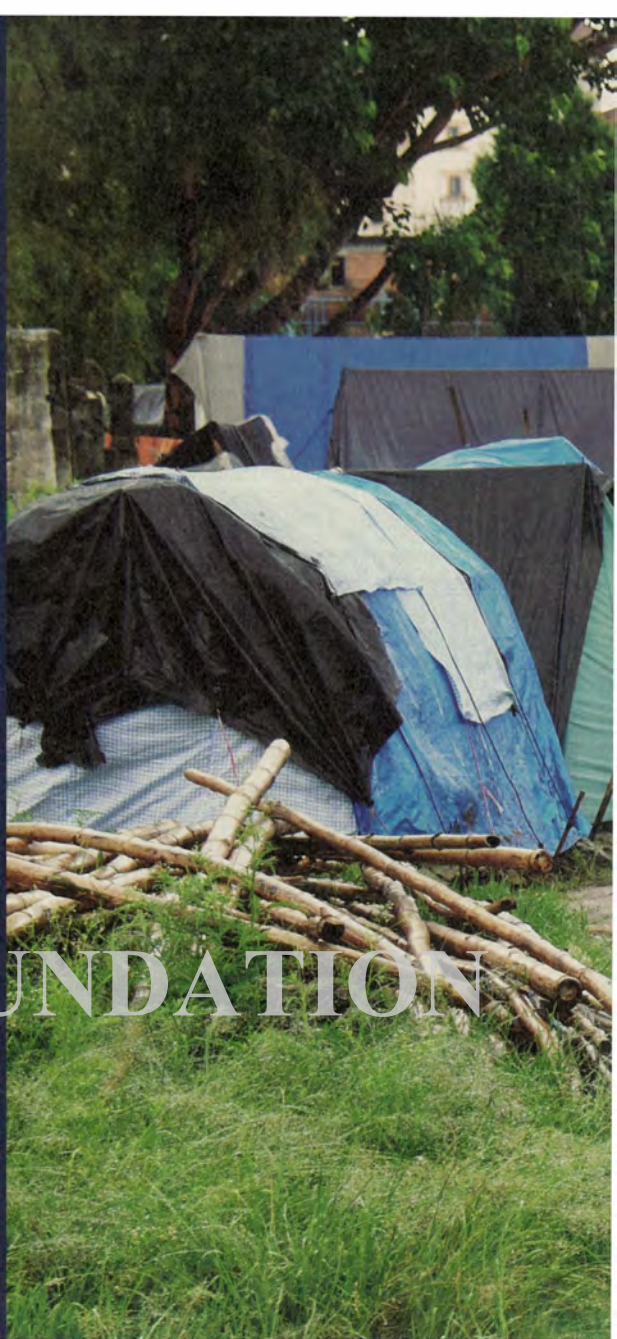


暴雨滂沱 建屋安身

地震災後，許多鄉親住屋倒塌或是已成危樓，也有心生驚恐，夜晚不敢待在屋內，紛紛在戶外搭起帳篷。每年六至九月是尼泊爾的雨季，居住在簡陋帳篷裡的受災鄉親，滿地泥濘和濕冷的夜晚，讓他們求不得一處安眠。

慈濟簡易屋研發團隊在設計簡易教室時，亦同時規劃簡易屋，唯尼泊爾多山，大片平坦空地難尋，慈濟志工已先行在邦加馬帝，依政府提供的需要住屋名單，先行訪視確認後，分別採取現地重建或由政府提供土地的方式進行援建；也為比故修道院援建佛堂和比丘尼宿舍。

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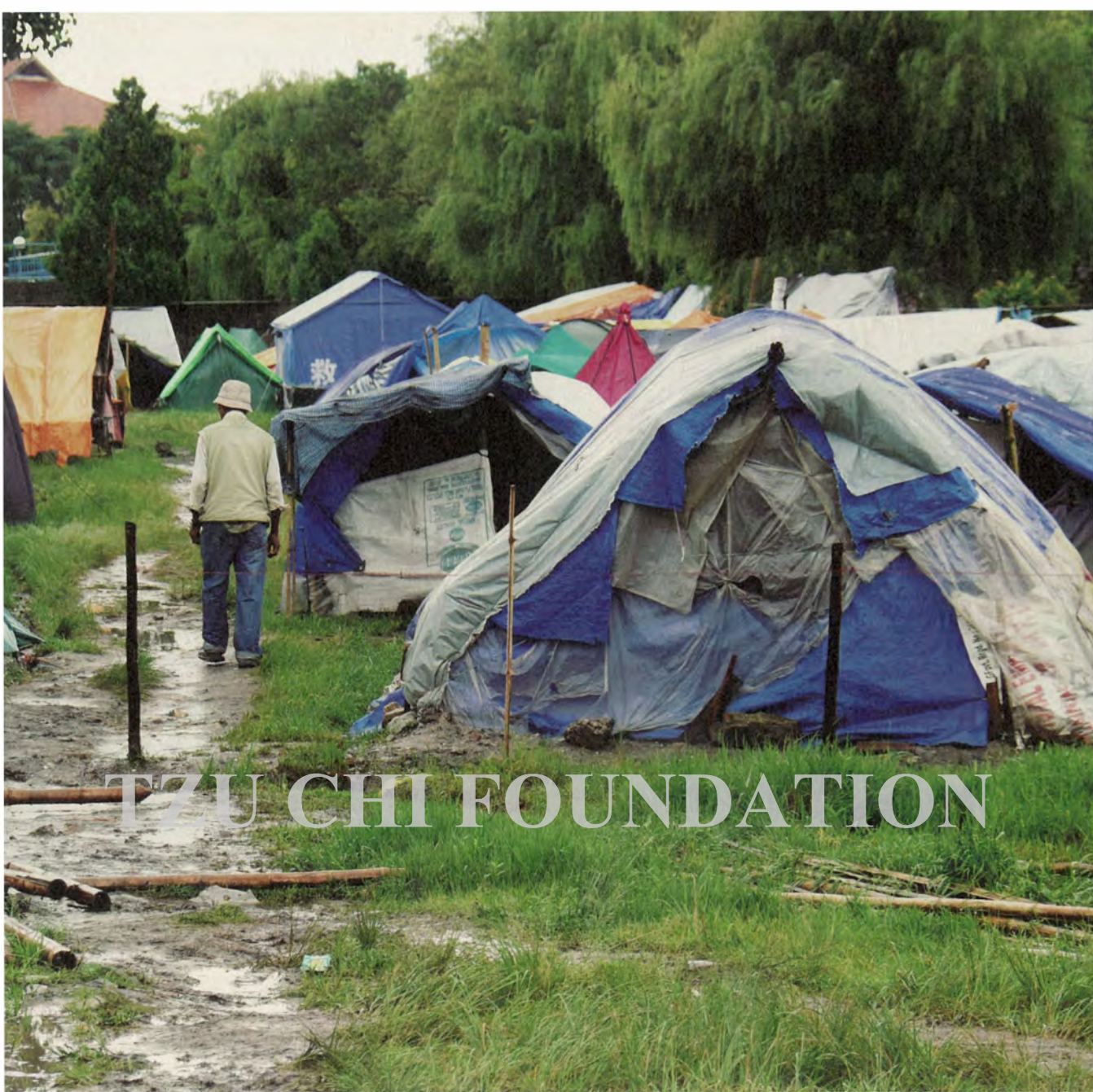


BUILDING SAFE AND COMFORTABLE HOMES

After the earthquake, many houses collapsed or were severely damaged. People could only stay in tents. From June to September is the monsoon in Nepal. Muddy and cold floor had made them hard to rest at nights.

After the earthquake, many houses collapsed or were severely damaged. People could only stay

in tents. From June to September is the monsoon in Nepal. Muddy and cold floor had made them hard to rest at nights. While designing the suitable prefabricated classrooms in Nepal, volunteers also planed to build prefabricated houses. However, because Nepal is so mountainous, it's hard to find a large flat land to build on. Tzu Chi volunteers in Bungamati visited families and worked with the government to locate land they could rebuild on. Volunteers had build temporary a Buddha hall and dormitory for Bigu Nunnery.



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1.

雨季來臨，臨時帳篷區一片泥濘，泥水常會流入帳篷內，席地而睡的居住品質令人難以想像。圖為奇翠巴蒂帳篷區雨後景象。(攝影 游錫璋)

When rainy season arrived, the area around tents became muddy and flooded with water. The photo shows the flooded Chuchepati tent area. (Photo credit: Si-Jhang You)





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2. _____
慈濟志工實際查訪政府提供需簡易屋的家戶，有人暫居在菜園、山上、河邊，這一家六口是向朋友借地搭建居住的。(攝影 曾美姬)

Volunteers did a field survey, using a government provided name list to visit each family. Some families live on mountains, some on the side of a river, and some next to a vegetable garden. This family of six borrowed land from a friend and put up temporary shelter to live in. (Photo credit: Mei-Chi Tseng)

3. _____
在樹下狹小的空間搭建簡易屋，事實上一點都不簡單。(攝影 許妙如)
Building a prefab house under a tree isn't very easy. (Photo credit: Miao-Ju Hsu)



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4.

原本位於喜馬拉雅山上的比故修道院，在地震後道場、學校、圖書館全毀，靠著直升機來回十八趟，才將比丘尼全數救出，暫居於加德滿都，慈濟獲知後協助援建。圖為以工代賑鄉親協助建築七間由簡易教室修改的宿舍及佛堂，供六十位比丘尼暫時安住、修行。（攝影 蘇門）

The Bigu Gumpa is located in the Himalaya Mountains, but severe damaged by the earthquake. All of the people at the nunnery were rescued by helicopter and now live in Kathmandu. In addition to building prefabricated classrooms, Tzu Chi also helped a dormitory and prayer hall, giving 60 people a temporary shelter to live and practice their religion. (Photo credit: Suman Prajapati)



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5. _____
以工代賑鄉親協助比故修道院搭建宿舍及佛堂。(攝影 蘇門)
Participants of cash aid livelihood program assists in building
a dormitory and prayer hall at Bigu Gumba (Nunnery). (Photo
credit: Suman Prajapati)