



國立成功大學策略發展整合室  
OFFICE OF STRATEGIC PLANNING



**WUN**  
WORLDWIDE  
UNIVERSITIES  
NETWORK

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**Research Assoc. Prof. Joy Chia-Yi Lin**  
Office of Strategic Planning

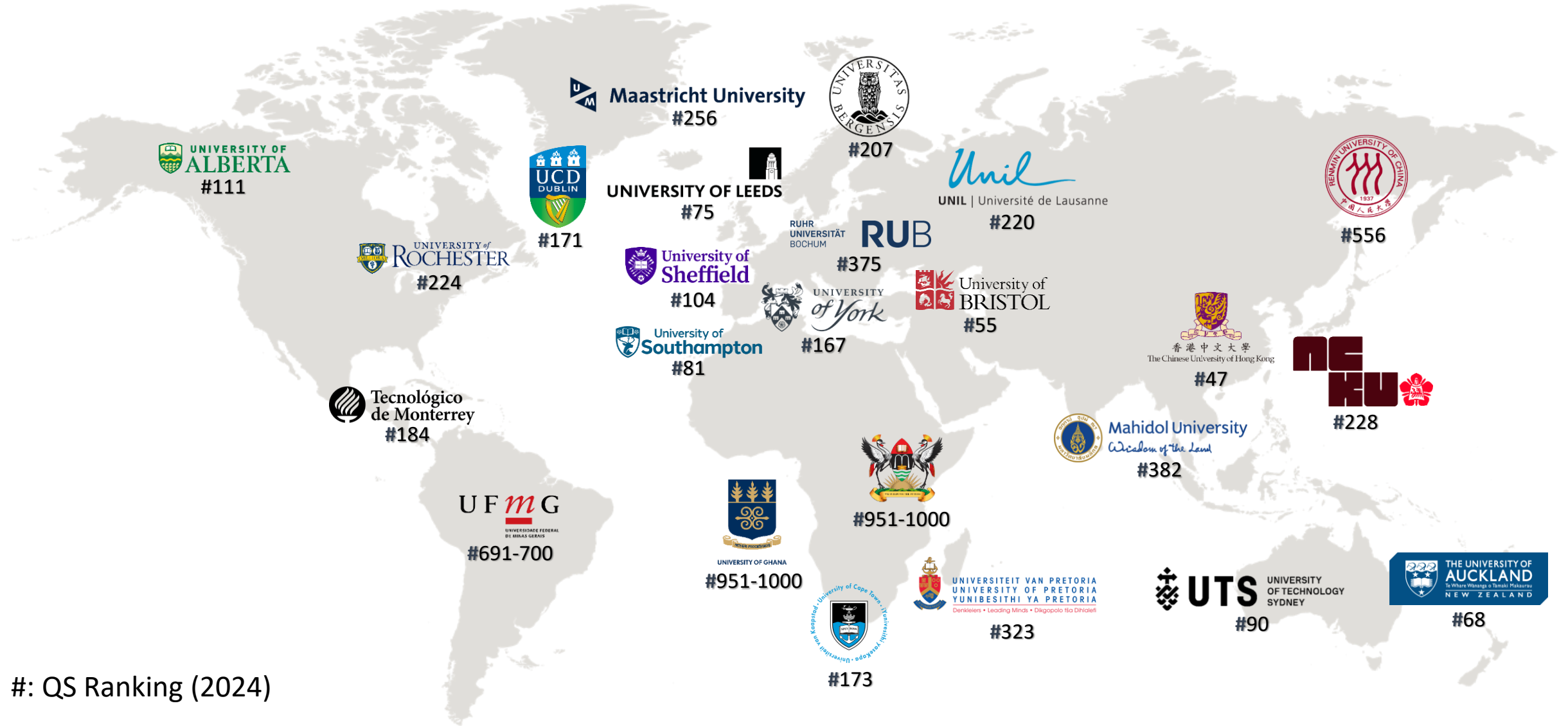
# About WUN

WUN brings together major universities that sit in widely diverse geographical and cultural contexts, forming a partnership that brings an unparalleled richness of talent and resources to bear on major research problems.

- **6大洲19個國家**，**24所大學**組成的全球性教學科研組織，致力於**應對世界緊迫的挑戰**。
- 整合各會員學校的**資源**和**學術優勢**，通過創造合作機會，**幫助成員拓展其研究範圍**，建立有益的**長期合作夥伴關係**。
- **遠景**：成為領先的國際高等教育聯盟，通過合作**促進知識創造**，培養人才，應對由世界不斷發展變化而帶來的機遇與挑戰。
- **整合會員學校的資源和學術優勢**，達到**協同合作**的目的，提升國際化水平。



# NCKU joined WUN in 2016



#: QS Ranking (2024)

# WUN external partnerships

WUN 與國際組織已建立完善合作關係，並希望增加會員學校獲得資源的機會。



**World Health Organization**



**United Nations**  
Framework Convention on  
Climate Change



United Nations  
Educational, Scientific and  
Cultural Organization



UN-HABITAT



**SUSTAINABLE DEVELOPMENT  
SOLUTIONS NETWORK**  
A GLOBAL INITIATIVE FOR THE UNITED NATIONS



OECD

**The Association  
of Commonwealth  
Universities**



*Opening Minds to the World®*

# Organization

## WUN Governance

- Consists of the Executive Director and a consultant team
- Operations, communications and strategy implementation of the network and reports to the Partnership Board



### Chair

Sandra Almeida  
Universidade Federal de Minas Gerais  
(UFMG)



### Executive Director

Peter Lennie  
University of Rochester



### Head of Secretariat

Mike Hasenmueller

# NCKU WUN 執行組織架構

## Governance Group

Partnership Board

沈孟儒校長

- ✓ 決策WUN整體發展及方向
- ✓ 決策新成員的加入

Academic Advisory Group

莊偉哲副校長

- ✓ 執行PB之政策
- ✓ 監督學術研究，確保品質
- ✓ 評估校內RDF申請

Coordinator

林佳怡副研究教授

- ✓ 作為會員學校的窗口，促進會員間合作
- ✓ 接收/提供WUN及跨領域研究訊息
- ✓ 協助RDF申請事項

## 全球重大議題團體代表

郭浩然教授 — 公共衛生（非傳染病領域）

吳秉聲教授 — 文化認知

林建宏教授 — 應對氣候變遷

羅偉誠教授 — 全球高等教育與研究

## 特殊議題團體代表

— Global Africa Group

王涵青教授



# WUN Major Programs

## 研究合作

### Research Development Fund

- WUN跨校研究計畫
- 每年每校可提名2件

## 主題工作小組

### Africa and the Sustainable Development Goals Group

- 針對非洲可持續發展的研究為主題

## 學者/學生交流

### Research Mobility Program

- 鼓勵學者互訪
- 各校自行建立獎勵制度
- 實體/線上

## Summer School

- 每年會員校爭取輪流舉辦
- 提供國際線上/實體課程
- 2022年由NCKU舉辦
- 2023年由U of Ghana舉辦

## 特殊計畫

### Student Mental Health Working Group

- 已進行至第二階段，擴大至各會員校發放問卷



# Benefits to Join RDF Program

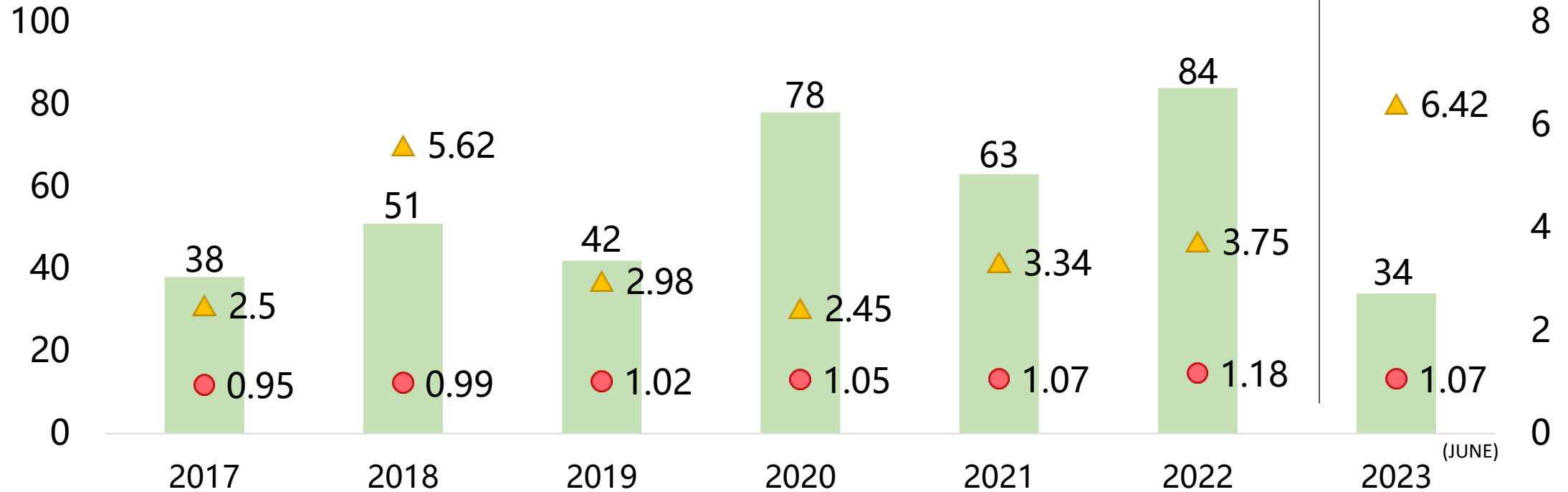
1. 年輕學者建立全球學術網絡之重要平台，會員校遍布六大洲
2. 增加與排名百大以內學校國際合著論文，論文曝光度與影響力指數也能隨之增加
3. 因RDF要求跨洲別組成研究團隊，且亞洲僅有四所學校，在RDF徵案中是一大優勢
4. 有機會參與國際組織與決策(e.g. 游素玲老師獲選之RDF「Marriage Migrants in Asia」被WUN評為該年度最有影響力的14個研究計畫之一；後續與UN Women合作編寫政策《From evidence to action: tackling gender-based violence against migrant women and girls》，為政府與利益關係人提出相關見解)



# Research Performance

Tripling the impact of co-authored papers

## NCKU's Collaboration with WUN



■ Number of co-authored publication with WUN member universities

▲ Co-authored publication FWCI

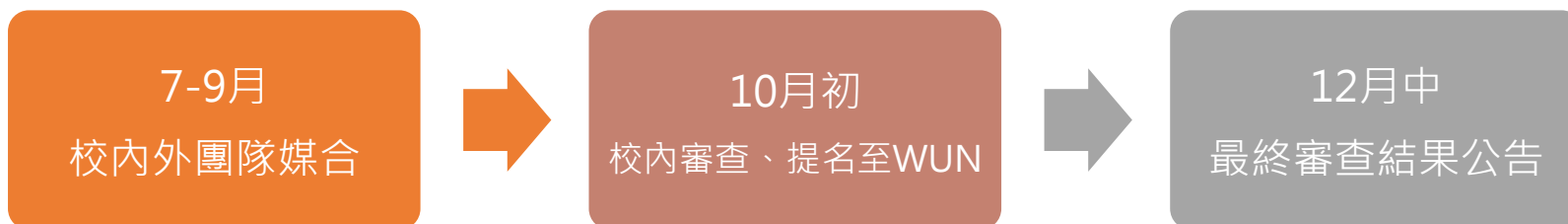
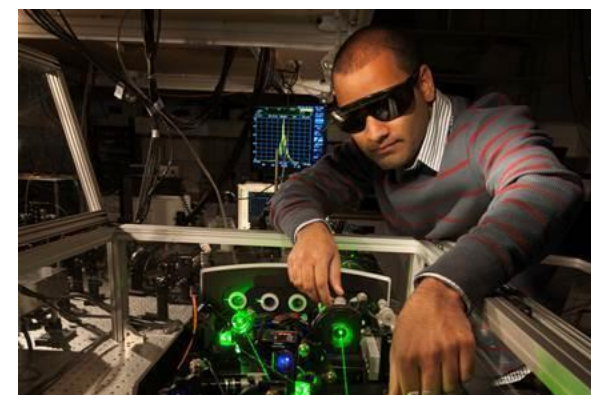
● NCKU FWCI

# Research Development Fund (RDF)

- 旨在匯集研究人員進行創新、高質量、可持續的研究，以解決全球挑戰
- 鼓勵WUN會員彼此合作發表，經跨校跨國合作的研究計畫如獲選，將獲得**1萬英鎊**

## ➤ 申請條件

- 計畫主持人必須為WUN會員
- 計畫需包含**至少3個WUN會員**，且至少跨2個洲別，可以另尋找非WUN會員及外部機構合作
- 每間會員學校至多可申請**2個計畫**(計畫主持人)，需經過校內審查，但不限制以Co-I身分參與計畫數量



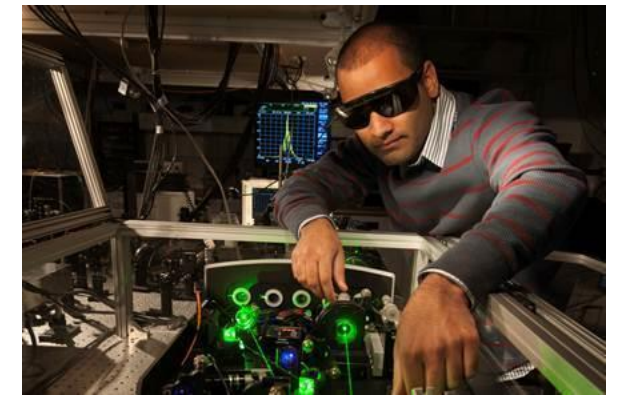
# Research Development Fund (RDF)

## ➤ 計畫期程

- 計畫申請期程為1年，並於期程結束後提交研究成果之書面報告

## ➤ 本期徵案主題

1. Social justice and human rights; addressing issues of inequality
2. Creating a sustainable world: urbanization, energy transitions, water and food security
3. Promoting mental health and well-being; improving child and maternal health; addressing the challenges of ageing
4. Responsible and ethical applications of Artificial Intelligence



## Social justice and human rights; inequality

- 追求**公平與平等**，確保每個人都能獲得平等機會。此議題涉及**解決各種形式的平等**。例如：
- 倡導弱勢群體平等獲得教育、醫療和就業機會。
- 促進性別平等，消除基於性別的歧視和暴力。
- 反對種族歧視，建立包容社區。
- 支持減少收入不平等、確保財富公平分配。

## Sustainable world: cities and urbanization; energy transitions; water, and food security

- 確保**地球與其資源的長期福祉**，包括支持可持續發展並**減少環境影響**的做法。例如：
- 鼓勵城市規劃，促進有效利用土地、減少污染並提升城市生活質量。
- 轉向可再生和綠色能源，如太陽能 and 風能，減少對化石燃料的依賴並減緩氣候變遷。
- 確保所有人能夠獲得乾淨的飲用水。
- 推廣可持續的農業實踐，優先考慮食品安全，減少浪費並保護生物多樣性。

## Mental health; child and maternal health; ageing

- 將**各個生命階段的個體福祉**視為發展重點。例如：
- 提高對心理健康問題的認識，減少社會污名化，改善心理健康服務和支持體系的普遍性。
- 投資促進兒童和母親健康發展之服務，包括產前保健、早期兒童教育與母親心理健康支援。
- 應對人口老齡化相關的挑戰，例如醫療需求、社會融合，並支持老年人與其照顧者。

## Responsible and ethical applications of Artificial Intelligence

- 以符合**道德原則和社會責任**的方式開發和應用**人工智能 (AI)**。例如：
- 確保AI系統在設計時公平透明，避免偏見和歧視性結果。
- 保護用戶隱私和數據安全，提倡用戶對個人信息的控制。
- 處理AI在自動駕駛車輛、醫療決策與自主武器等領域的道德問題。
- 鼓勵跨學科研究和合作，探索AI的社會影響。

# NCKU's participation in previous years

NCKU	2017	2018	2019	2020 COVID-19	2020	2021	2022
PI	1	-	1	-	1	1	1
Co-I	-	-	2	1	3	3	1
	<b>1</b>	<b>-</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>2</b>
No. of projects funded by WUN	<b>14</b>	<b>16</b>	<b>16</b>	<b>8</b>	<b>17</b>	<b>16</b>	<b>22</b>



2022 RDF	PI	Co-I
U of Alberta	2	6
U of Sheffield	2	3
U of Southampton	2	3
Maastricht U	2	2
U of Rochester	2	0
U of Technology Sydney	1	8
Mahidol U	1	6
U of Cape Town	1	6
Universidade Federal de Minas Gerais	1	4
U of Pretoria	1	4
Tecnológico de Monterrey	1	4
U of Leeds	1	3
CUHK	1	3
U of York	1	3
<b>NCKU</b>	<b>1</b>	<b>1</b>
Ruhr U Bochum	1	1
U of Bergen	1	0
Makerere U	0	7
U of Ghana	0	7
U of Auckland	0	3
U College Dublin	0	1
U of Lausanne	0	1
U of Bristol	0	1



Collaborating University		
U. Sheffield	7	Food Security, Pandemic on Adolescent, Pandemic on Doctoral Researchers, Post-pandemic Emotional Pathways, Sustainable Future, COVID Research Resilience, Health System Resilience
U. Alberta	5	Food Security, Post-Pandemic Migrants, Indicators of Microplastics, Sustainable Future, Health System Resilience
U. Auckland	4	Migration and Aging, Food Security, COVID Resilience, Pandemic on Adolescent, COVID Research Resilience
U. Bristol	6	Food Security, Women Wellbeing, Post-Pandemic Migrants, Pandemic on Adolescent, Sustainable Future, COVID Research Resilience
CUHK	4	Food Security, Post-Pandemic Migrants, Pandemic on Adolescent, Pandemic on Doctoral Researchers
U. Massachusetts Amherst	5	Food Security, Women Wellbeing, Pandemic on Adolescent, Indicators of Microplastics, Sustainable Future
U. Southampton	4	Food Security, Indicators of Microplastics, Pandemic on Doctoral Researchers, Sustainable Future
U. Leeds	4	Migration and Aging, Food Security, Pandemic on Doctoral Researchers, COVID Research Resilience, Health System Resilience
U. York	4	Food Security, Post-Pandemic Migrants, Sustainable Future, COVID Research Resilience
U. Western Australia	3	Marriage Migrants, Women Wellbeing, Pandemic on Doctoral Researchers
U. Lausanne	2	Sexuality across Cultures, Sustainable Future
Maastricht U.	3	Women Wellbeing, Sustainable Future
U. Technology Sydney	2	Post-Pandemic Migrants, Health System Resilience
Mahidol U.	2	Autism Spectrum Disorder, Health System Resilience
Universidade Federal de Minas Gerais	3	Food Security, Food Security, Post-pandemic Emotional Pathways
U. Bergen	1	Indicators of Microplastics
Makerere U.	1	COVID Research Resilience
U. Ghana	6	COVID Resilience, Indicators of Microplastics, Pandemic on Doctoral Researchers, Post-pandemic Emotional Pathways, COVID Research Resilience
U. Cape Town	3	Women Wellbeing, Sexuality across Cultures, Autism Spectrum Disorder
U. Pretoria	1	Autism Spectrum Disorder



# WUN Global Research Group – SDGs in Asia

Focusing the sustainable development of Asia to strengthen the link between NCKU and international institutions



## Phase 1

11 countries  
58 researchers  
23 institutions

- 59 publications
- 25 conferences

## Phase 2

17 countries  
71 researchers  
31 institutions

## Journal Special Issue: Asia SDGs: Focuses on Science, Technology, and Management of Energy and Environmental Issues

- 2022 Journal Impact Factor: 4.9
- Published in May 2023



### Asia SDGs: Focuses on Science, Technology, and Management of Energy and Environmental Issues

The Global Research Group – Asia SDGs is initiated by National Cheng Kung University (NCKU) with the support of WUN. The purpose of the Group is to promote, implement, study, and compile the best practices related to SDGs (Sustainable Development Goals). The Group commits to facilitating and inspiring more in-depth and thought-provoking case studies of SDG practices in Asia. We expect to promote more innovative and collaborative SDG practices in Asia and analyze SDG-related academic research applications and innovative praxis involving industry, government, and society. In addition, the Group works to nurture international SDG collaboration teams to cooperate with different stakeholders which in terms to realize the essence of SDG in our research and daily practices.

By providing a supportive network of scholars and researchers, we aim to build a platform for researchers from different regions to share views and exchange perspectives and eventually produce thorough and comprehensive solutions to the SDG-related problems facing Asia.

#### Carbon reduction of plastic's circular strategies: tracking the effects along supply chains with waste input-output modeling

Plastic is a material associated with various Greenhouse Gas (GHG) emissions along the life cycles of different products. Many economies have adopted or planned for strategies to reduce, reuse, and recycle pla...

Jui-Hao Chang Chien and Pi-Cheng Chen

*Sustainable Environment Research* 2023 33:18

Research | Published on: 17 May 2023

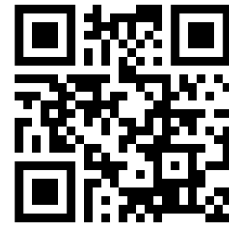
[Full Text](#) > [PDE](#)

# For more information

➤ NCKU - WUN



➤ WUN Homepage



➤ Contact NCKU Coordinators

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