



**Asia-Pacific
Economic Cooperation**

2019/EPWG/DIA/006

Agenda Item: 7.1

Tzu Chi's Resilience and Disaster Prevention Model

Submitted by: Chinese Taipei



**APEC Resilience Week
Taipei, Chinese Taipei
30 September - 2 October 2019**

Tzu Chi's Resilience and Disaster Prevention Model

Speaker: Joe Wang

Buddhist Tzu Chi Foundation

30.09.2019

>600 Offices/Points in 59 countries/areas
Charity Relief in 100 countries/areas



~1 million volunteers around the world

~10 million supporters & donors around the world



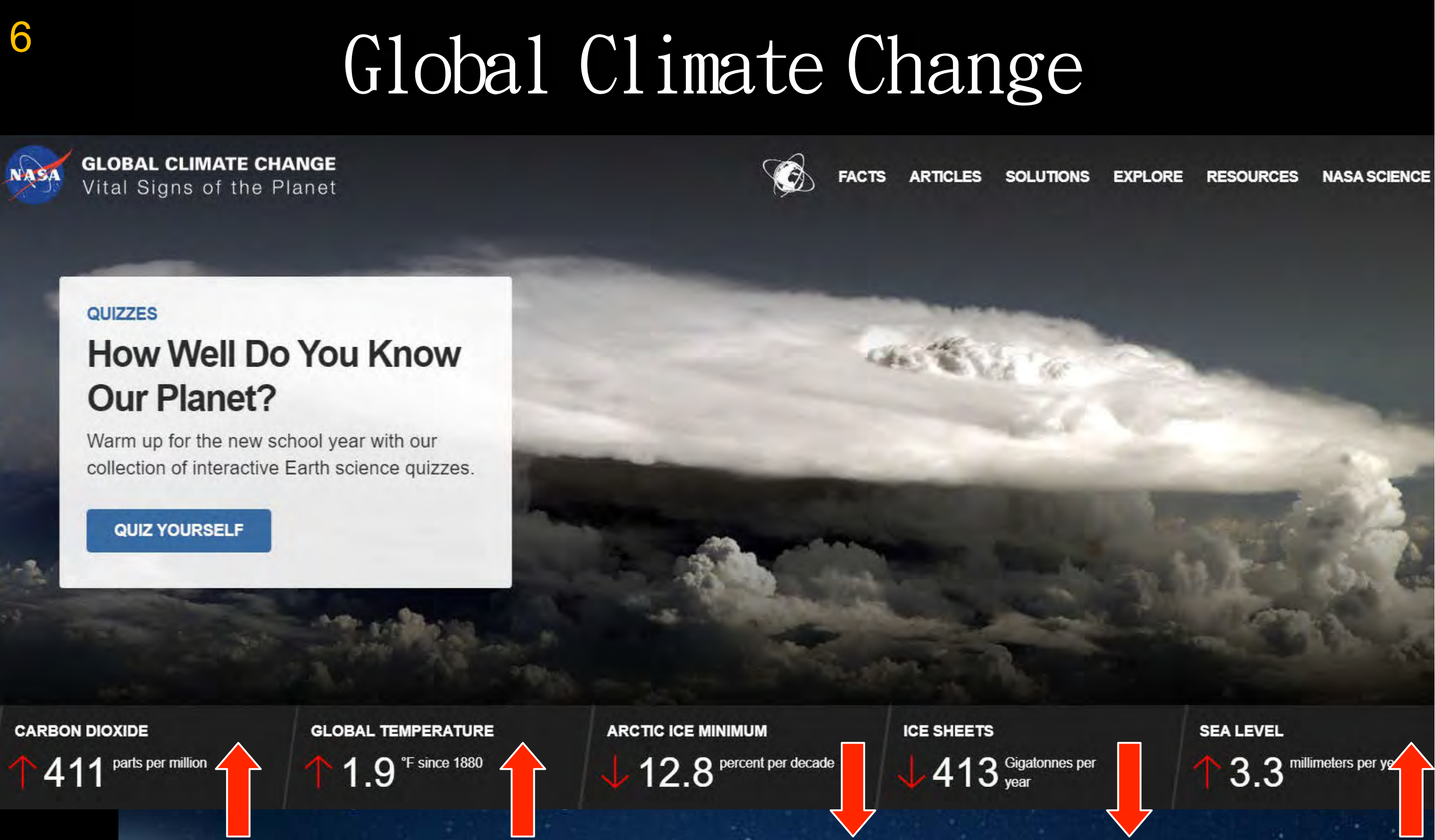
International Educational Support over 16 countries/ 230 Schools



Tzu Chi Aligns with the UN SDGs



Four Missions ■ Charity ■ Medicine ■ Education ■ Humanistic Culture



Global Climate Change

QUIZZES

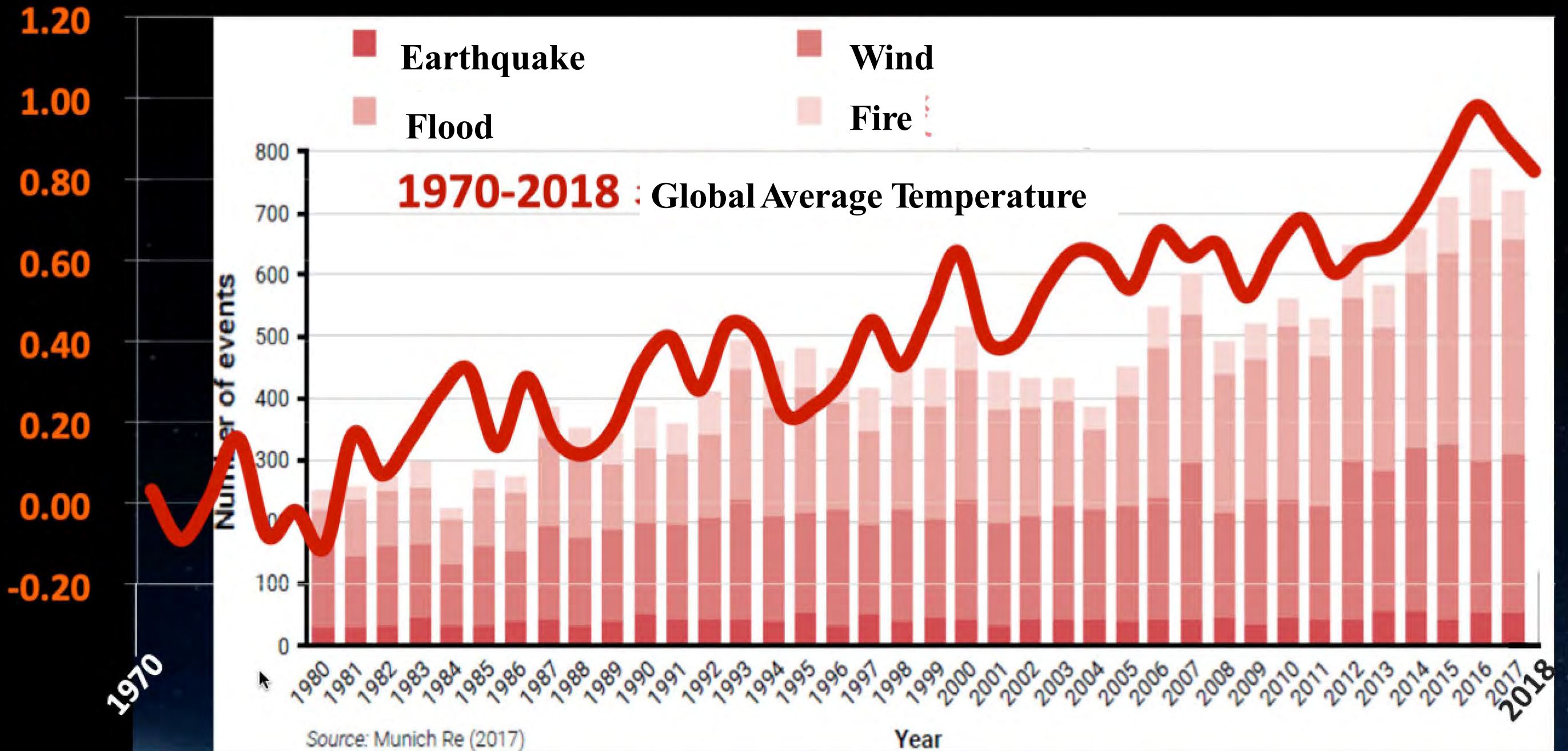
How Well Do You Know Our Planet?

Warm up for the new school year with our collection of interactive Earth science quizzes.

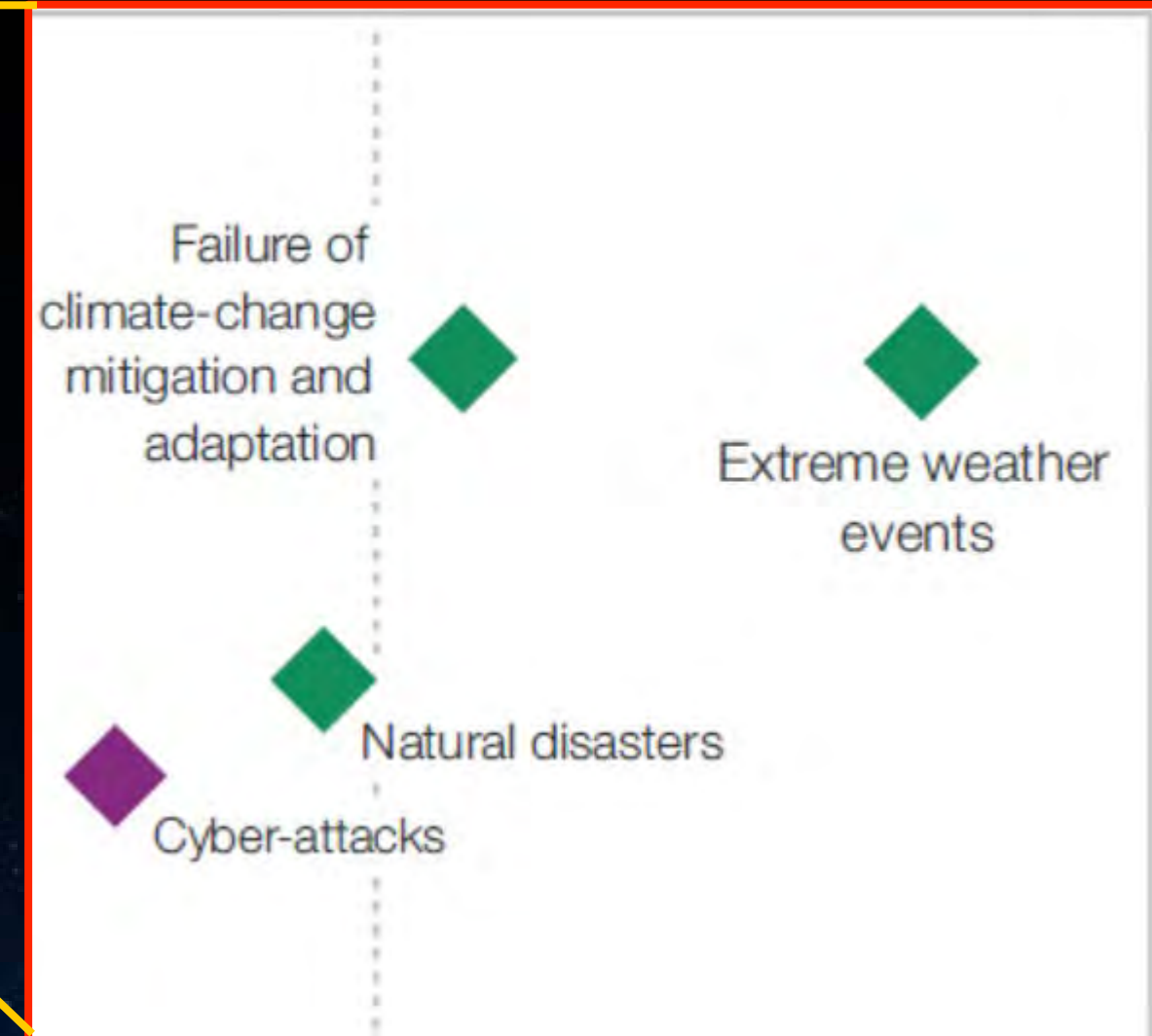
[QUIZ YOURSELF](#)



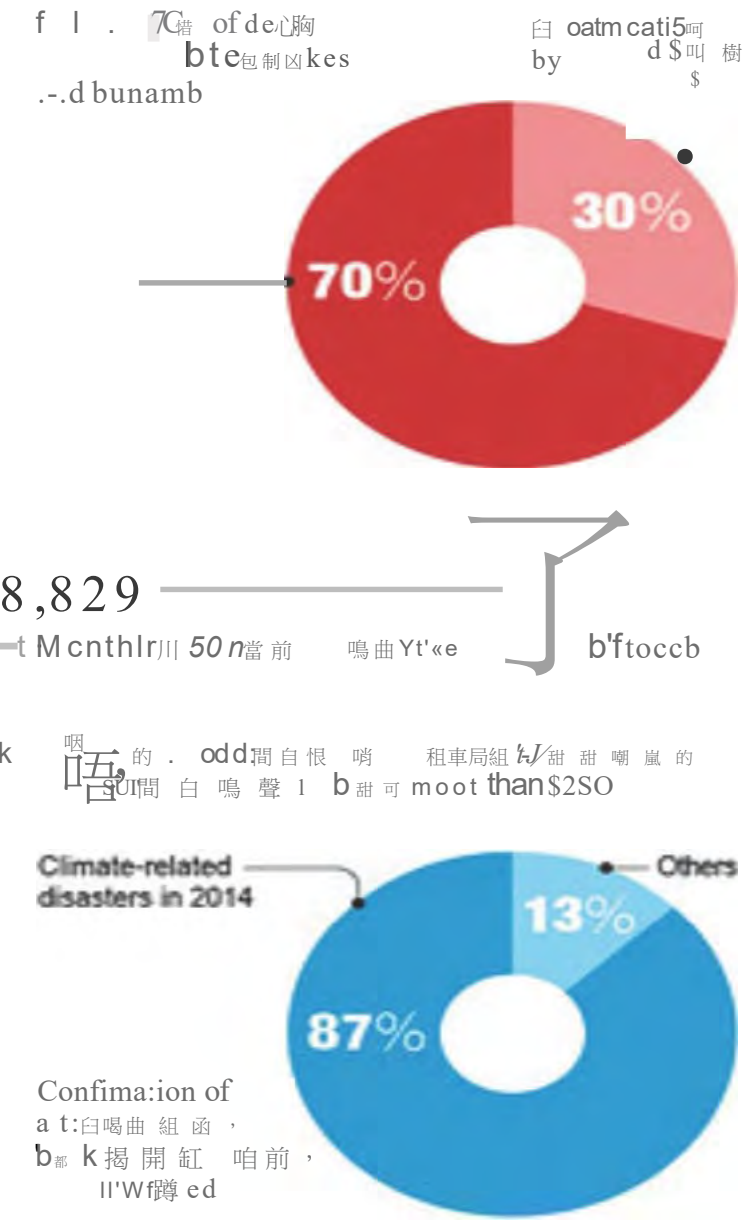
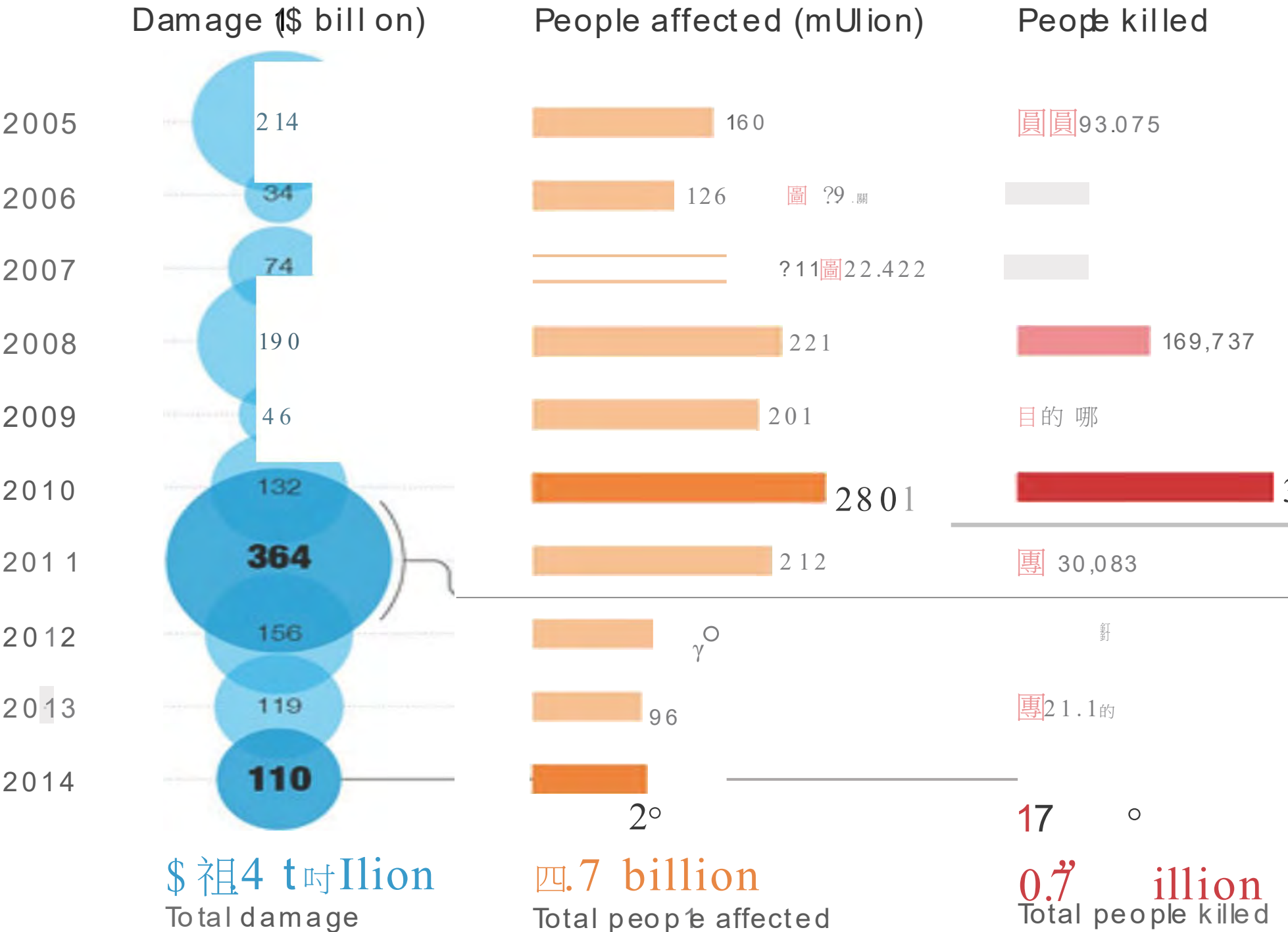
7 Average Temperature and Nature Disaster



2019 Global Risk Ranking



The Economic and Human Impact of Disasters in the last 10 years



NEW DISPLACEMENT BY CONFLICT AND DISASTERS IN 2017

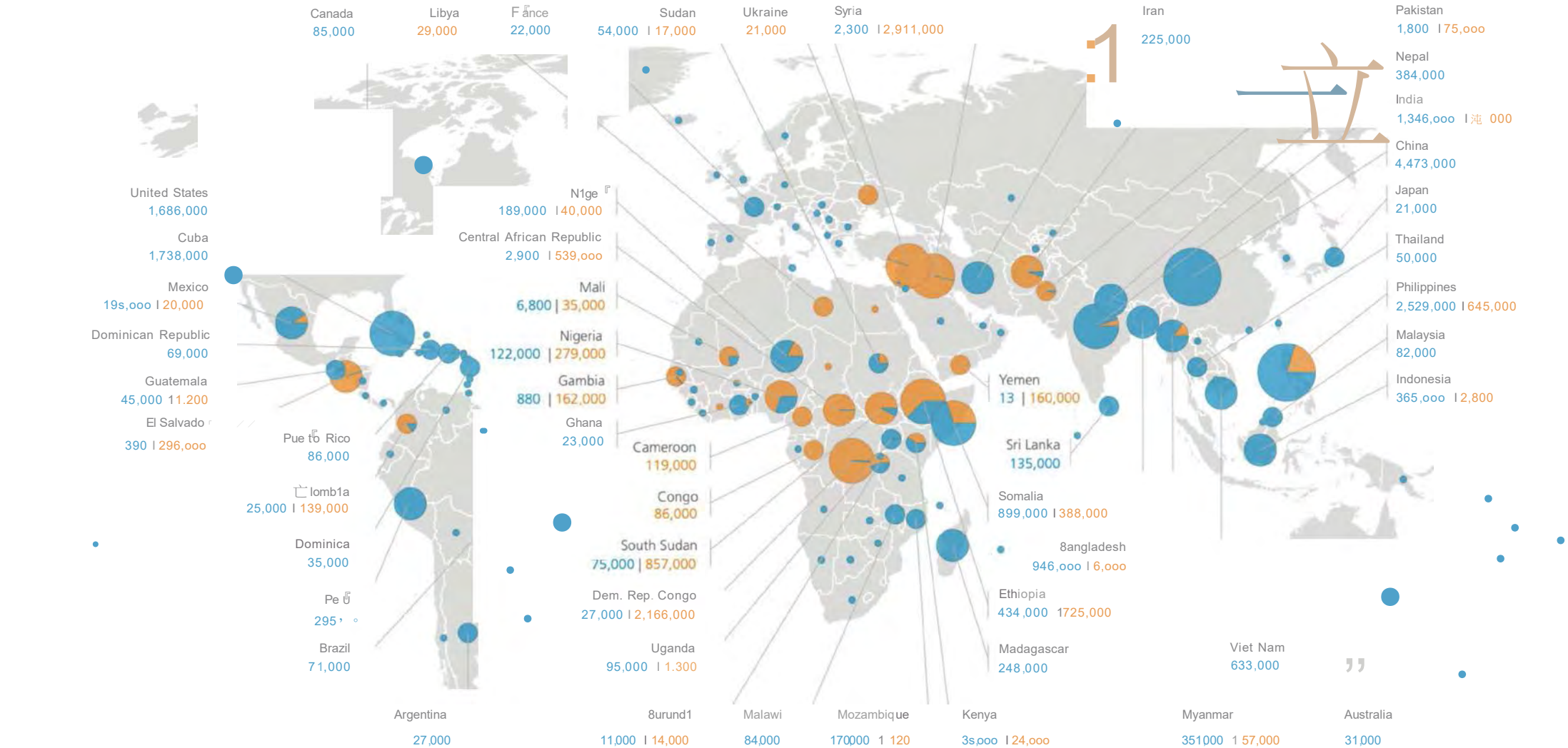
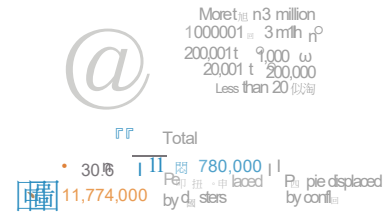


FIGURE 1: New displacements due to conflict and disasters (2008-2017)

50

Conflict and disasters

424



447,000 | 457,000
(16.1% from the total in 2017)

233,000 | 448,000
(15.4%)

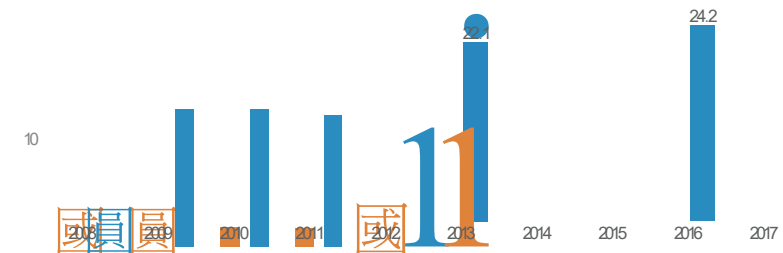
2,561,000 | 5,412,000
(26.3%)

424

11

11

The country names and figures are shown only when the total new displacements in a country exceeds 20,000. The boundaries and the names shown and the designations used on this map do not imply official endorsement or acceptance by IDMC.



1995~2018 Tzu Chi Relief Action to Earthquake Disasters

全球板塊擠壓從未停止，能量釋放又累積；面對未知的瞬脈災、備災的作為不能

慈濟救災 防備災同步

- 1992~培訓急難救助專業
 - 以男眾慈誠隊員為主，培訓急難救助的知識與技能，期使配合警政、消防單位救災



急救訓練課程持續至今，隊員演練心肺復甦術。(攝影/黃淑嫻)

- 1996~推動「社區志工」模式
 - 賀伯颱風來襲，為臺灣過往三十年間最大的天災。上人推動「社區志工」概念，將慈濟志工以所在社區為單位重新編組，期望建立社區關懷網絡
- 1999~九二一地震
 - 社區關懷網絡建置近三年，是地震當時慈濟投入急難救助得以迅速動員的關鍵之一
- 2001~完善防救災機制
 - 第一線救援工作為專業單位負責，慈濟志工參與急難救助工作以後勤補給、醫療站設置、陪伴關懷受災民眾等第二線工作為主

2017 Mexico

2010 Haiti

1999 Clumbia

2016 Ecuador

2007 Peru

2010 Chile

- 2003年與消防署簽訂「救災物資空中運輸後勤支援補給計畫」，由消防署提供師資訓練、提升支援救災之效能
- 2004年由企業與專業志工組成的「慈濟國際人道援助會」，針對救災上的食衣住行通訊各項需求，進行後勤支援與研發，如環保毛毯及快速組裝的簡易屋等

2009~莫拉克風災

- 香積飯開始廣泛運用於災區
- 淹水退去後，汙泥厚重清掃不易，研發利於清運民宅汙泥的小山貓

2011~建構防救災圖資系統

- 與國家實驗研究院國家太空中心簽署「國外災區衛星影像支援合作」備忘錄，由太空中心無償提供衛星影像，提升海外救災情資判斷

2012 Italy

1999 Turkey

2003 Iran

1998 Afghanistan

2005 Pakistan

2003 / 2008

China

2015 Nepal

2001 India

1995 / 2011 /

2016 Japan

1999 / 2016 / 2018

Chinese Taipei

2013 Philippines

2006 / 2018 Indonesia

1998 Papua New Guinea

2004 South Asia Tsunami

2011 New Zealand

2013~菲律賓海燕風災

- 自臺灣送抵包含Q-Water淨水器、香積飯、火箭爐、簡易屋、太陽能路燈、福慧床等研發產品投入賑災

2015~蘇迪勒颱風、復興航空南港空難

- Q-Water淨水器、清運汙泥的小山貓進入新北市烏來風災災區，協助民眾清理家園。爾後以全地形救災工作車取代小山貓，進行運送物資及清運汙泥之工作
- 行動廚房首度於南港空難現場供應熱食
- 2017年與健行科技大學合辦「無人飛行載具勘災與資料處理研習營」；與國防大學簽訂「慈濟防賑災資訊系統」研發合作，系統於隔年瑪莉亞強颱時啟用



志工藉由空拍教育訓練考取證照，可操作無人載具拍取勘災畫面，爾後進行3D疊圖(左圖攝影/溫巧好)，以利救災行動的規畫。

2018~0823熱帶低壓水災

- 改良研發之防割手套、防穿刺鞋墊首度大幅使用，以保護投入災區的志工免遭異物所傷，並贈予整頓災區的國軍使用



防穿刺鞋墊



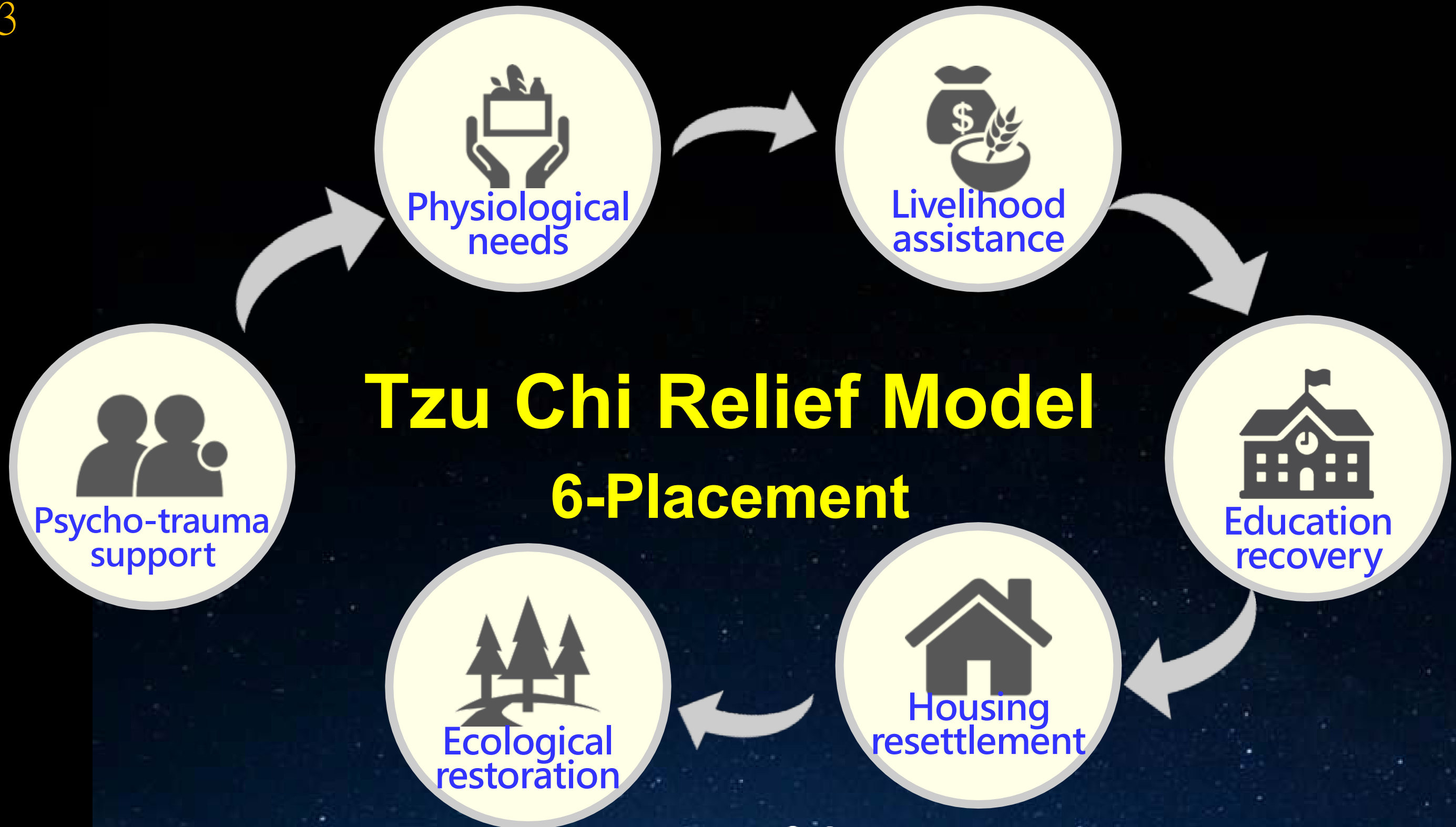
防割手套

- 2019年與國家災害防救科技中心(NCDR)，簽訂「災防科技合作協議」，透過「災害情資網」的圖資平臺，整合與應用災害防救資訊的相關研究與工作；與中央氣象局簽訂「防賑災氣象運用及教育推廣合作備忘錄」，並於慈濟苗栗園區啟用全臺第一個「慈濟防備災教育中心」

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VVEPIA





5 Principles

Directness

Priority

Respect

Practical

Immediate

4 Missions in 1



Medicine

Education



Charity

Humanity

Tzu Chi



**1999 Sept 21, 1:47 am
Magnitude 7.3**



**51,711 Houses Destroyed
53,768 Houses Damages**



**2,415 Death, 29 Missing
11,305 Injuries**



**364.7 Billions NTD losses
(11.64 Billions USD)**



Emergency Relief Aid



Mobilized 100,000 volunteers in disaster area helping victims, logistics, etc.



Livelihood Recovery



Visited 14,237 household to rehabilitate their living condition and revisited 616 households for mid-term and long-term aid.

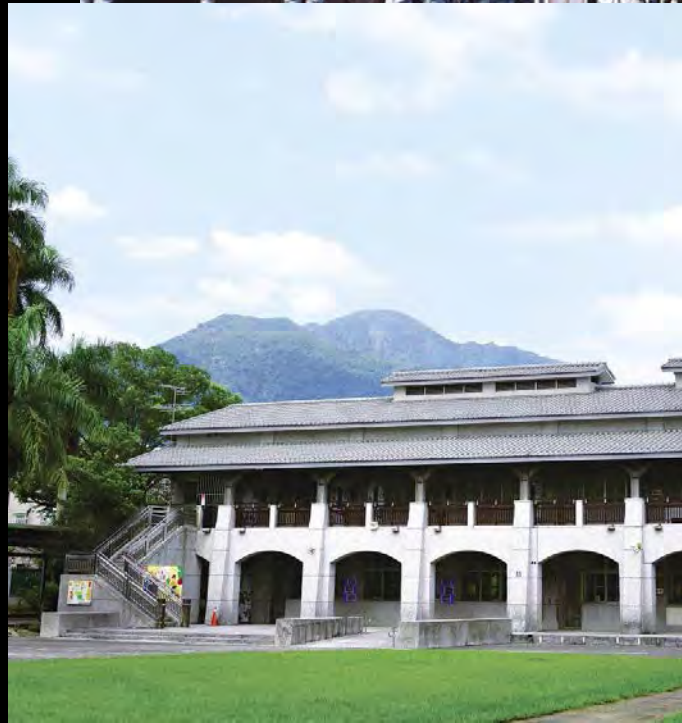


Community Housing Recovery



Mobilize 50,000 volunteers to build 1,776 prefabricated modular housing including house, public library, playground, police stations and others for the community.

Tzu Chi Provide US \$ 300 Million for Rebuilding 51 Schools



2001 Earthquake in India



India 印度強震援助

2001.04.01 印度古茶拉底省普杰鎮 攝影：謝景貴

印度地震後災區斷垣殘瓦，超過兩萬名生命在這場世紀強震中犧牲。

Tzu Chi Rebuild 227 Houses



India 印度強震援助

2002.10.22 印度古茶拉底省安加爾地區可達達慈濟村 攝影：顏霖沼

慈濟與法國關懷機構(CARE)合作，為震災災民興建227戶大愛屋。



2003 Earthquake in Bam, Iran



Iran 伊朗巴姆強震救援

2003.12.28-2004.01.21 伊朗卡曼省巴姆市 攝影者：顏霖沼/蕭耀華

強震將千年古城巴姆市幾乎夷為平地。志工走訪重災區，評估援助計畫。



Iran 伊朗巴姆強震救援

2004.01.29 伊朗卡曼省巴姆市吉曼羅帝街 攝影：顏霖沼

為八萬多位災民發放大米、醫藥箱、毛毯及生活用品。



Tzu Chi Rebuild 5 Schools



2004 Earthquake and Tsunami in South Asia









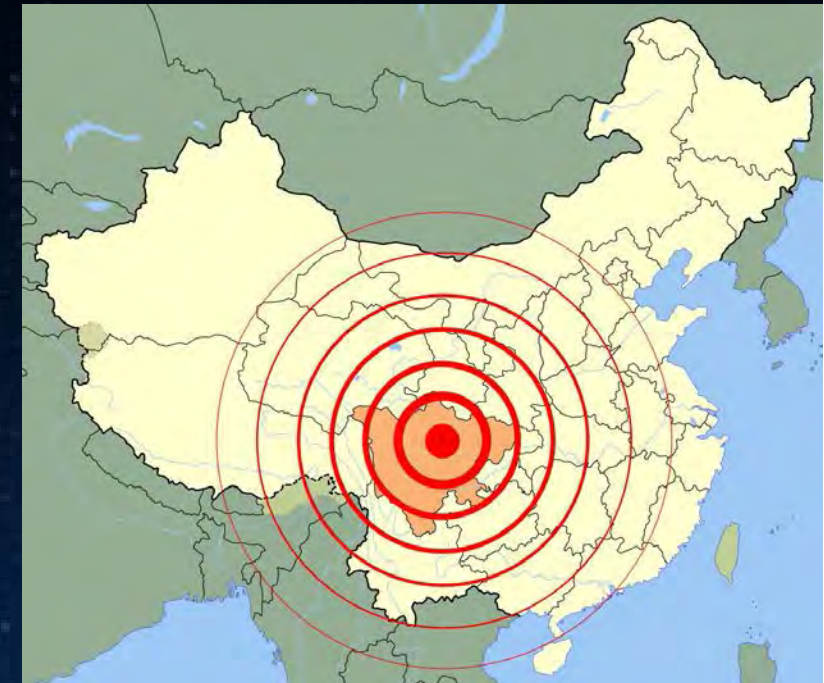
Tzu Chi Rebuild Over 3000 Houses and 3 Schools in Indonesia

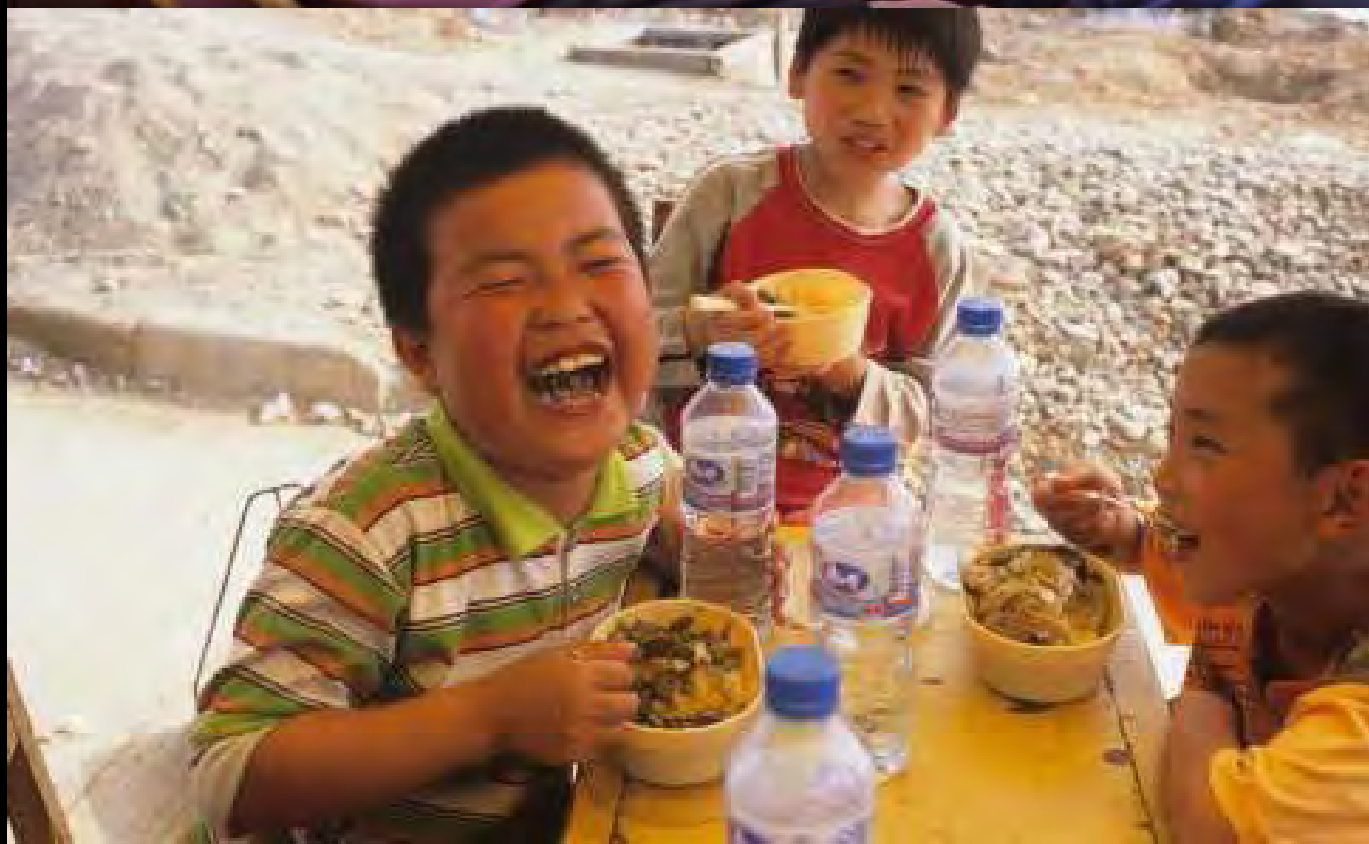


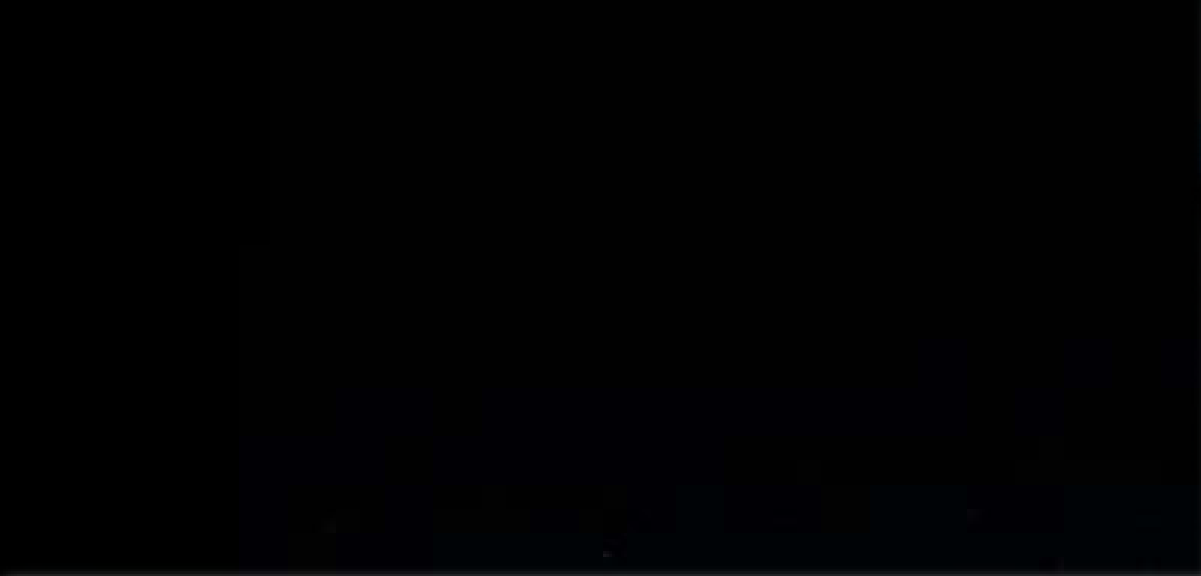
Tzu Chi Rebuild Over 600 Houses and 3 Schools in Sri Lanka



2008 Earthquake in China



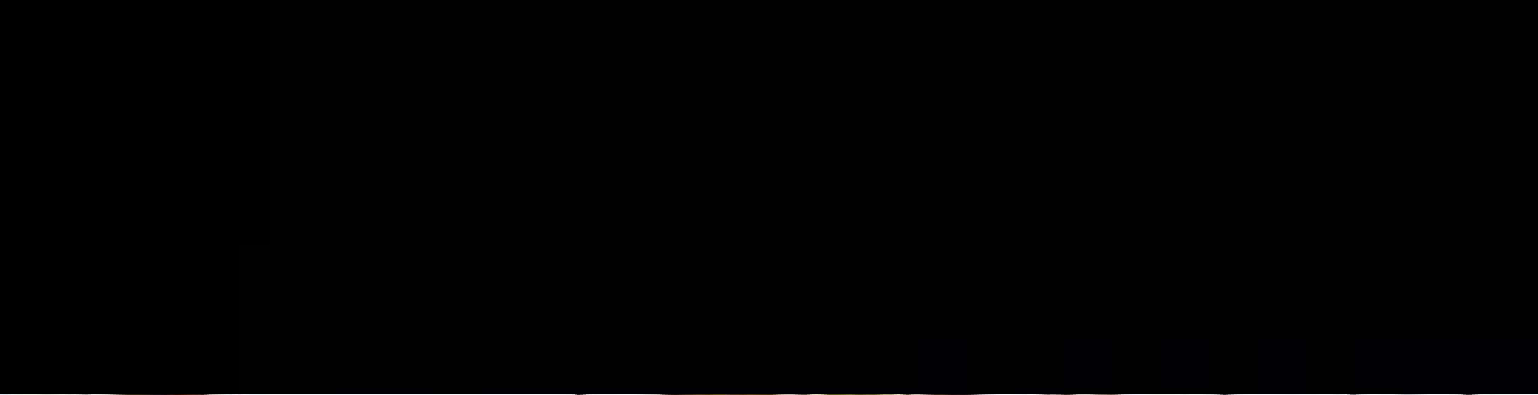






Tzu Chi Rebuild Over 95 Houses and 15 Schools in China











Tzu Chi Resilience Community Projects in Gansu Province in China





Tzu Chi Resilience Community Projects in Guizhou Province in China



2009 Typhoon in Chinese Taipei



45

Xiaolin Village in Kaohsiung

Before

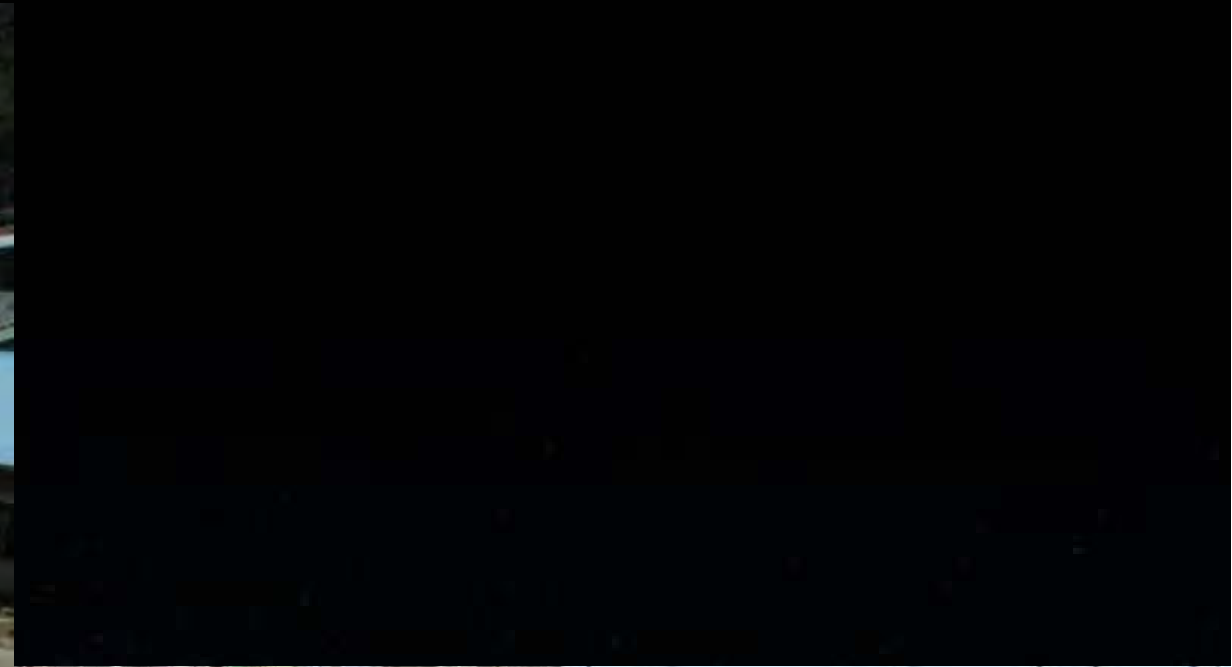


甲仙小林村(FS2,2009/1/14)

After



甲仙小林村
(FS2,2009/08/13)





Food Distribution



Tzu Chi Rebuild Over 1280 Houses, 2 Churches, 1 School in 3 Counties





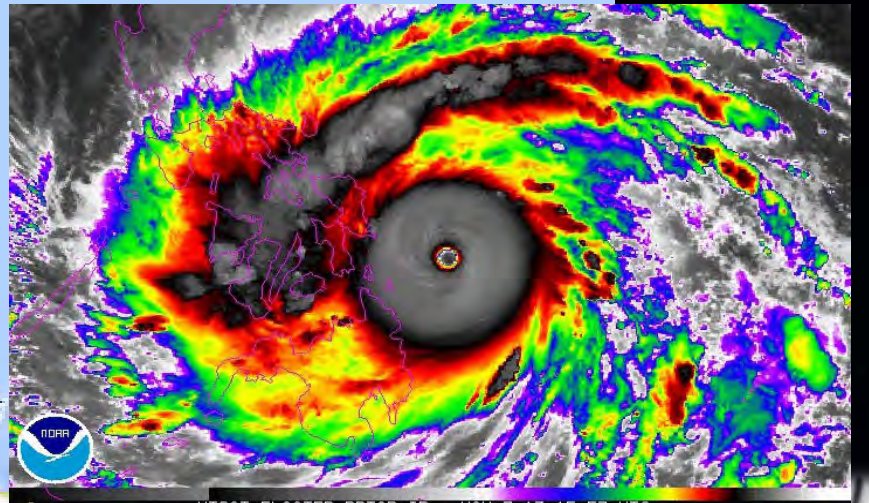
2011 Earthquake and Tsunami in Japan



Tzu Chi provide Over US \$ 70 Million for 96,976 Families with Respect



2013 Typhoon, Earthquake and Conflict in Philippines



Typhoon Haiyan





Tzu Chi rebuild Over 2,500 Houses





2017 Earthquake in Mexico







61

6/30/2019

Groundbreaking Ceremony



62

Architectural Design



2018 Tzu Chi Relief Action Map



美國加州林火



美國維吉尼亞州龍捲風



莫三比克垃圾山崩塌



柬埔寨水災



菲律賓水災



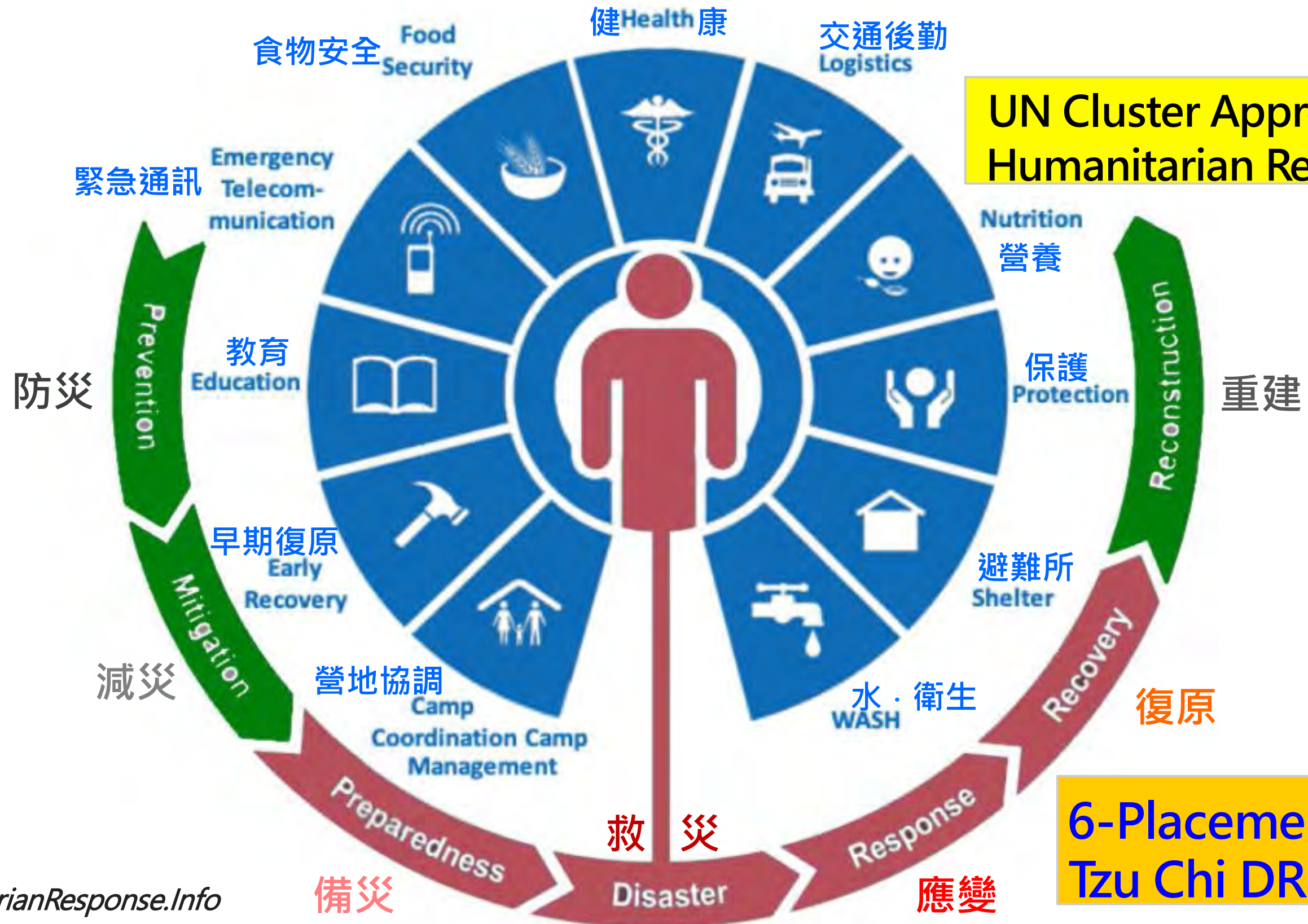
日本岡山水災



2018 Earthquake in Chinese Taipei

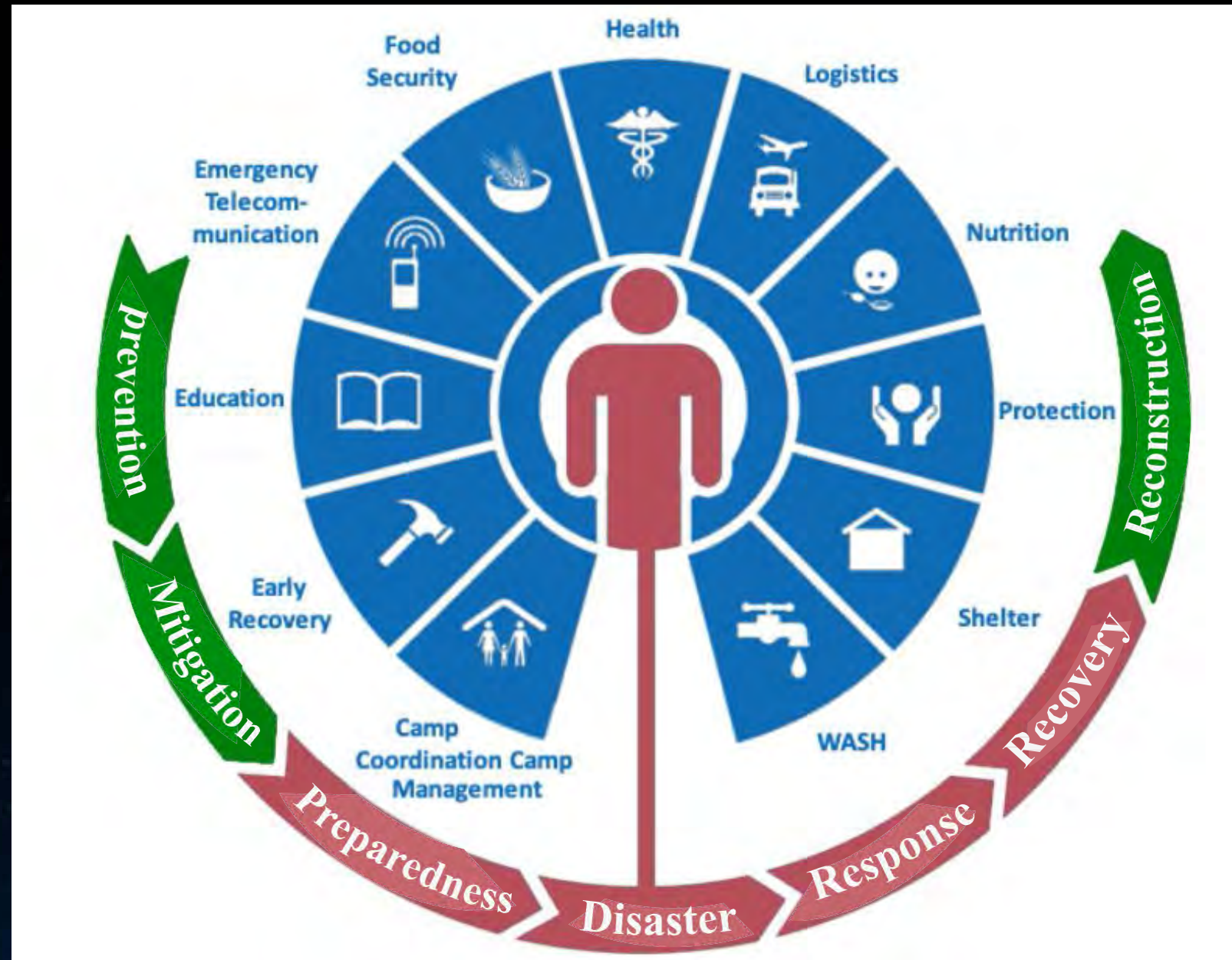


雲門翠堤大樓成四十五度傾斜，救難人員、住戶、媒體人員、志工團體紛紛趕至；在龐然建物下，人力如此渺小。



Credit:
HumanitarianResponse.Info

66 Three Phases Of Disaster Relief Action



Response

Recovery

Reconstruction

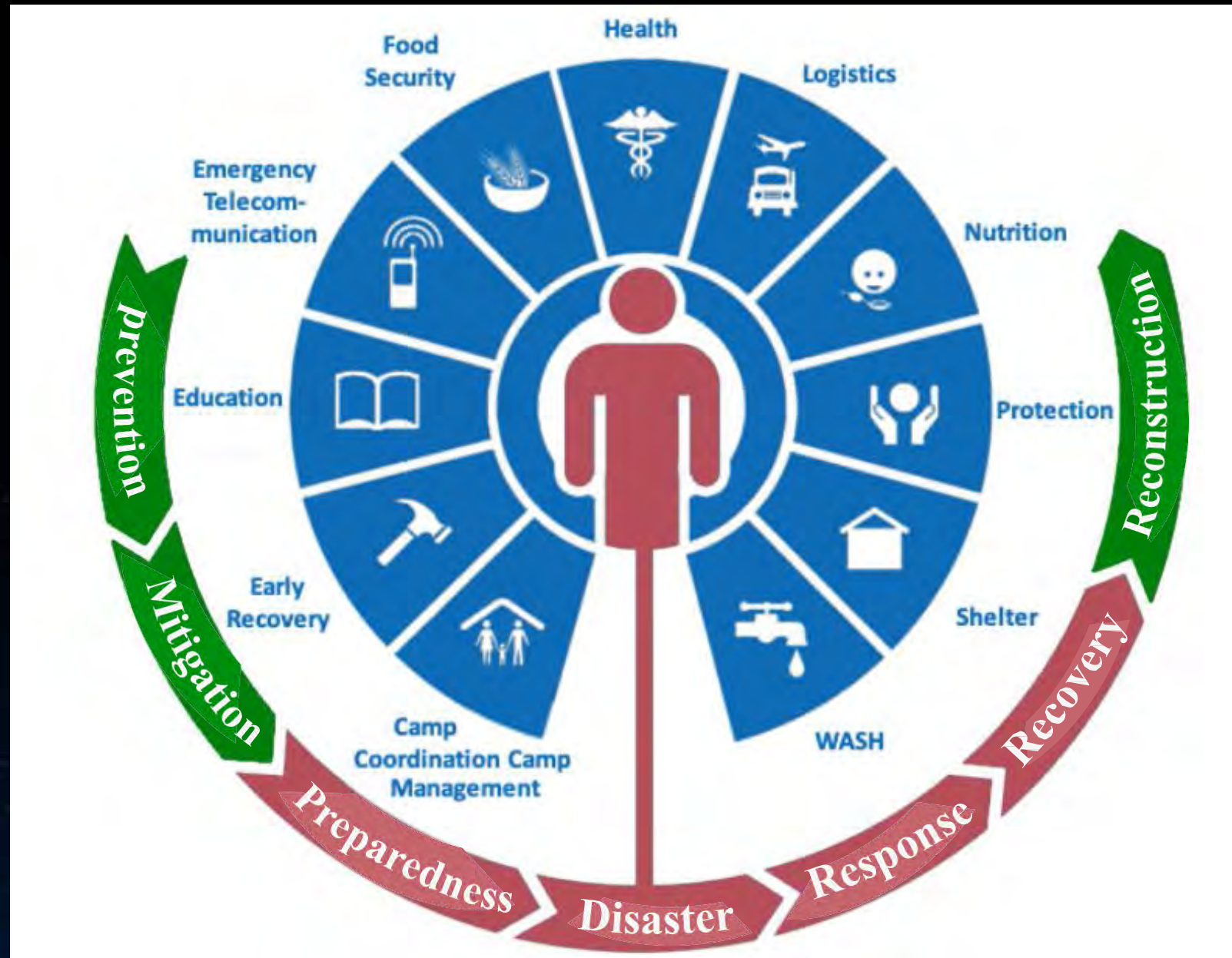
PPP Model from Post-Disaster to Pre-Disaster

Prevention

Matigation

Preparedness

68 Disaster Risk Reduction & Prevention



Prevention

Mitigation

Preparedness

Prevention Is Better Than Cure

Tzu Chi initiated “Project Disaster Reduction” to reconstruct the high risk buildings of school



The high quake-risk building of the school in remote area

“Project Disaster Reduction” Reconstruction

全臺慈濟減災希望工程

花蓮六校啟用

慈濟「減災希望工程」自二〇一四年啟動，於屏東、高雄、花蓮、臺東及苗栗，共協助二十六所學校修建校舍，今已陸續完工啟用。二〇一七年十月二十四日，花蓮縣六所援建學校舉行校舍捐贈暨聯合啟用典禮，共嘉惠了近五千名學子。

■規畫中
■已啟用



住民國小

1934年成立，學生人數約50人
援建項目：行政辦公室共3間，普通及專科教室共11間，圖書室、保健室



明貴國小

1939年成立，學生人數約1400人
援建項目：演藝廳、普通及藝術專科教室共73間



中原國小

2005年成立，學生人數約200人
援建項目：活動中心、特教班教室5間、一般教室、美術教室、輔導室、圖書室、教師辦公室、體育器材室及辦公室



國風國中

1968年成立，學生人數約1500人
援建項目：行政辦公室9間、一般及專業教室共45間、輔導室、合作社、保健室



化仁國中

1999年成立，學生人數約360人
援建項目：宿舍、綜合球場、體育專科教室及辦公室、器材室、舞蹈教室



玉里國中

1946年成立，學生人數約700人
援建項目：綜合球場、體育器材室、辦公室、新畫區



71 Disaster Prevention Exhibition Activities in Chinese Taipei



全臺各區展覽時程

- 常** 7/28起@新店靜思堂
- 常** 7/12起@慈濟苗栗園區
- 常** 9/1起@臺中靜思堂
- 常** 8/31起@臺中民權會所
- 特** 8/3-9/30@臺鐵臺中車站2F大廳
8/7-9/19@臺中草悟道
- 特** 8/9起@臺南靜思堂
- 特** 8/19-8/24@新北市政府大廳
8/26-9/11@新北板橋車站B1
9/14-9/22@北市信義新天地
香堤廣場及北段
- 暫** 11/22-12/23@中正紀念堂展廳
- 特** 9/20-10/11
@宜蘭阮義忠故事館
- 常** 5/12起@花蓮靜思堂B1
- 特** 12/1起@花蓮靜思堂2F
科工館災防DNA特展
- 常** 8/18起@南投聯絡處

921
莫忘那一年



國家防災日
National Disaster Preparedness Day



Tzu Chi Set up First Disaster Education Center in Chinese Taipei









TZU CHI INNOVATION SYSTEM

Charitable Technology

When disasters strike, aid providers are often challenged to offer food and water to victims as quickly as it is needed. Over the decades, Tzu Chi has developed some equipment to assist volunteers to deliver aid better and faster.

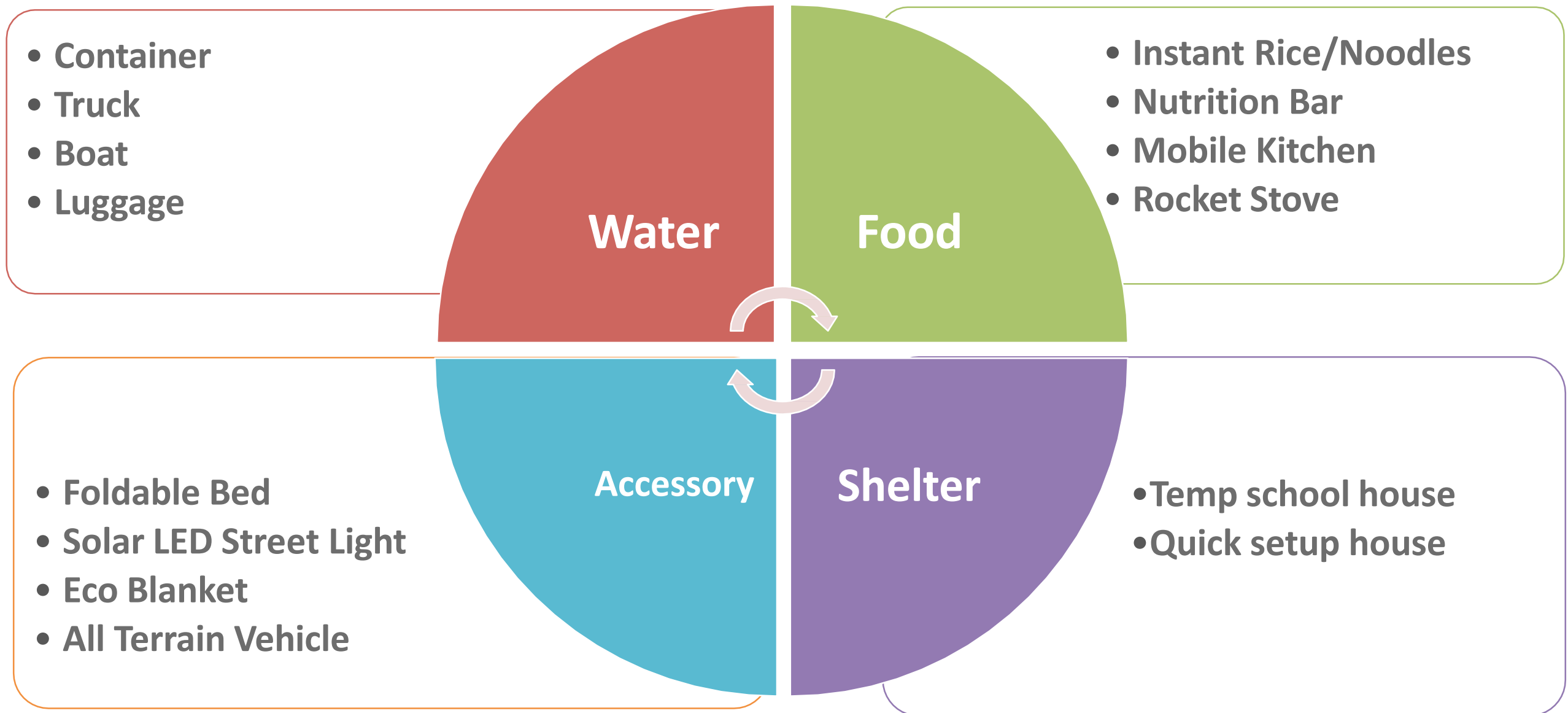
While a lot of equipment for conducting relief missions can be purchased on the open market, some special-purpose items are not commercially available. The product specifications for these items are often very exact and different from what most consumers desire. As far as manufacturers are concerned, the demand for these goods is too small. They do not mass-produce such equipment because there is no money to be made. What company would incur the expense of designing or modifying a product, just to get an order for five units once every three years?

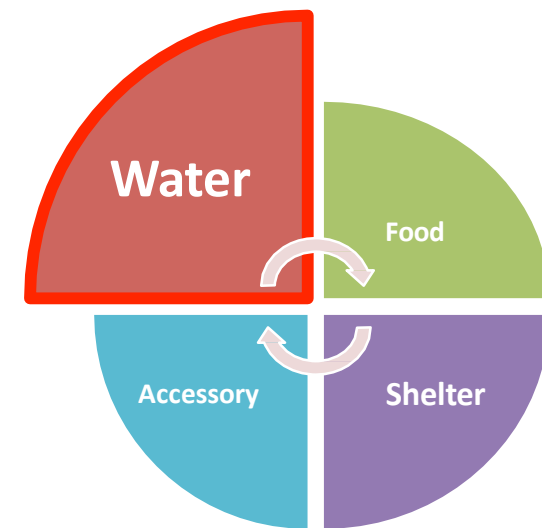
Tzu Chi has been involved with disaster relief for decades. The foundation's aim is to ease the suffering of disaster victims as quickly as possible. To enhance aid delivery capability, volunteers have created tools that are not commercially available. Because disaster areas typically lack resources, these customized items usually meet the following criteria: easy to use, practical, low maintenance, mobile, and stand-alone.

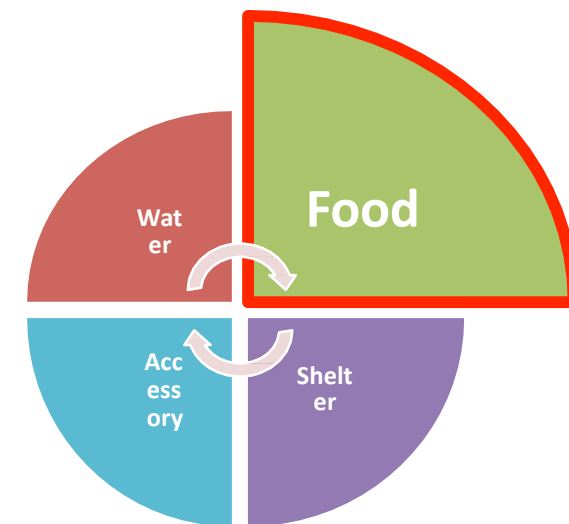
Here we showcase three items from the Tzu Chi aid toolkit.



The innovation of disaster response and relief system







The six spaces in a version 2 mobile kitchen are configured differently depending upon local needs.



Taiwan One space for two rice cookers, two for woks, one for a soup pot, one for a food steamer, and one for a sink.



Zimbabwe Three spaces for six rice cookers, one for a sink, and one for storage.



Thailand Two spaces for four rice cookers, two for woks, one for a sink, and one for storage.



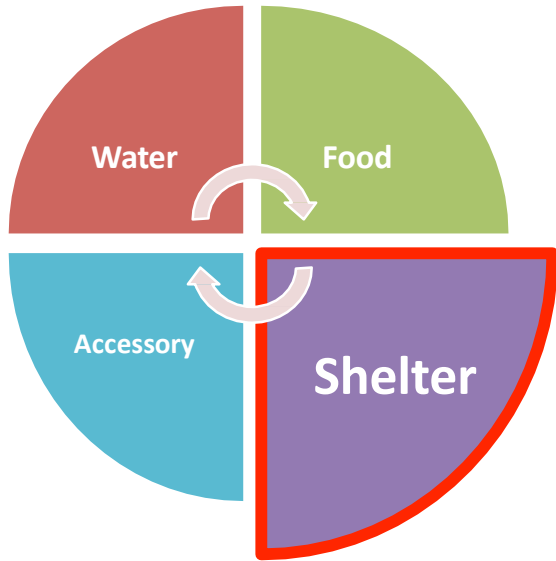
A Modular Mobile Kitchen

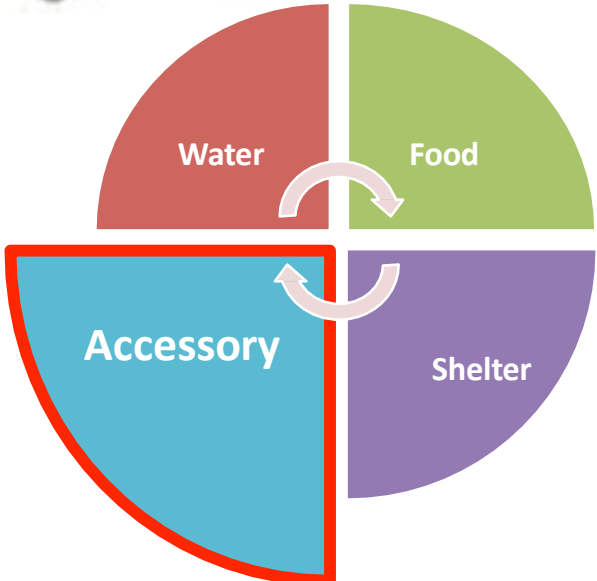
Unique features

Able to cook enough to feed 900 people in three hours and can be transported on a small truck

Occasions where it has been used

TransAsia plane crash in Taipei (2015) and the search and rescue mission after an earthquake in Tainan (2016), both in Taiwan





2013 Typhoon In Philippines



The water heater provides boiling water to be added to dehydrated rice in food containers, like this one, to make cooked rice.



Education Support In Zimbabwe





2018 Floods in Laos

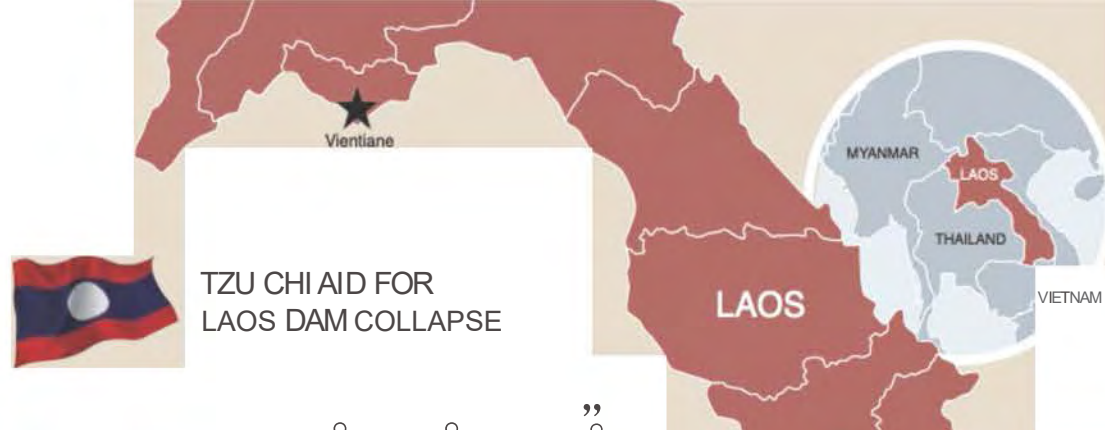
After the Floods

Aid After a Dam Collapse in Laos

By Zhu Ying-yan
Translated by Wu Hsiao-ting
Photos by Hsiao Yiu-hwa







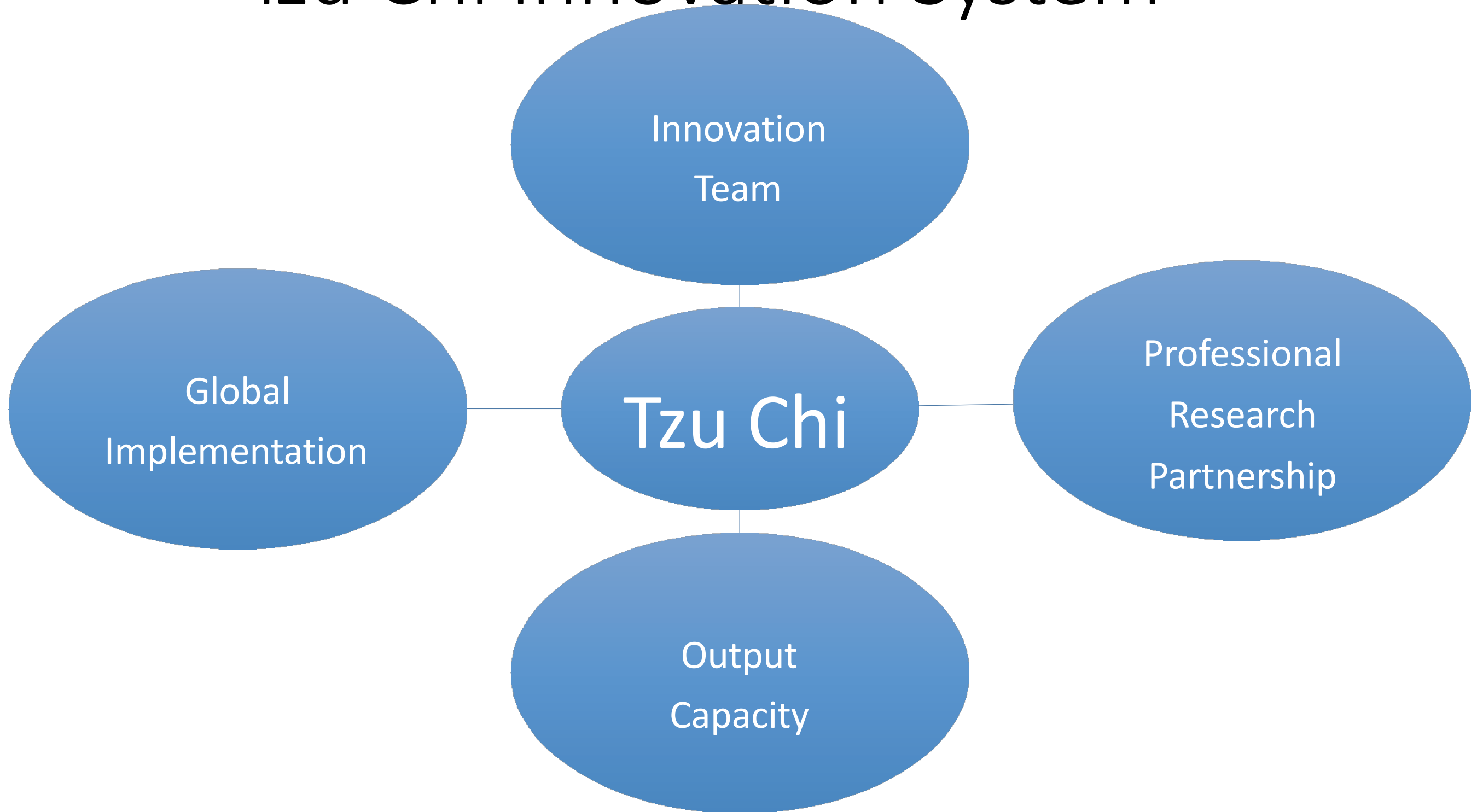
TZU CHI AID FOR LAOS DAM COLLAPSE

Laos is the only landlocked country in Southeast Asia. On July 29, a dam collapse in Attapeu Province triggered a flash flood, through villages downstream, displacing over 6,000 people. Tzu Chi arranged for relief goods to be sent to Laos and held two aid distributions for victims on September 2.

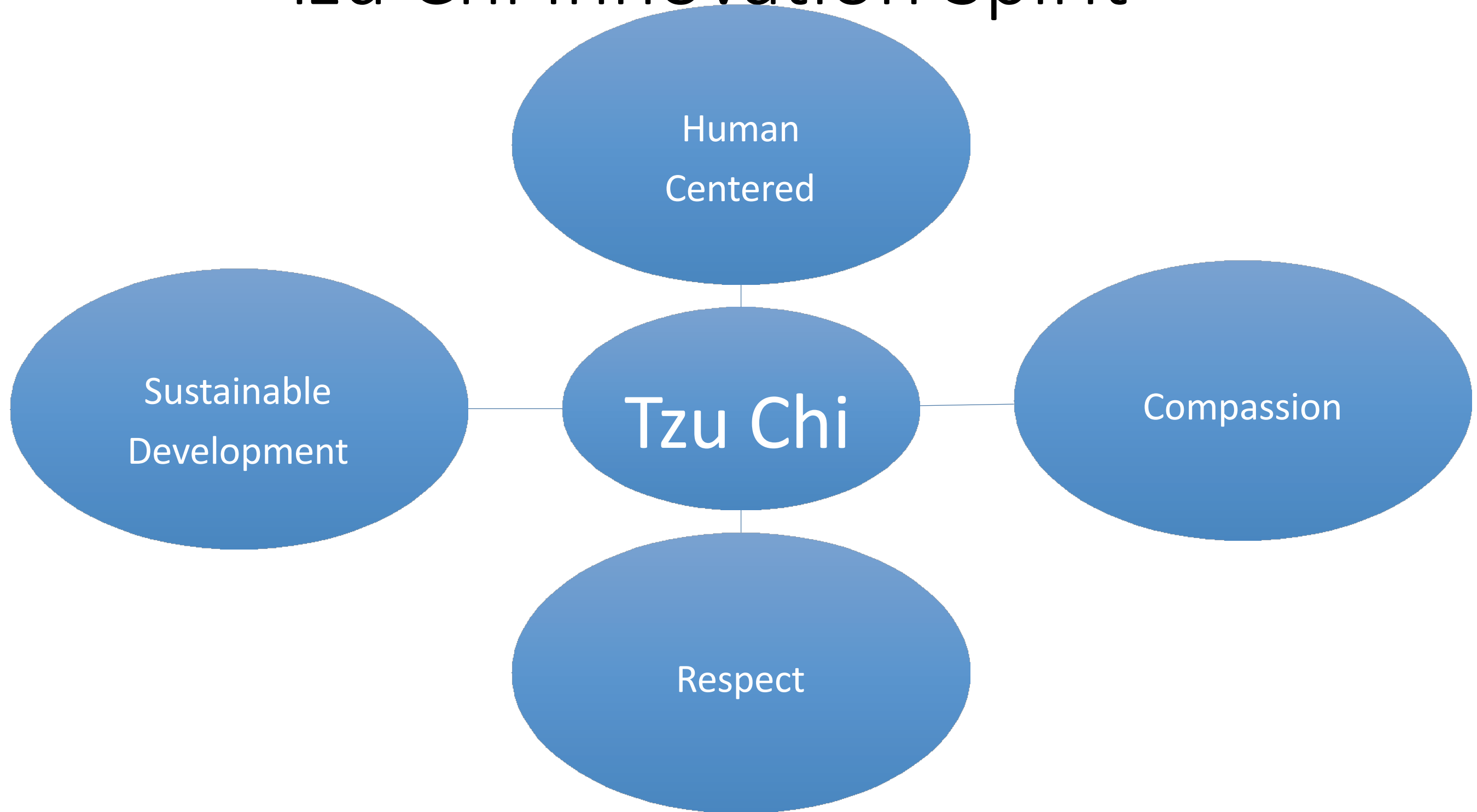
A Tzu Chi volunteer shows villagers how to use the water purification system.



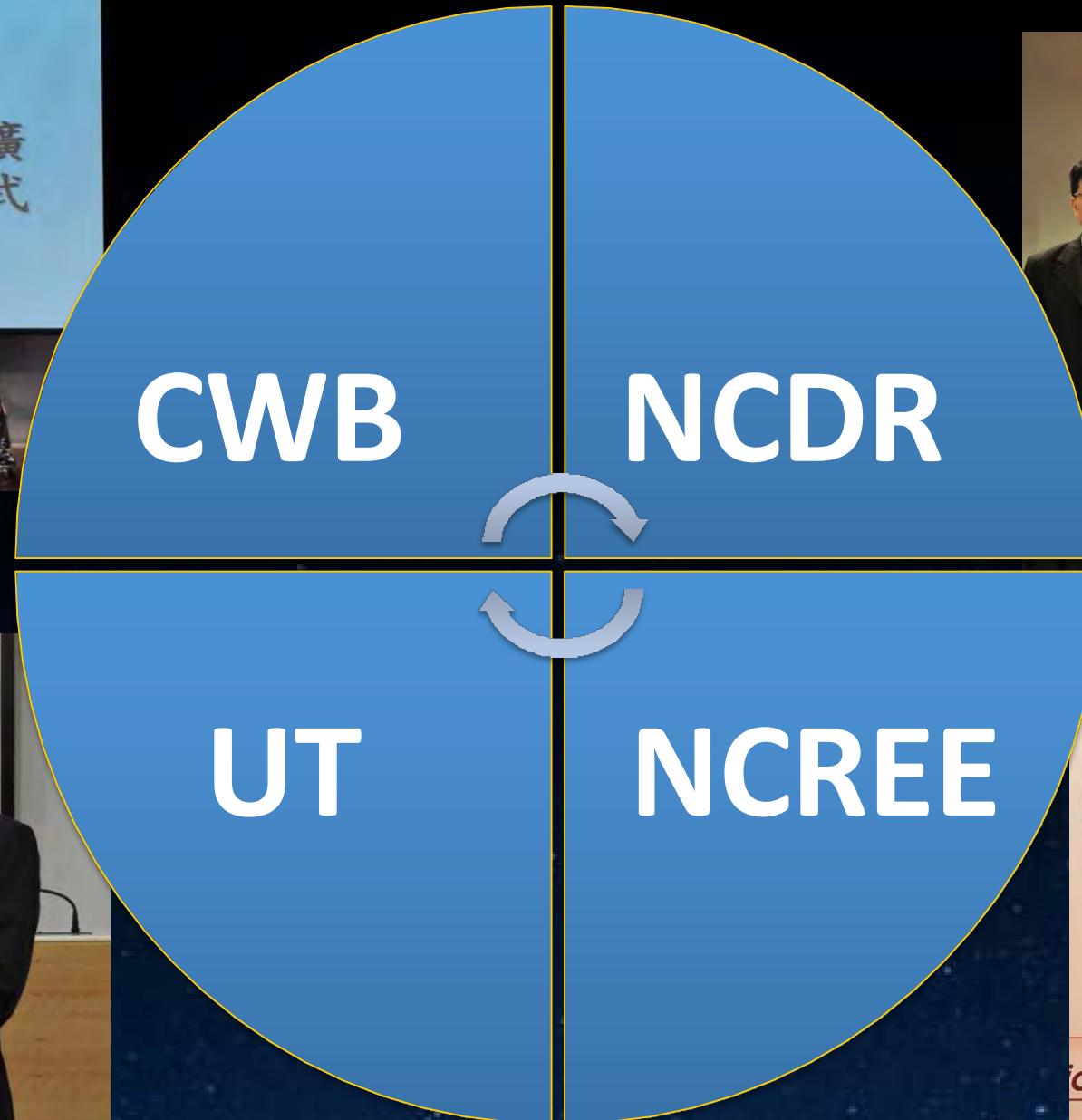
Tzu Chi Innovation System



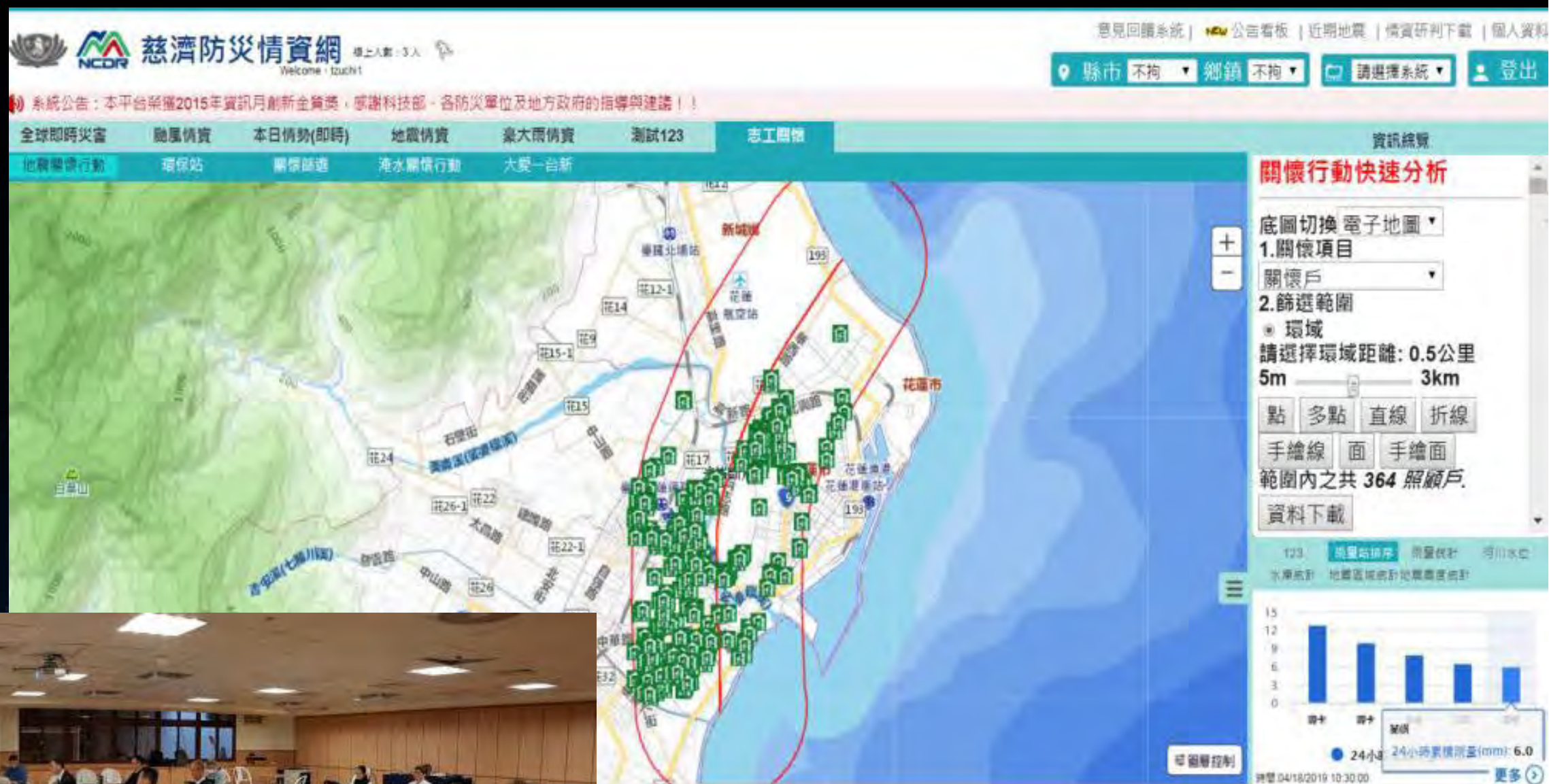
Tzu Chi Innovation Spirit



Partnership with Professional System



Thank For DRM System By NCDR

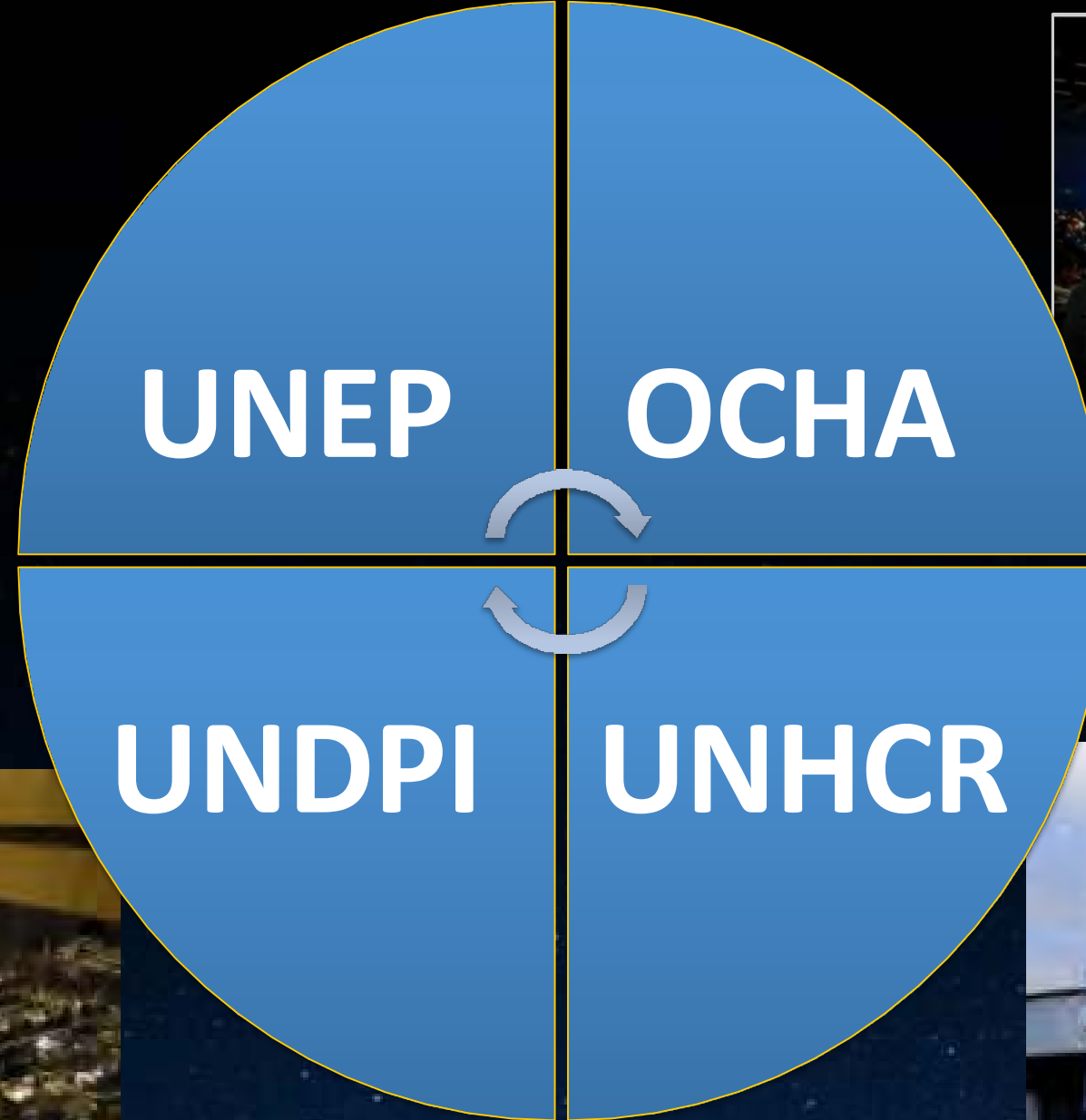


Engineer & Soft Care Technology & Humanity



2019 September

Partnership with UN System



Partnership with Indonesia



654

VVEPIA



Buddhist Tzu Chi Foundation



Founder:
Dharma Master
Cheng Yen

Core Values: Loving-kindness, Compassion, Joy, Equanimity

Spirit: Sincerity, Integrity, Faith, Honesty

Goals: May all hearts be purified May
all societies be in harmony
May the world be free of all disasters

Conclusion 1:
PPP For Resilience and Disaster Prevention
Partnership

Public and Private

Person and Society

Globalization and Localization

Humanity and Technology

Faith and Race Cooperation

Conclusion 2: Change

Relief Action

Disaster Reduction

Charity

Environment

Chinese Taipei

Global

Conclusion 3: Never Change

Humanitarian Commitment

Value and Spirit

Tzu Chi Model

Sustainable Development

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Thank you