MESSAGE FROM THE RIGHT HONOURABLE CHIEF MINISTER OF SARAWAK

First of all, we would like to welcome all delegates of the 8th Alliance for Healthy Cities Global Conference and General Assembly 2018 (AFHC 2018) to Kuching, Sarawak.

Indeed, we are deeply honoured and privileged that this year, Kuching City is the venue for this prestigious conference involving representatives from many cities around the globe, particularly those from the Western Pacific Region. This is the eighth edition of the AFHC Global Conference and General Assembly. We trust that this event will continue to act as an important platform for prominent local and international experts including city mayors, councillors, health experts, urban planners and managers to deliberate on the way forward in managing the challenges resulting from rapid urban development.

Cities development and competitiveness play a pivotal role as the main economic driver of a country through the creation of huge economic and employment opportunities. Nonetheless, urbanisation also brings about various complicated issues and challenges that need to be addressed in creating a vibrant and safe city. There is no straight forward approach in managing the cities properly and effectively due to the diverse and dynamic issues associated with the economics, physical, social and environmental development of the cities.

In this respect, it is important for us to develop and manage our cities strategically and sustainably. Cities need to learn from each other by emulating good practices and to avoid repeating the failures of other cities. Collaboration between cities under the Alliance for Healthy Cities is one of the strategic approaches to create opportunities for member cities to work closely in seeking solution to various issues and challenges. Undoubtedly, the AFHC 2018 will bring together member cities of the AFHC to share their ideas and experiences on various programmes, projects and initiatives in tandem with the Sustainable Development Goals (SDGs) aspirations, goals and objectives.

Rapid urbanisation and technological changes are affecting the way we manage our cities. Digital technologies are ubiquitous and influencing the structure, norms and dynamics of modern social life of urban dwellers. It helps to shape and reshape social relationships, organisations, societies and even individual in the cities. In this regard, we must leverage on the power of digital technology in managing the cities. Digital technology is crucial to connect the different components of the urban systems. However, the digital technology alone cannot resolve the social, environmental and logistical issues that the growing cities are facing. Hence, the symbiotic relationship between governments, business and entrepreneurs utilising digital technologies are pertinent in creating citizen-centric development and resilient cities.

In conclusion, I wish all the delegates of the AFHC 2018 to have a successful conference and enjoy their stay in Kuching City.

Thank you.

THE RIGHT HONOURABLE DATUK PATINGGI (DR) ABANG HAJI ABDUL RAHMAN ZOHARI BIN TUN DATUK ABANG HAJI OPENG
MESSAGE FROM THE HONOURABLE STATE SECRETARY OF SARAWAK

I would like to take this opportunity to welcome all delegates to Kuching City, Sarawak, Malaysia for the 8th Alliance for Healthy Cities (AFHC) Global Conference and General Assembly 2018

On behalf of the Sarawak Government, I would like to convey my sincere and greatest appreciation to the AFHC Steering Committee for selecting Kuching City as the convenor city for the 8th edition of the AFHC Conference and General Assembly. I believe this is a reflection of the recognition accorded by the international community on the Healthy Cities Programme of Kuching City. Indeed, we are greatly honoured to host this prestigious event again after we had hosted the inaugural AFHC Conference and General Assembly in 2004.

Being one of the founding members of the AFHC, I am proud to see that the AFHC membership has currently grown to more than 200 cities and organization. The AFHC is an important platform for networking among cities, to enable them to share experiences and exchange of ideas toward betterment of urban living environment. I understand that the formation of the AFHC has strengthened the collaboration among cities in the Western Pacific Region to achieve better quality of life, provide liveable urban environment and protect health of the citizen.

The government of Sarawak has always been committed to the Healthy Cities programme ever since Kuching City was selected by the World Health Organization (WHO) to participate in the Healthy Cities movement in 1994. In this regard, we will ensure that Kuching City will continue to play significant role in the healthy cities programme at the international level, especially through the AFHC.

In response to the rapid urbanisation, cities must have their own clear development agenda and way forward to balance the physical, economic and social development aspects of the city. Therefore, the theme “Our Cities, Our SDGs, Our Journey” is timely as cities play critical role to achieve the Sustainable Development Goals (SDGs) agendas.

Let us work together in our journey to make our cities a better place to work, play and live. We encourage you to share your ideas and experiences during the 8th Alliance for Healthy Cities (AFHC) Global Conference and General Assembly 2018. Please send your city biggest delegation to Kuching City. We welcome you to experience and enjoy the beauty of our city, the warmth of our people and the richness of our culture.

Thank you.

THE HONOURABLE TAN SRI DATUK AMAR HAJI MOHAMAD MORSHIDI BIN ABDUL GHANI

SARAWAK STATE SECRETARY
CHAIRMAN OF THE MAIN ORGANISING COMMITTEE
MESSAGE FROM HEAD OF THE SECRETARIAT OF THE ALLIANCE FOR HEALTHY CITIES

I am grateful that we are able to organise the 8th Global Conference of the Alliance for Healthy Cities and General Assembly this year. In this regard, I would like to express my gratitude and sincere appreciation to the Sarawak Government and Kuching Healthy City Secretariat for taking up the challenge to organise this event.

The Alliance for Healthy Cities (AFHC) is growing and will continue to grow in terms of membership and contribution since its formation in 2004. Kuching City is where we started the formation of AFHC and organised the inaugural conference and general assembly. After fourteen years, we are glad to be back here in Kuching City for the AFHC 2018.

Fourteen years of AFHC since Kuching 2004 were warmly supported and guided by the World Health Organization (WHO). Their continuous leadership to form global consensus on “Healthy Cities” while respecting diversities in cities, and their practical guidance to AFHC have made us to be sustainable. I would like to express my sincere appreciation to WHO Western Pacific Regional Office, for their continuous support and encouragement.

Since its formation, the AFHC has managed to attract interest from many cities and relevant organisations around the Western Pacific Region and beyond. Currently, it has more than 200 member cities and organisations. I am sure, the AFHC would provide a greater platform for cities and organisations to collaborate and work together towards achieving better quality of life of the citizens.

Cities in Asia and the Pacific are experiencing rapid urbanisation and development. Sustainable development has now become a key consideration. In cities, these are challenges and opportunities. While experiencing changes in environmental and resource management, socio-economic disparities, cities have contributed in developing city planning conducive to health supportive physical and social environment, in producing innovative technologies to support health promotion, environmental management, and climate actions.

The AFHC 2018 theme of “Our Cities, Our SDGs, Our Journey” reflected the way forward for AFHC member cities, in line with the 2030 Agenda for Sustainable Development that includes 17 Sustainable Development Goals (SDGs). Healthy Cities have worked to address physical and social determinants of health. We have advantage to work towards 17 SDGs. We see cities as ecosystems wherein a balance is sought among social, economic and environmental concerns. Through AFHC 2018, the city leaders and stakeholders will have opportunities to strengthen their networks, learn from the experts and share experience with other cities.

I hope, the AFHC 2018 will provide the delegates new insights on the way we should manage our cities. Working together will make our cities better place to live, work and play.

Thank you. 

Prof Keiko NAKAMURA
HEAD OF THE SECRETARIAT OF THE ALLIANCE FOR HEALTHY CITIES
MESSAGE FROM MAYOR OF KUCHING CITY SOUTH

A warm welcome to all distinguished Mayors, speakers, participants and exhibitors to the 8th Alliance for Healthy Cities – Global Conference and General Assembly 2018, hosted for the second time in the beautiful City of Kuching, Sarawak. It has been 14 years since the first Conference was held in October 2004.

On behalf of Kuching City South Council, I am honored to be one of the many Organizers for this important event that advocates for Good Health and Well-Being, Sustainability of Cities and Communities and Partnerships for Goals as an integral part of healthy city and community at large.

This year’s Alliance for Health`y Cities - Global Conference and General Assembly will be held from 17th to 19th October 2018 at Borneo Convention Centre Kuching. We are indeed looking forward to having a momentous platform to share, hear, and learn experiences – both positive and negative, from the international and well-known speakers and experts on the topics based on the Kuching City theme of “Our Cities, Our SDGs, Our Journey.

I strongly believe that the development and sustainability of a healthy and progressive city is impacted by achieving a high level of health of its people, both physically and mentally besides creating an affordable, inclusive, safe and sustainable space for its people's movement and healthy environment.

Towards this end, the efforts to establish these beneficial goals need to be intensified and on-going by the Cities administration through close partnerships and rapport especially with people.

I want to take this opportunity to extend my appreciation to WHO for their commitment and focus of Healthy Cities, the AFHC Secretariat, the Organising Committee members for their dedication and efforts, the knowledgeable Speakers for their valuable contributions and inputs, the participants and exhibitors for their interests and presence, and last but not least, Sarawak State Government, host for this 2018 international Healthy Cities event for their resolute involvement and fullest support of Healthy Principles to benefit people.

It is with these combinations of factors, the passion and unity of minds and knowledge to establish a healthier, liveable, accessible and sustainable urban environment for the people is within a reach of hand.

I hope all participants will have a successful conference and an enjoyable stay to discover the secrets of the beautiful City of Kuching.

Kuching City
My City, My Future

DATO JAMES CHAN KHAY SYN
Mayor of Kuching City South
MESSAGE FROM MAYOR OF KUCHING CITY NORTH

Welcome to Kuching, City of Unity and Sarawak the Mystical Land of the Hornbills to all the delegates of the 8th Alliance For Healthy Cities (AFHC) Global Conference and General Assembly 2018.

Kuching is the biggest city in terms of population and capital of Sarawak and also the largest city in Borneo. Interestingly Kuching City comprised of a diverse, well mixed population of Dayak, Malay, Melanau and Chinese with a small number of Indians and others.

Apart from that, Kuching City is also one of the cleanest city in Malaysia and well known for its natural flora and fauna, indeed Kuching City is the right choice for hosting the 8th Alliance For Healthy Cities (AFHC) Global Conference and General Assembly 2018.

As this is the first time an international conference of this nature is held in Kuching City, it is a great honour for us to provide a stimulating and pleasant atmosphere for everyone. We sincerely hope that all will benefit from this conference and enjoy all the various programs drawn up.

While you are in Kuching, do take some time off from your busy schedule to enjoy many of our fine restaurants, recreational facilities, shopping malls, museums, and the natural landscape in our beautiful city.

We appreciate your presence, and while you are with us, please make yourself at home.

Best wishes for the conference!

(DATUK HAJI ABANG ABDUL WAHAP BIN HAJI ABANG JULAI)  
Mayor of Kuching City North
1.0 INTRODUCTION

The Alliance for Healthy Cities Conference is a biennial event that is much anticipated by various actors and stakeholders of cities in the region and globality. It is an occasion where policy makers, planners, academics, NGOs and individuals get together to exchange ideas on how to better manage and run cities to ensure that all three dimensions of sustainability – social, economic, and physical environment - are properly managed in order to promote the healthy and wellbeing of the citizens.

The Alliance for Healthy Cities (AFHC) Conference has been hosted by different member cities ever since the inaugural Conference and General Assembly was held in Kuching, Sarawak in 2004. After 14 years, the AFHC Conference will be coming back to Kuching City.

The theme of each Conference reflected the important local and global ideas and events affecting healthy cities as well as urban health topics at the time. In recognisance of the important of the Sustainable Development Goals (SDGs) and the important roles that cities play in their realisation, the theme for AFHC Conference 2018 is “Our Cities, Our SDGs, Our Journey”.

This year conference will be hosted by Sarawak State Government, Alliance for Healthy Cities Secretariat, Ministry of Healthy Malaysia, Sarawak Convention Bureau and UNIMAS. It will be led by State Planning Unit and assisted by Sarawak Centre of Performance Excellence (SCOPE) Sdn Bhd, Kuching North City Council (DBKU), Kuching South City Council (MBKS), Padawan Municipal Council (MPP) and Samarahan Municipal Council (MPKS) are given the task to organise the conference and co-sponsored by World Healthy Organization, Sarawak Cultural Village and Sarawak Tourism Board.

2.0 WHAT’S THE ALLIANCE?

The Alliance for Healthy Cities is the network founded on the international efforts on Healthy Cities in the Western-Pacific region. Our members are municipal governments, NGOs, private sectors, academic institutions, and international agencies. We all supported the Healthy Cities approach.

Through the network of the Alliance, it is hoped that its members cooperate and are inspired to make the best use of the Healthy Cities approach. Experiences by one city or one person can be a good guide to others. If the members accumulate such experiences, it would be a great vehicle to improve the health of urban residents in member cities and towns. To that end, the Alliance promotes the interaction of people and information exchange, research development and capacity building programs.
On top of promoting Healthy Cities programs for our members, the Alliance will work to raise public awareness on the Healthy Cities approach beyond the scope of the Alliance members. The ultimate goals of the Healthy Cities program is to create sustainable cities with the focus on health.

And hopefully, we can enjoy the process of creating healthier cities and befriending others through an international network.

3.0 HISTORY

The Alliance was founded October 17, 2003, at an inaugural meeting held at the World Health Organization Regional Office for the Western Pacific in Manila, Philippines. The participants of the inaugural meeting were cities, national coordinators, NGOs, and academic institutions that were engaged in the Healthy Cities program in the Western Pacific Region.

At the inaugural meeting, the participants adopted the charter of the Alliance as the backbone of our organization. At the same time, they designated five cities and two non-city members as the members of the Interim Steering Committee. Tokyo Medical and Dental University, which serves as the WHO Collaborating Centre for Healthy Cities and Urban Policy Research in Tokyo, was designated as the Interim Secretariat.

In contrast to the short history of the Alliance, Healthy Cities activities in the Western Pacific region date back in the 1980s. In cooperation with the WPRO, cities and other groups have launched the Healthy Cities program. In the region, cities and groups adopting the Healthy Cities program is said to number more than 100.

There are 25 founding members as following:

- Phnom Penh, Cambodia
- Kwai Tsing District, Hong Kong SAR, China
- Macao Special Administrative Region, China
- Sai Kung District, Hong Kong SAR, China
- The City of Suzhou, China
- Fukuroi City, Japan
- Hirara City, Japan
- Ichikawa City, Japan
- Owariasashi City, Japan
- Changwon City, Republic of Korea
- Seoul, Republic of Korea
- Wonju City, Republic of Korea
- Kuching City, Malaysia
- Ulaanbaatar City, Mongolia
- Marikina City, Philippines
- Valencia City, Bukidnon, Philippines
- Hue City, Vietnam
- Healthy Cities Illawarra, Australia
- Healthy Cities Noarlunga, Australia
Kuching, officially the City of Kuching, is the capital and the most populous city in the state of Sarawak in Malaysia. It is also the capital of Kuching Division. The city is situated on the Sarawak River at the southwest tip of the Sarawak on the island of Borneo and cover an area of 431 square kilometres (166 sq mi) with a population estimated about 400,000 people. Kuching means cat in the Malay language. Thus, Kuching City is nicknamed as “The Cat City” and cat statues greet visitors around the city. Kuching was proclaimed a City on 1st August 1988, and at the same time it was reconstituted administratively into two city councils, namely the Kuching North City Hall (DBKU) and the Kuching South City Council (MBKS).

Some of cat statues in Kuching

The city is defined within the borders of what is the Kuching District, formerly the Municipality of Kuching with an area of 1,868.83 square kilometres. The area then subdivided into three sub-district, namely Kuching Proper, Padawan and Siburan. Kuching Proper included the city area and Padawan municipality, while Siburan and Padawan is a sub-district. The combined
area of Kuching North City Hall (DBKU), Kuching South City Council (MBKS), Padawan Municipal Council (MPP) and the Samarahan District Council (MDS) is known as Greater Kuching.

4.1 KUCHING NORTH CITY HALL (DBKU)

The Commission of Kuching North City Hall (*Suruhanjaya Dewan Bandaraya Kuching Utara*, abbreviated DBKU) is the commission which administers the northern part of the city of Kuching in the state of Sarawak, Malaysia. This commission was established after the city was officially granted city status on 1 August 1988. Their jurisdiction covers an area of 369.48 square kilometres. Abang Abdul Wahap Abang Julai is the sixth and current Mayor of Kuching North City Hall. The commission consists of the commissioner plus nine commission members appointed to serve a one-year term by the Sarawak State Government. DBKU is responsible for public health and sanitation, waste removal and management, town planning, environmental protection and building control, social and economic development and general maintenance functions of urban infrastructure.
4.2 KUCHING SOUTH CITY COUNCIL (MBKS)

The Council of the City of Kuching South (Majlis Bandaraya Kuching Selatan, abbreviated MBKS) is the city council which administers the southern part of the city of Kuching in the state of Sarawak, Malaysia in which was established also after the city was officially granted city status on 1 August 1988. Their jurisdiction covers an area of 61.53 square kilometres. The council consists of the mayor plus thirty councillors appointed to serve a one-year term by the Sarawak State Government. James Chan Khay Syn is the fourth and current Mayor of Kuching South City Council.

MBKS official logo

MBKS headquarters located at Jalan Padungan, 93765 Kuching, Sarawak
4.3 PADAWAN MUNICIPAL COUNCIL (MPP)

Padawan Municipal Council (Majlis Pembandaran Padawan, MPP) is a local authority which administers Padawan municipality of the Kuching, District, Sarawak, Malaysia. The agency is under purview of Sarawak Ministry of Local Government and Community Development. The council aimed to improved infrastructure development and provide quality services to its residents besides preserving the environment. Padawan Municipal Council administers an area of 1,432 square kilometres. The current chairman of MPP is Lo Khere Chiang.

MPP headquarters located at Kota Padawan, Jalan Penrissen, Pasar Batu 10, 93250 Kuching, Sarawak
4.4 SAMARAHAN MUNICIPAL COUNCIL (MPKS)

Samarahan Municipal Council (Majlis Perbandaran Kota Samarahan, MPKS) is a local authority which administers Kota Samarahan municipality of the Kuching, District, Sarawak, Malaysia. It is located about 30 kilometres from Kuching city. The area that fall under the jurisdiction of Samarahan Municipal Council are Asajaya and Sadong Jaya. Samarahan Municipal Council administers an area of 593.9 square kilometres. Dato Peter Minos is the current chairman of Samarahan Municipal Council.

Official Logo of MPKS

MPKS headquarters located at Jalan Dato Mohd Musa, 94300 Kota Samarahan, Kuching
PLENARY SPEAKER

The Honourable Tan Sri Datuk Amar Haji Mohamad Morshidi bin Abdul Ghani
STATE SECRETARY OF SARAWAK


Professor Dr Trevor Hancock
Professor and Senior Scholar, School of Public Health and Social Policy, University of Victoria Canada

DR. TREVOR HANCOCK TEACHES THAT CITIES WANTING TO IMPROVE THE HEALTH OF THEIR CITIZENS NEED TO PAY ATTENTION TO BOTH THEIR PHYSICAL AND THEIR SOCIAL ENVIRONMENTS. THINK INCREASING THE AMOUNT OF GREEN SPACE DOWNTOWN OR INTRODUCING COMMUNITY PROGRAMS THAT CONNECT CITIZENS WITH THEIR CITIES. OVER THE PAST 30 YEARS AS AN INTERNATIONALLY RECOGNIZED HEALTH PROMOTION LEADER, DR. HANCOCK HAS HELPED TO PUT HEALTH ON THE AGENDA OF THOUSANDS OF CITIES AND TOWNS AROUND THE WORLD. HE HAS HAD A LONG-STANDING INTEREST IN THE RELATIONSHIP BETWEEN HUMAN AND ENVIRONMENTAL HEALTH AND IS ONE OF THE FOUNDERS OF THE GLOBAL HEALTHY CITIES AND COMMUNITIES MOVEMENT. DR. HANCOCK TEACHES IN THE SCHOOL OF PUBLIC HEALTH AND SOCIAL POLICY AT THE UNIVERSITY OF VICTORIA, WHERE HIS GRADUATE COURSES CONNECT STUDENTS TO REAL ON THE GROUND PROBLEMS FACING SOCIETY. THE CHALLENGE NOW IS TO INCREASE AWARENESS AS CO-CHAIR OF A WORKING GROUP STUDYING HUMAN AND ECOSYSTEM HEALTH FOR THE CANADIAN PUBLIC HEALTH ASSOCIATION (CPHA), HE IS SEARCHING FOR NEW, CREATIVE WAYS TO COMMUNICATE HIS MESSAGE.

Professor Dr Keiko Nakamura
Head of the Secretariat of the Alliance for Healthy Cities (AFHC) and Urban Policy Research, Tokyo Medical and Dental University, Tokyo

KEIKO NAKAMURA MD PHD IS PROFESSOR AND HEAD OF THE DEPARTMENT OF GLOBAL HEALTH ENTREPRENEURSHIP, DIVISION OF PUBLIC HEALTH, GRADUATE SCHOOL OF TOKYO MEDICAL AND DENTAL UNIVERSITY (TMDU). PROF NAKAMURA ALSO SERVES AS THE DIRECTOR OF WHO COLLABORATING CENTRE FOR HEALTHY CITIES AND URBAN POLICY RESEARCH. SHE IS A MEMBER OF SCIENCE COUNCIL OF JAPAN AND A BOARD MEMBER OF JAPANESE SOCIETY OF PUBLIC HEALTH. PROF NAKAMURA IS A PUBLIC HEALTH SCHOLAR WITH OVER 25 YEARS OF EXPERIENCES WITH HEALTHY CITIES IN THE ASIA-PACIFIC REGION. SHE HAS RESEARCHED HEALTH AND ENVIRONMENT IN URBAN AREAS, WITH PARTICULAR FOCUS ON: DETERMINANTS OF HEALTH; HEALTHY CITIES AND URBAN POLICY; USE OF INFORMATION TECHNOLOGY FOR HEALTH PROMOTION; TRADES IN HEALTH SERVICES; AND COOPERATION FOR HEALTH DEVELOPMENT. SHE HAS WORKED WITH GLOBAL HEALTHY CITIES MOVEMENT SINCE THE 1990’s AND IS STRONGLY COMMITTED TO THE ALLIANCE FOR HEALTHY CITIES, AN INTERNATIONAL NETWORK, AS THE HEAD OF ITS SECRETARIAT. SHE HAS PUBLISHED EXTENSIVELY IN PEER-REVIEWED JOURNALS AND HAS BEEN CLOSELY WORKING WITH VARIOUS INSTITUTIONS AND LEVELS OF GOVERNMENT THROUGH RESEARCH, HEALTH PLANNING, AND HEALTH PROMOTION ACTIVITIES.
PLENARY SPEAKER

Professor Datu Dr Andrew Kiyu
Professor of Public Health, Faculty of Medicine and Health Sciences, University Malaysia Sarawak

ANDREW KIYU, MBBS, MPH, DRPH, FACE, AM, IS A PROFESSOR OF PUBLIC HEALTH AT THE FACULTY OF MEDICINE AND HEALTH SCIENCES, UNIVERSITI MALAYSIA, SARAWAK. HIS CONTRIBUTIONS TO HEALTH AND WELL-BEING SPANNED OVER 40 YEARS WHILE WORKING AS A PUBLIC HEALTH PHYSICIAN, INCLUDING BEING THE STATE EPIDEMIOLOGIST, DEPUTY DIRECTOR FOR PUBLIC HEALTH, AND AS THE DIRECTOR IN SARAWAK HEALTH DEPARTMENT, FROM 1976 TO 2017, BEFORE MOVING TO UNIMAS. HIS INVOLVEMENT IN HEALTHY CITIES STARTED IN 1994 WHEN KUCHING CITY PARTICIPATED IN THE WHO'S HEALTHY CITIES PROGRAMME. HE HAD HELPED MANY CITIES IN THE WESTERN PACIFIC REGION INITIATE THEIR HEALTHY CITIES PROGRAMME IN HIS CAPACITY AS A WHO SHORT-TERM CONSULTANT.

Alana Officer
Senior Health Adviser, Department of Ageing and Life Course, World Health Organization’s


Ms Uta Dietrich
Senior Manager, Think City, Kuala Lumpur, Malaysia

UTA DIETRICH IS RECOGNISED FOR HER EXPERTISE IN URBAN HEALTH AND HEALTH PROMOTION. OVER THE PAST 25 YEARS, HER CAREER HAS SPANNED EDUCATION, POLICY, PRACTICE AND RESEARCH FROM HER GERMAN ROOTS TO THE USA, HONG KONG, AUSTRALIA AND MALAYSIA. CURRENTLY SHE HOLDS A POSITION OF SENIOR PROGRAMME MANAGER WITH THINK CITY. HER PREVIOUS ROLES IN MALAYSIA INCLUDED RESEARCH FELLOW WITH UNITED NATIONS UNIVERSITY, INTERNATIONAL INSTITUTE FOR GLOBAL HEALTH AND SENIOR LECTURER AT TAYLOR’S UNIVERSITY’S SCHOOL OF MEDICINE. SHE HAS DRIVEN A VARIETY OF INITIATIVES AROUND CHRONIC DISEASE PREVENTION, REDUCING INEQUITIES AND URBAN POVERTY, SUSTAINABLE URBAN DEVELOPMENT FOR HEALTH AND WELLBEING AND IS NOW FOCUSING ON URBAN SOLUTIONS TO IMPROVE LIVEABILITY IN THE MALAYSIAN CONTEXT.
RICHARD OSBORNE, IS PROFESSOR OF PUBLIC HEALTH, DIRECTOR OF THE HEALTH SYSTEMS IMPROVEMENT UNIT, AND DIRECTOR OF THE WORLD HEALTH ORGANISATION (WHO) COLLABORATING CENTRE FOR HEALTH LITERACY AT DEAKIN UNIVERSITY, VICTORIA, AUSTRALIA. HE IS A NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL PRINCIPLE RESEARCH FELLOW AND ADJUNCT PROFESSOR OF HEALTH LITERACY, UNIVERSITY OF COPENHAGEN, DENMARK. HIS INTERESTS CENTRE AROUND WHOLE OF SYSTEM APPROACHES TO DEVELOPING, IMPLEMENTING AND SCALING INTERVENTIONS TO REDUCE HEALTH INEQUALITIES AND IMPROVE HEALTH. HE HAS LED THE DEVELOPMENT OF A WIDE RANGE OF TOOLS AND PROCESSES TO ADVANCE PUBLIC HEALTH IN THE FIELDS OF HEALTH EDUCATION, HEALTH EDUCATION, HEALTH SERVICE IMPROVEMENT AND CLINICAL CARE. HE PIONEERED NEW WAYS TO CONCEPTUALISE AND MEASURE HEALTH LITERACY, AND USE THESE DATA TO EMPOWER COMMUNITIES TO UNDERTAKE SYSTEMATIC CO-DESIGN OF INTERVENTIONS AND SERVICE IMPROVEMENT. THIS INCLUDES THE OPHELIA (OPTIMISE HEALTH LITERACY AND ACCESS) PROCESS, NOW BEING IMPLEMENTED AS WHO NATIONAL HEALTH LITERACY DEMONSTRATION PROJECTS IN ASIA, AFRICA AND EUROPE. HE IS AN ADVISOR TO THE WHO AND HAS DELIVERED HEALTH LITERACY CAPACITY BUILDING IN ASIA, AFRICA, EUROPE AND THE MIDDLE EAST. HE FACILITATES WHO’S GLOBAL COORDINATION MECHANISMS FOR NCDS HEALTH LITERACY GLOBAL WORKING GROUP AND THE WHO’S HEALTH LITERACY GLOBAL COMMUNITY OF PRACTICE – WHICH YOU ARE ALL MOST WELCOME TO JOIN. HE HAS AUTHORISED OVER 200 PEER-REVIEWED RESEARCH MANUSCRIPTS WHICH HAVE BEEN CITED OVER 27,500 TIMES.

PROFESSOR ALBERT LEE IS FOUNDING DIRECTOR OF CENTRE FOR HEALTH EDUCATION AND HEALTH PROMOTION AND PROFESSOR OF PUBLIC HEALTH AND PRIMARY CARE OF THE CHINESE UNIVERSITY OF HONG KONG. HE OBTAINED HIS MEDICAL DEGREE (1984) AND LAW DEGREE (2015) FROM UNIVERSITY OF LONDON WITH HIGHER PROFESSIONAL AND ACADEMIC QUALIFICATIONS IN PUBLIC HEALTH, FAMILY MEDICINE, EDUCATION, LEGAL STUDY (HIGHER DOCTORAL RESEARCH DEGREE IN MEDICINE; FELLOWS OF ROYAL COLLEGE OF PHYSICIANS, LONDON AND IRELAND; ROYAL AUSTRALIAN COLLEGE OF GENERAL PRACTITIONERS; HONG KONG ACADEMY OF MEDICINE; FACULTY OF PUBLIC HEALTH, UK; AMERICAN COLLEGE OF LEGAL MEDICINE, CHARTERED INSTITUTE OF ARBITRATORS; MASTER OF PUBLIC HEALTH; MASTER OF LAW WITH DISTINCTION; MASTER OF RESEARCH & PROFESSIONAL STUDY IN EDUCATION). HE IS PIONEER OF HEALTHY SETTING IN ASIA AND WAS ELECTED AS MEMBER (FOREIGN ASSOCIATE) OF NATIONAL ACADEMY OF MEDICINE, USA (NAM) IN 2012, FIRST FROM HONG KONG. ELECTION TO THE NAM IS CONSIDERED ONE OF THE HIGHEST HONOURS IN THE FIELDS OF HEALTH AND MEDICINE. HE HAS SERVED AS WHO ADVISOR/CONSULTANT ON MANY OCCASIONS. HE WAS ONE OF THE FOUNDING MEMBERS OF STEERING COMMITTEE OF ALLIANCE FOR HEALTHY CITIES (AFHC) AND DEVELOPED THE ‘SPIRIT’ FRAMEWORK FOR AFHC AWARDS FOR HEALTHY CITIES.
PLenary speaker

Professor Cordia Chu
Director, Center for Environment and Population Health, Nathan Campus
Griffith University, Australia

Professor Chu is the Director of the Centre for Environment and Population Health, Griffith University. Her key areas of research expertise are global health, eco-friendly healthy settings; reproductive health; health promotion and integrated health planning; workplace health promotion and safety management; community needs assessment and policy development. She is committed to translational research and capacity-building, particularly in linking environment, health strategies and sustainable development, and has been active as an international consultant to facilitate the development of healthy cities, hospitals and workplaces in many countries in the Asia-Pacific. Her recent focus is on global health security, climate change adaptation and health. Awarded the Member of the Order of Australia (AM) in 2013, she has published over 180 articles, delivered 55 key note addresses in conferences, graduated 38 PhDs and has won a National Commendation for 2018 Excellence in Research Supervision by the Australian Council for Graduate Research.

Dr Nobuo Nishi
Chief of WHO Collaborating Centre for Nutrition and Physical Activity,
National Institute of Health and Nutrition,

Nobuo Nishi, MD, PhD, MSc, MBA is Chief of International Center for Nutrition and Information, National Institute of Health and Nutrition, National Institutes of Biomedical Innovation, Health and Nutrition of Japan, and also Chief of WHO Collaborating Centre for Nutrition and Physical Activity. He graduated from Osaka University Medical School in 1988. He has worked in Osaka University Medical School, Takarazuka City Health Promotion Center, Iwate Medical University, and Radiation Effects Research Foundation Hiroshima Laboratory. He is Visiting Professor of Shiga University of Medical Science. He serves the Japanese Society of Public Health as Editor-in-Chief.
6.0 PLENARY PAPERS
### Plenary Session 1

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<th>Abstract Title</th>
<th>Healthy Cities 2.0: The SDGs, the Anthropocene and Planetary Health</th>
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<td>Presented By</td>
<td>Professor Dr Trevor Hancock</td>
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<td>School of Public Health and Social Policy, University of Victoria Canada</td>
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The fundamental challenge we face together is how we live well, with high levels of human development and good health for all, within the limitations of this one small planet that is our home. In this presentation I will discuss the human, social and economic development challenges posed by the Anthropocene – the combination of human-driven global ecological changes that we will have to learn to live with, manage and adapt to in the 21st century. This includes a discussion of the social and health inequities that are already evident and will likely worsen due to the Anthropocene. What is clear is that our current social and economic path – which has led to this immense challenge - is not fit for purpose. So we need a transformative change in our current social and economic systems, and in the cultural values and social norms that underlie that system. I will then discuss the implications of all this for cities, as I firmly believe that cities already are and must continue to be leaders in this vitally important task. The challenge I will pose – one that I am working on in my own community – is to become ‘One Planet Cities’; places that have a high quality of life and good health for all while living within the limits of our home planet. Meeting this challenge will require the full and genuine participation and engagement of all sectors of the city – public, private, community and NGOs, youths and schools, seniors, academics, faith and other partners must learn to work together for the common good of the people as well as the planet. Throughout the presentation I will draw upon the UN’s Sustainable Development Goals; UN Habitat’s New Urban Agenda; the Kuching Statement on Healthy, Just and Sustainable Urban Development and the Copenhagen Consensus Statement on Healthier and Happier Cities for All.
A competitive city is defined as a city that is able to attract capital, businesses, talent and visitors. In order to be competitive, the city must be liveable and provide a high quality of life. The global trend has shown that mega cities performed the role as the economic driver of the country or region. These cities have economic strength with innovation, sophistication and global appeal to attract investments and provide huge businesses and employment opportunities to the citizen.

Sustainable urban development is always the main vision of cities development. The city would need to ensure balanced development in various economic sectors, provision of wide range of physical and social infrastructures to meet the rising demand of its population and at the same time to ensure the urban environment and green areas are well conserved and protected. In this regard, the cities competitiveness factors are the key elements to drive the cities’ economy and creating business and employment opportunities.

Major cities and urban centres in Sarawak have undergone fast development and socio-economic transformation over the years. More than half of the Sarawak’s population is currently living in the urban areas. Faster growth in the urban population is contributed significantly by the migration of rural population to the urban areas. Rapid urban development brings along socioeconomic benefits through creation of huge business and employment opportunities in the urban areas. At the same time, rapid urbanisation also creates various challenges and complicated issues associated to the demand of the population.

Being the capital city of Sarawak, Kuching city plays crucial role to drive the economy of Sarawak. Therefore, Kuching city must be competitive and capable to attract visitors, investments and businesses in order to accelerate its socioeconomic development. Kuching continues to develop rapidly and increasing number of populations has led to rapid development of various social and physical infrastructures including roads, commercial buildings and premises, residential and industrial areas. With the growing economy, at the same time Kuching city provides serene environment with good quality of life. Kuching City has always been regarded as a healthy city and accorded with several recognition pertinent to its efforts towards creating a better quality of life for its citizen.

The development of economy, physical and environment of a city must be balanced in order to create good quality of life for the citizens.
<table>
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<tr>
<th>Abstract Title</th>
<th>Translating the Kuching Statement on Healthy, Just and Sustainable Urban Development into Practice</th>
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<tr>
<td>Presented By</td>
<td>Dr Uta Christine Dietrich</td>
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In early 2016, over 250 participants from various sectors and countries gathered in Kuching, Malaysia to debate and re-imagine sustainable urban development for health & wellbeing. The outcome of this Urban Thinkers Campus organised by United Nations University – International Institute for Global Health was ‘People, Planet and Participation: The Kuching Statement on Healthy, Just and Sustainable Urban Development’. Urbanisation is unstoppable with fastest growth seen in Africa and Asia. We know that cities are hubs for innovation and creativity grown out of the dense and diverse conglomeration of people while at the same time cities are responsible for higher energy use and waste production, using more resources than the ecosystem provides. The Kuching Statement was written to influence UN Habitat’s New Urban Agenda (2016) advocating an ecosocial approach to development, one that places health of people and planet at its centre. Cities implementing this statement combine three approaches: minimizing their ecological footprint, prioritising people’s physical, mental and social wellbeing and providing opportunities for democratic engagement for everyone. Most cities can point to initiatives such as greening streets, building a cycling infrastructure, improving access to affordable housing or involving community in upgrading a neighbourhood. The challenge for urban governance and planning is finding a different way of doing business that leads to measurable improvements in health of people and planet. The Kuching Statement offers guidance for sustainable urban development for health at all scales, from the neighbourhood, to city, inter-city and national level. The next big step is growing a community of practice around its implementation.
Abstract Title | The SDGs and Healthy Cities
Presented By | Professor Dr Keiko Nakamura
Author | Professor Dr Keiko Nakamura
Co-authors | -
Organization | Tokyo Medical and Dental University, Tokyo

Number of cities in Asia have developed their plans and programs to improve the health and quality of life of urban residents in a comprehensive manner and the cities are implementing these by taking advantage of their resources, cultures, and people. The Alliance for Healthy Cities had worked with cities in the last 14 years.

Common characteristics of Healthy Cities in Asia and the Pacific were: comprehensive city planning; institutional developments; public-private partnerships; and evidence gathering. Healthy Cities address healthy urban planning, urban governance, physical and social determinants of health, inequalities, sustainability, and partnerships. Cities are now using SDGs to further strengthen intersectoral collaboration, develop initiatives involving multiple stakeholders, develop evaluation framework according to SDGs, and facilitate understanding on SDGs by stakeholders.

Considerable variety exists between cities’ preferred interpretations of “health” as well as their priorities, capabilities and circumstances. Healthy Cities have experiences to address multiple determinants of health, equity, and partnerships in planning, implementation, and evaluation.

This presentation will provide diversity of Healthy Cities in the Western Pacific Region and discuss their applications in the framework of SDGs.
Urbanization and population ageing are transformative trends that are changing the way we live, work and experience our lives. The WHO Global Strategy and Action Plan on Ageing and Health (the Strategy), adopted by WHO Member States in 2016, provides a policy framework to ensure that the response to population ageing is aligned with the Sustainable Development Goals. The Strategy identifies age-friendly cities and communities as a key approach for enabling multisectoral action on population ageing in cities, towns and villages.

An age-friendly city or community is a good place to grow older because it fosters Healthy Ageing and enables wellbeing throughout life. The WHO Global Network for Age-friendly Cities and Communities established in 2010 and now covering more than 750 cities and communities in 39 countries, supports communities, cities and other sub-national levels of government that want to achieve this ambition.

This presentation will provide updates on key strategic developments related to WHO's work on age-friendly cities and communities and the opportunities these provide.
Plenary Session 6

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<tr>
<th>Abstract Title</th>
<th>Enhancing Sustainable Development Goals and Health Equity via Healthy Setting Approach</th>
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<tr>
<td>Presented By</td>
<td>Professor Albert Lee</td>
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<td>Organization</td>
<td>JC School of Public Health and Primary Health Care, The Chinese University of Hong Kong</td>
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Abstract

United Nation has set the agenda for Sustainable Development Goal 2030, “UN Agenda 2030”. It is enabling our planet not only more peaceful and pleasant for living and also brings equality and equity to mankind irrespective of age, gender, ethnicity, and socio-economic background. Goal 3, “Ensure healthy lives and promote well-being for all at all ages” is more than prevention of premature death but also empowerment of individuals as well as the communities to protect themselves from harm and capacity to achieve optimal health and well-being. Regarding rights to health, there is global aspiration for all citizens to enjoy highest attainable standard of health. However, the standard would vary among different states and it might not be justifiable and equitable to impose a fixed standard. However, there is still a need for universal standard. One would take reference from Ottawa Charter for Health (WHO 1986) asserting that, ‘health is created and lived by people within the setting of their every-day life; where they learn, work, play and love.’ The ‘Healthy Setting’ approach can facilitate the ‘rights to health’ as it argues for investment in social systems in which people spend their daily lives to address the multi-factorial determinants for health. The approach can therefore build the capacity of individuals, families and communities to create a strong human and social capitals. The notion of human and social capitals begins to offer explanations why certain communities are unable to achieve better health than other communities with similar demography. The synergistic effects of different healthy setting can combine the efforts of upstream, midstream and downstream approaches to improve population health and reduce health inequity.
# Plenary Session 7

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<tr>
<th>Abstract Title</th>
<th>Health Literacy: A Critical Mechanism for Developing Healthy and Equitable Cities and Communities</th>
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<tr>
<td>Presented By</td>
<td>Professor Richard Osborne</td>
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<td>Organization</td>
<td>Deakin University, Victoria, Australia</td>
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The Regional Action Plan (RAP) on Health Promotion in the Sustainable Development Goals: 2018-2030 was endorsed at the 68th session of the World Health Organization Regional Committee for the Western Pacific last October 2017. It proposes actions to operationalize commitments made at the 9th Global Conference on Health Promotion (Shanghai, China) by Member States to foster health literacy, expand healthy settings and strengthen health governance. The Regional Action Plan recommends country actions such as embedding health literacy improvement in sector policies, plans and programmes and using strategic communications, social marketing and new media to enhance health literacy.

Healthy cities strive to plan and manage services to address social and physical factors that influence health and reduce inequities amongst constituents, and would benefit from health literacy interventions that make use of community assets – such as peer support, and intergenerational knowledge and skills, to empower individuals and communities to promote health. For example, accessing useful culturally appropriate health information that addresses challenges and practical needs, such as navigation of the health and social services, can be made possible through the help of neighbors and does not need professional support.

Cities need to invest in strengthening health literacy in the community to enable people to promote their own and others health. In particular, Cities need to ensure equitable access to services for people with diverse health literacy strengths and weaknesses, i.e., they need to become more health literacy responsive to their communities.

The aim of this presentation is to raise awareness of health literacy and its practical applications in healthy cities and workplaces. It will introduce new practical tools including new approaches to community co-design, ways to generate health literate organisations, and a model for deep global learning and scaling up through National Health Literacy Demonstration Projects.
Developing healthy cities is becoming ever more important in the 21st century as the rapidly globalizing world copes with the phenomenal speed and scale of its economic, industrial and urban development and their associated threats to environment and population health. Rapid increases in: energy consumption and carbon emissions, water and air pollution, urban sprawl cum heavy traffic congestion, the speed and scale of infectious disease transmission, and climate change related extreme weather events and disasters, are all immense problems growing cities face. The healthy cities approach to urban development and governance has emerged as an essential means to facilitate, mobilize, and coordinate local efforts and form partnerships to address environment and health threats. This paper advocates the urgent need for conducting translational research to develop climate change responses into healthy city planning and implementation as a means to secure a sustainable future. It consists of four sections: 1) a brief introduction of the why and what of translational research to develop policies and practices to meet societal needs; 2) an outline of climate changes and urban health challenges that require sound ecological management and multi-sectoral partnerships as engendered by the healthy cities approach; 3) examples of work conducted to promote environmental sustainability and climate change adaptation by the growing number of cities and communities; and 4) the urgent need for translational research to develop practical strategies to future proof cities and communities against disaster and climate risks in order to secure a sustainable future for the world.
Prevention and control of noncommunicable diseases (NCDs) is indispensable for health promotion in both developed and developing countries. A total of nine targets and 25 indicators were developed in the WHO Global Monitoring Framework of the Global Action Plan for the Prevention and Control of NCDs 2013-2020. A part of the indicators are measured by STEPwise approach to surveillance (STEPS), which WHO recommends as a simple, standardized method for collecting, analysing and disseminating risk factor data. WHO/ISH risk prediction chart can be adapted to risk factor data to estimate 10-year risk of a major cardiovascular event in individuals and populations. Each country is expected to employ appropriate surveillance system to monitor their health promotion programs. Japan launched a goal-oriented health promotion program named Health Japan 21 in 2000 followed by its second term which started in 2013. The goals of the second term include extension of healthy life expectancy, reduction of health disparities, and improvement of social environment and lifestyles such as nutrition and dietary habits, physical activity and exercise, rest, alcohol drinking, tobacco smoking and oral health. The Japan National Health and Nutrition Survey, which has a history of over 60 years and is conducted by the Ministry of Health, Labour and Welfare, is an important data source to monitor the targets of the second term of Health Japan 21. The survey regularly collect risk factor data such as BMI, salt intake, step counts and exercise habits. Recently, the survey also occasionally collect data on household income, and health disparity in risk factors are being monitored. Thus, social determinants of health should be incorporated in measuring health promotion to achieve SDGs.
The percentage of people living in cities is projected to increase from 51% in 2010 and 70% in 2050. This is humanity’s journey and country and city governments have crucial roles to play at all phases of this journey. So too does each one of us as individuals.

We need development but in a sustainable manner, to ensure our survival and that of later generations. Sustainability is a delicate balancing act between conservation (the regulation of human use of the environment) and preservation (the elimination of human impact altogether).

Sustainable development has been defined in the Brundtland Report (1987), as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’. The three interdependent pillars of sustainable development are: economic development, social development, and environmental protection. The three major things that need to be sustained are: nature, life support systems, and community; and the three things that should be developed are: people, economy, and society.

To operationalise the concept of sustainable development, the Sustainable Development Goals (SDGs) were developed and passed during a United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. All 17 Goals and 169 targets are interconnect, meaning success in one affects success for others. The SDGs address the 5 Ps that are of critical importance for humanity and the planet sustainability: People, Planet, Prosperity, Peace Partnership.

At the individual level, we should “Think Global, Act Local” or GLOCA, starting with the 4Rs of reduce, reuse, recycle and repair, accompanied by reducing our use of plastics, and “plogging”.

At the workplace level, we can participate in practices and activities that promote sustainability. For instance, those of us in the health care sector should adopt the concept of sustainable health and health systems care. Fostering environmental sustainability in health systems is both a responsibility and an opportunity. A sustainable health care system is one that can improve, maintain or restore health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve the environment to the benefit of the health and well-being of current and future generations. Clinicians should aim for sustainable clinical practice based on the four principles of: (a) disease prevention and health promotion, (b) patient education and empowerment, (c) lean service

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<tr>
<th>Abstract Title</th>
<th>Our Cities, Our SDGs, Our Journey: - Our Roles and Responsibilities</th>
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<tr>
<td>Presented By</td>
<td>Professor Datu Dr Andrew Kiyu</td>
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<td>Professor Datu Dr Andrew Kiyu</td>
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<td>Organization</td>
<td>Universiti Malaysia Sarawak (UNIMAS)</td>
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| Plenary Session 10      |                                                               |
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delivery, and (d) preferential use of treatment options and medical technologies with lower environmental impact.

At the global level, we can contribute towards the SDGs. For instance, human health and wellbeing are directly covered by SDG 3: “Ensure healthy lives and promote well-being for all at all ages”. The foundation of SDG3 is universal health coverage (UHC). Health staff have important roles to play in the journey towards universal health and ensuring that no one is left behind.
7.0 PARALLEL PAPERS
7.1.1 PARALLEL SESSION 1: HEALTHY CITIES FOR “PEOPLE” (HEALTH PROMOTION ACROSS THE LIFE SPAN)
## Abstract

**Abstract Title**  
Reducing the Number of Deaths Resulting from Sudden Cardiac Arrest

**Presented By**  
Koji Nishimura

**Author**  
Koji Nishimura

**Co-authors**  
-

**Organization**  
City of Obu

### Introduction

Each year, approximately 70,000 deaths occur across Japan from sudden cardiac arrest. Sudden cardiac death is one of the major public health challenges as it can happen unexpectedly to anyone, anytime, anywhere. In order to reduce the number of deaths from sudden cardiac arrest, expanding the placement of Automated External Defibrillators (AEDs) throughout the city and increasing the number of citizens who know how to use an AED is crucial.

### Objectives

To train citizens in Basic Life Support (BLS) knowledge and skills so they can perform immediate revival techniques on a person in an emergency situation until paramedics arrive.

### Methodology

A Public Access Defibrillation program was implemented where AEDs were first installed at public facilities and schools and then at workplaces across the city for appropriate coverage after first forming cooperative partnerships with them. Also, following agreements signed with the five major convenience store chains in Japan, AEDs were installed in all convenience stores open for 24 hours from June 2017 onwards. In addition to providing training courses for adults on how to perform cardio pulmonary resuscitation and how to use an AED, BLS classes targeted at all final year elementary school students and second year junior high school students are conducted every year, repeatedly giving people the opportunity to learn BLS from a young age.

### Results and discussion

A total number of 239 AEDs were installed across Obu City meaning that one AED is now within reach per approximately every 370 square metres. Each year, approximately 7,000 people ranging from children to adults receive BLS training. A survey on junior high school students indicated that the more BLS training they received, the more confident they were about actually performing revival techniques.

### Conclusion

Improved public access to AEDs and repeated opportunities to learn BLS are vital in saving as many lives as possible.
# Parallel Session 1: Healthy Cities for “People” I
(Health Promotion Across the Life Span)

<table>
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<tr>
<th>Abstract Title</th>
<th>Health Promotion for Seniors in Aboriginal Fuxing District</th>
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<tr>
<td>Presented By</td>
<td>Te-Wen Lin</td>
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<tr>
<td>Author</td>
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<tr>
<td>Co-authors</td>
<td>Wen-Yen Wang, Li-Chuan Chen, Te-Wen Lin, Shiang-Yun Huang, Hui-Chin Yen</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association</td>
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## The introduction
Mountainous Fuxing District is the only aboriginal district in Taoyuan City, with totally five clinics, one public health center and one medical station. Compared to other districts, Fuxing is traffic inconvenient and has less medical resource. The district is mostly populated by the Atayals (67.3%) with 11.3% being seniors. The top ten causes of death in 2016 showed that the district’s incidences of heart diseases (excluding hypertensive diseases), chronic liver diseases, and liver cirrhosis are higher than the national and Taoyuan City’s figures. This may related to the indigenous lifestyle and dietary habits (like drinking).

## Objective(s)
Improving accessibility of medical resources, providing holistic healthcare services for the elderly, and reducing “health inequality.”

## Methodology
Based on the guidelines of “adapting to local conditions”, “establishing mechanisms”, “sustainable management”, and “utilizing tribal knowledge”, the Department has established public health policies and health promoting initiatives beneficial to elderly health, including mountain-region medical services, tribal health establishment, and long-term care resources. Additionally, “Healthy Living Stations” were set up with community resources to counsel drinkers, and advocate exercising habits among the elderly.

## Results and discussion
From 2015 to 2017, medical station served 5,500 people and outreach services were given to 10,000 people annually; household health management was given to 101 seniors living alone and 517 chronic patients; home care services were given to 533 bedridden individuals; and allowances were given to 174 seniors for dentures.

## Conclusion
Inhabitants in remote Fuxing formerly need to take at least 40 minutes to one and half hour to reach the nearest medical institutions. The medical station provides 24-hour emergency and 3 outpatient clinics, and also cooperates with the public health center offering sentinel clinic service for remote tribes seven times a week that effectively reduced the traffic consumption. The strategies assure elderly to get immediate, continuous and diversified healthcare services, thus improving accessibility of healthcare, creating a healthy tribal atmosphere and effectively improving the gap between urban and rural areas.
Parallel Session 1: Healthy Cities for “People” I  
(Health Promotion Across the Life Span)

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Effect of Physical Activity on Nutritional Status and Motor Skills Among Toddler in Peri-Urban Kuching Sarawak</th>
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<tr>
<td>Presented By</td>
<td>Dr Melvin Chung Hsien Liang</td>
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<tr>
<td>Author</td>
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<td>Organization</td>
<td>Universiti Malaysia Sarawak (UNIMAS)</td>
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The recent increase trend in childhood obesity among younger children have been a major public health concern, particularly in the rural areas. As early childhood represents an important phase in cultivating healthy lifestyle, promoting physical activity at a younger age not only give long term health benefit but also help in developing good motor skills. This aim of this study was to determine the effects of physical activity on nutritional status and motor skills performance among preschool children aged 3-5 years old in a rural district – Bau in Sarawak. It was a cross-sectional study carried out in 22 government kindergartens, involving 153 children. Physical activity (PA) level was measured using pedometer, while motor skills were determined using The Test of Gross Motor Development (TGMD) version 2. Anthropometric measurement was taken to obtain weight and height. Data was analysed using IBM SPSS version 22. The prevalence of overweight and obese was 27.5%. About 74% of the children had gross motor skills score more than 90, and majority of the children have more than 7500 steps count. Boys have higher PA level (59.0%) compared with the girl (41.4%). Those who were non-obese (60.4%) have higher PA level compared with those who were obese. The higher the gross MS score, the higher the PA level (p<0.05). Logistic regression analysis showed gender (p= 0.038), BMI (p <0.001), gross MS score (p <0.001), household income (p=0.015), and caretaker (p=0.042) were found to be significant determinants of PA level. The findings of this study can be used as input in designing of intervention programs to help to increase the physical activity level in children within a community or school environment, involving both teachers and parents.
Abstract Title: Effectiveness of Elderly Care in Taitung
Presented By: Yang, Sing-Jin
Author: Guo, Zi-Lin
Co-authors: -
Organization: Social Affairs Department, Taitung County Government, Taiwan

**Introduction** The total population in Taitung by March 2018 was 219,466 people, including 34,475 elderly people, commanding 15.7% suggesting Taitung is an aged society (over 14%). Mitigating the need for long-term care by extending the mobility of sub-healthy elderly people through preventive care and social participation is thus an urgent issue.

**Objective** Empower intermediary organizations in community organizations to develop social capital for community operating organizations, expand the scope of industry-academia-government collaboration and participation, improve service quality, and boost aging prevention capacity.

**Methodology** Offer volunteer home visits, telephone reassurance, welfare service enquiries and referral services, and catering and health promotion services to care for the physical and spiritual needs of elderly people.

**Results and discussion** A total of 60 care points have been established with a coverage of 83% to serve 20,564 people. Five more locations will be built in 2018 to provide local heartfelt life for healthy and sub-healthy elderly people as a precaution for hyper-aged society.

**Conclusion** Participation in care locations brings social and organizational changes, provides a new care model, and offers opportunities for situated practice to communities and local elderly people to develop communitarianism values and maintain equal social inclusion for elderly people. Concrete effectiveness has been seen in terms of the number of people served and care locations constructed, except for the service gap between supply and demand.
7.1.2 PARALLEL SESSION 2: HEALTHY CITIES FOR “PEOPLE” (ACTIVE AGEING)
Parallel Session 1: Healthy Cities for “People” II (Active Ageing)

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<tr>
<th>Abstract Title</th>
<th>Promoting Health and Well-Being Amongst Elderly Koreans:</th>
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<tr>
<td>Presented By</td>
<td>Dr Hwang, Myeong-Seon</td>
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<tr>
<td>Author</td>
<td>Dr Hwang, Myeong-Seon</td>
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<tr>
<td>Co-authors</td>
<td>Myeong-Seon Hwang, Myoung-Soon Lee, Hang-Sun Park, Min-Jung Kang,</td>
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<tr>
<td>Organization</td>
<td>Sungkyunkwan University, School of Medicine, Korea</td>
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**Introduction.** Nonsan-si, located in the middle of Chungcheongnam-do province in South Korea and has about 127,000 people. It is one of Korea’s super-aged cities with a large ageing population over 20% (23.3%). It has also a high rate of social problems associated with the elderly including suicide, loneliness, and dementia. In addition, a considerable portion of the elderly in the city are illiterate and majority of them do not have easy access to various cultural services. Since 2016 in order to promote healthy and active aging at the local city level, Nonsan-si Office has developed and implemented a project, “Sharing Happiness and Difficulties Together with Community” Project (“Donggo-Donggrak” Project).

**Objectives.** This project’s goal is to make educational, cultural and social, and health services appropriate and accessible to elderly people across Nonsan-si to promote their health and well-being.

**Methods** As a result of intersectoral collaboration across rural or urban areas of Nonsan-si, senior community centers have been transformed into a complex platform for education, culture, health and caring of older people. Nonsan-si Office, local council, civil societies and all of Nonsan-si’s 522 communities have been actively involved in making their city age-friendly and enhancing their sense of community.

**Results and discussions.** Over the past two years, the project has established 270 seniors’ schools to provide educational services for illiterate persons. Multi-disciplinary team have provided health services across the 281 centers. Various cultural and educational activities including concerts, shows, exhibitions, and display have been provided, and 132 village libraries have been created. In addition, elderly people have facilitated the care of elderly people living alone and their stay at night together have been important.

**Conclusion.** The Nonsan-si’s approach to make services accessible at the senior community center of each village has promoted elderly people’s health and well-being and made the city age-friendly.
### Abstract Title
Analysis of Wellness Valley Cluster in Obu City and Healthy City Development Strategy: Exploration of Concept of Healthy City Plaza

### Presented By
Professor Emeritus Moosung Cho

### Author
Professor Emeritus Moosung Cho

### Co-authors
-

### Organization
Public Policy Institute, Korea University, Republic of Korea

### Introduction
Wellness Valley in Obu City forms a cluster of Research Institute, Hospitals, Health Plaza, Aichi Children’ Health and Medical Center, diverse silver facilities, Heath Village Park, Medical Plant Garden, Wood village, Genki-no-Sato for reconstruction for regional agriculture etc. Obu City has performed healthy city project through Health City Promoting Bureau composing of Healthy City Division and Wellness Valley Division. The Wellness Valley plays an important role in improving the quality of Japanese people and providing good insights for people including scholars and officials from other countries. Therefore, it is necessary to propose a better alternative as a health city development strategy through the Wellness Valley cluster analysis.

### Objectives
Analyze and classify wellness valley clusters through a holistic health approach to health city development.
Propose better alternatives through exploring healthy city plaza as health city development strategy

### Methodology
Interview with officials of Obu city and analysis of data on Wellness Valley and literature survey for logical evidence in exploring healthy city plaza

### Results
The fact that basic philosophy and concept activities of Wellness Valley contains purpose of healthy city and holistic health concept was identified. Elements of cluster of Wellness valley were classified into physical, mental, social, environmental health dimensions. In social health dimension cooperative governance liking citizen with officials for health city was not found in Wellness valley cluster.

### Discussion and Conclusion
It is necessary to add element for cooperative governance as better alternative in Wellness valley cluster. Healthy city plaza is explored as concept of a central place with a cooperative network to connect and utilize information, education, industrial resources, relaxation space and healing for the improvement of the quality of life of citizens and the health of each citizen by life cycle.

### Key words
Wellness Valley, Obu city, Cooperative Governance, holistic health
Abstract Title: Promote Healthy Ageing and Create a New World for Seniors

Presented By: Yu-Bei Liu

Author: Yu-Bei Liu

Co-authors: Wen-Yen Wang, Po-Wen Su, Kuo-Ning Lin, Chieh-Ying Yeh, Yu-Bei Liu

Organization: Taoyuan Healthy City Promotion Association, Taiwan

**The introduction**

In 2010, Taoyuan became an aging society and its elderly population ratio reached 10.79% in 2017. This signified an increase in aging index from 36.38% in 2010 to 71.16% in 2017 and highlighted how aging has become a major issue in the city.

**Objective(s)**

To disseminate health-related knowledge, promote health in seniors, create a supportive environment for them, and encourage them to step out of their homes, interact with others, develop the habit of exercising, and manage their physical and mental health, special events and seminars were held.

**Methodology**

In 2017, competitions for seniors such as group performance competitions, healthy cooking competitions, puzzle competitions, and safe medication use competitions were held to enable seniors to realize their potential. In addition, community events such as frailty prevention screening, anti-falling exercises, and oral and mental health activities were organized. A total of 646 events were hosted, attracting 43,774 participants and 20.83% of the city’s seniors. From 2014 to 2016, classes such as painting, calligraphy, gardening, and spiritual learning classes were offered, teaching nearly 110,000 people.

**Results and discussion**

In 2017, more than 1,855 senior citizens aged over 65 participated in the competitions; this was an increase of 23.94% compared with 2016. In a 2017 survey, which assessed whether seniors felt that Taoyuan had “a diversity of activities in the community,” the score was nearly 4 out of 5. The Exercise Situation of Seniors Over 65 Years Old Report prepared in 2017 showed that 46.60% of seniors in the city exercised regularly, which was the highest in Taiwan.

**Conclusion**

We will continue to implement the above measures to alleviate physical disabilities and dementia in seniors, and conduct a survey every two years to revise relevant policies to better meet the needs of seniors, making Taoyuan a “healthy aging” and “successful aging” city.
Parallel Session 1: Healthy Cities for “People” II (Active Ageing)

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Happy Longqi District, Healthy Ageing Locally</th>
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<tr>
<td>Presented By</td>
<td>Chih-Ling Huang</td>
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<tr>
<td>Author</td>
<td>Chih-Ling Huang</td>
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<tr>
<td>Co-authors</td>
<td>Yu-Ju Hung</td>
</tr>
<tr>
<td>Organization</td>
<td>Public Health Bureau, Tainan City Government</td>
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Longqi District is a rural region, about 4,000 residents, in Tainan, Taiwan. This District is an aging seriously region in Taiwan as the population aged over 65 here has reached 25.76%. Therefore, we chose to conduct healthy community plan in one region of the district, so that making it become an active-aging community. First (in 2015), we chose an idle community center and invited neighboring elders to participate in the wall-painting event we hold there. In the process of wall painting, the elders established a good relationship with each other. Next, we invited the children of these elders to come back to attend the outcome presentation activity of the wall painting accomplished by the elders. Everyone consequently has common emotions and memories on this land. Since the main crop in Longqi District is “bamboo”, in the second year (2016) of the healthy community plan, the elders decided to use bamboo to make handicrafts and beautify the community center to create an ideal space for activities. In 2017, we encouraged the elders to put forward the courses where they are interested and fixed them up with the classes they really needed. So in the third year of the healthy community plan, we hold many classes in the community center where is beautified by the local elders, such as “how to eat healthy?”, “how to use the I-pad?”, “how to make a doorplate?”, “how to make a wind bell” and so on, allow elders to continue learning. Until now, this originally quiet and unfamiliar community has become an active, happy and continuously healthy-aging community.

KEYWORDS: healthy-aging, active-aging, aging locally
7.1.3 PARALLEL SESSION 3: HEALTHY CITIES FOR “PEOPLE” (PSYCHOLOGICAL HEALTH OF ELDERLY)
Parallel Session 3: Healthy Cities for “People” III (Psychological Health of Elderly)

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Promoting Partnership for Dementia Prevention and to Foster a Dementia-Friendly City</th>
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<tr>
<td>Presented By</td>
<td>Yosuke Hiranto</td>
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<tr>
<td>Author</td>
<td>Yosuke Hiranto</td>
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<td>Co-authors</td>
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<td>Organization</td>
<td>City of Obu</td>
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Introduction
Cities across Japan are facing a super-aging society. With numbers of the elderly growing, dementia is becoming an increasingly serious issue. In anticipation of the future problems that may accompany dementia, collaboration across all sectors including the government is essential. For many years in Obu City, local government, citizens, community groups, local businesses, nursing care providers, medical and research institutions etc. have joined forces to come up with strategies for dementia prevention and fostering a dementia-friendly community.

Objectives
One objective is to ensure that not only partnerships that have emerged remain in place but new ones are formed. Another is to ensure that a systematic approach is taken to tackle dementia.

Methodology
In December 2017, Obu City set a new precedent by being the first city ever in Japan to enact a local ordinance that established comprehensive provisions for the promotion of dementia measures following collaboration across multiple sectors. The ordinance outlines not only the city’s duty but also the role that citizens, community groups, businesses and institutions etc. have in the fight against dementia. The ordinance also states that through city-wide collaboration, it aims to become a community in which everyone can lead anxiety free lives from dementia.

Results and discussion
The ordinance was enforced on April 1st, 2018. Some sectors have already reacted by springing into action in accordance with their role. There is also a need to make this ordinance common knowledge so that new partnerships can be made from among those who still don’t realise the importance of dementia measures.

Conclusion
The enactment of this ordinance is an opportunity for all parties to share a common goal and realise that they each have their own part to play. Obu City is pushing forward with its partnership-based town development to establish itself as a city free from dementia-related anxiety.
Parallel Session 1: Healthy Cities for “People” III (Psychological Health of Elderly)

<table>
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<tr>
<th>Abstract Title</th>
<th>Dementia-Drug Free Pet Therapy</th>
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<tr>
<td>Presented By</td>
<td>Dr Wen-Yen Wang</td>
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<tr>
<td>Author</td>
<td>Dr Wen-Yen Wang</td>
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<tr>
<td>Co-authors</td>
<td>Li-Chuan Chen, Po-Wen Su, Hsing-Hui Lin, Hui-Ju Wu</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taoyuan City, Taiwan</td>
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**The introduction**
Taoyuan City has been estimated to have roughly 19,552 people with dementia as of the end of February 2018. To help people with dementia function normally and prolong the course of diseases, the Taoyuan City Government organized drug-free therapies to improve care quality.

**Objective(s)**
To increase the actions, expressions and emotions of dementia patients by 15% after the implementation of pet therapies.

**Methodology**
Professional animal-aided therapist and therapy dogs helped dementia patients improve their language skills by issuing simple verbal commands and limb functions through touch exercises. Additionally, the therapy dogs accompanied and performed alongside the patients, promoting mental and emotional health and creating opportunities for mental stimulation.

**Results and discussion**
A total of 52 pet therapy activities were organized, serving 560 people. The participants were scored on a scale of 0 to 100 based on their performance. A higher score denoted greater autonomy. A pre-test/post-test method was adopted, in which the scores of the “action scale,” “expression skill,” and “emotion scale” before and after intervention were compared. Results indicated that participants’ action, expression, and emotion performance improved by 19.05%, 15.5%, and 118.75%, respectively. Overall, the participants’ actions, expressions, and emotions significantly improved after canine intervention.

**Conclusion**
The “pet therapy” initiative will continue into 2018. It will also be combined with various drug-free therapy methods, such as horticultural therapy, and aromatherapy. These serves shall be introduced into communities to fulfill the government’s “aging in place” goals.
Depression is an important factor of active. Late-life depression not only affect disease treatment but also decline body and cognitive function, quality of life, wellbeing, and increase the care cost and the risk of mortality. Recently, many researches illustrated that environment characteristic is an important factor of mental illness. However, there is limited research in Taiwan. Hence, this study examines the relationship between land use and depression symptom among the older adults.

This study used two levels of data: ecological and individual data. Ecological data (land use types) was obtained from the Land Use Investigation of Taiwan by using GIS overlay analysis and two control variables were concerned including urbanization level and median income of townships. Individual data was from 2009 National Health Interview Survey. Control variables at individual level included sociodemographic characteristics, number of disease, smoking, drinking, physical activity, and social participation. The depressive symptom was measured by Center for Epidemiologic Studies Depression Scale (CES-D) which score ≥10 is considered to be depression. Descriptive statistics, chi-square test, T test, and logistic regression analysis and multi-level analysis of Hierarchical Linear Modelling (HLM) were used in this study.

After excluding those living in outlying islands, institutional adults and those without depression score, a total of 2155 adults aged 65 years and above were recruited as the study sample. Results showed that school and medical land use were significantly related to CESD scores. When CESD score were divide into yes/no type, “culture facility”, “recreational and amusement areas” and “playgrounds and sports venue” were significantly associated to the depression of older adults. Older male residents were found additionally decline the CESD score while compared with older females in the full model (β= -0.45, p = 0.0492). This demonstrated the fact that ecological-level variables can modify the effects of individual-level variables.
Parallel Session 1: Healthy Cities for “People” III (Psychological Health of Elderly)

Abstract Title | Age-Friendly to Promote Mobility of the Older Population in Taiwan: Are We Meeting Their Needs?
Presented By | Professor Shiann-Far Kung
Author | Professor Shiann-Far Kung
Co-authors | Yung-Chi Yen, Cordia Chu, Nuan-Ching Huang
Organization | National Cheng Kung University, Tainan City, Taiwan

Walking is the most frequently and easy way of physical activity among the older adults. In order to promote walking and physical activity for the older adults, friendly and supportive environment for mobility need to be constructed. Taiwan became an aging Society in 1993, and is projected to become an aged society and super-aged society in 2018 and 2026 respectively. Negative population growth will occur in 2021 at the earliest and in 2025 at the latest. Nearly 12% of older adults are disability.

The three-year project “The effect of the traffic transportation system of built environment to the active ageing of the elderly” designed a questionnaire contained demographic, activities types and frequency, related travel modes, transportation categories, health status and quality of life. A telephone survey was used to collect these information of the older adults aged 65 years and above in 2017. “Ottawa Charter for Health Promotion” was used to prioritize main issues and the determinants including structure, environmental, culture, individual, and health services according to the information of this survey. Then, action means of Ottawa Charter was used as the structure for policies and strategies suggestion.

A total of 1591 sample were recruited in this analysis. Results showed that main transportation modes are “walking”, “ride a motorcycle”, “drive a car” and “Take bus”. High satisfaction on of walking environment could reduce the accident and enhance the health-related quality of life among the older adults. Priority Issues included: (1) Difference of health status and disability among the older adults. (2) Barrier free environment for walking, wheelchair. (3) Utilization of public transportation. Policies and strategies among “Healthy Policy”, “Supportive Environment”, “Community Action”, “Individual Skills” and “Re-orient Health Services” were proposed and recommended.
7.1.3 PARALLEL SESSION 4: HEALTHY CITIES FOR “PEOPLE” (Transport, Healthy Life Styles & Environment)
Parallel Session 1: Healthy Cities for “People” IV  
(Transport, Healthy Life Styles & Environment)

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Reconstruction of Homeless Life and Recurrence of Mengja Glory</th>
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<tr>
<td>Presented By</td>
<td>Qiu, Qing-Xiong</td>
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<tr>
<td>Author</td>
<td>Qiu, Qing-Xiong</td>
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<tr>
<td>Co-authors</td>
<td>Wu Chia-Ling</td>
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<tr>
<td>Organization</td>
<td>Department of Social Welfare, Taipei City Government</td>
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**The introduction**

In order to improve the phenomenon of “the notorious three (gangsters, streetwalkers, hoboes)” in Wanhua District, which seriously affect the environmental cleanliness, the order of the area and the development of sightseeing tourism, it is necessary to develop local characteristics so that the core culture can be totally changed.

**Objective(s)** To create a Mengjia Park project and to assist the homeless in putting an end to homelessness by connecting the relevant employment and settlement resources through cooperation among bureaus.

**Methodology** Through inter-bureau cooperation, the whole team enhanced the life quality of the citizens and actively took care of the underprivileged to create a welfare society with mutual assistance, dignity and high quality. In addition to helping the homeless return to the role of contributors to the community through support, empowerment, and life rebuilt, this project responded positively to the local residents and improved the quality of the environment.

**Results and discussion** The Mengjia Park project aroused the residents’ self-confidence and honor, implemented the resident-oriented participation, returned the community to the autonomous operation, and managed the sustainable development of the community, which enabled Wanhua to maintain a friendly city environment.

**Conclusion** Through cross-sectoral cooperation and local community participation mechanisms, the unique features of Wanhua have been gradually developed. In addition to improving the stereotype of “the notorious three” in the past, the development of Wanhua’s healthy environment was reinitiated.
Parallel Session 1: Healthy Cities for “People” IV (Transport, Healthy Life Styles & Environment)

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Developing Urban Planning Guideline for Creating a healthy city in Gangdong-gu</th>
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<tr>
<td>Presented By</td>
<td>Lee Sun Hyoung</td>
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<tr>
<td>Author</td>
<td>Donguk Lee</td>
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<td>Co-authors</td>
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<td>Organization</td>
<td>Gangdong-gu Office, Seoul, Republic of Korea</td>
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Introduction
A community health is determined by both individual and environmental factors through affecting their healthy lifestyle. In order to create a more sustainable and healthy city, strategies for urban planning and design is needed to improve the urban environment.

Objectives
This study aimed to identify urban health status in Gangdong-gu and to develop urban planning guideline for creating a healthy city based on empirical analysis of health and physical environment.

Methodology
Using data from Community Health Survey in 2011-2016, multilevel logistic regression analysis was conducted to identify physical environments affecting on the residents' health. Strategies for urban design were derived by spatial regression analysis about the effects of environmental factors on health within 500m or 1km from the residential areas.

Results and discussion
From the empirical analysis, the physical environments significantly influenced on the residents’ health status and health behaviors. Based on these empirical evidences, the guideline was developed including principles and strategies for 4 main objectives. Urban planning strategies for a 1) Sustainable City include minimizing health risks from air pollution, heat wave and noise. For an 2) Active City, the strategies to improve environments facilitating walking and physical activities were suggested, and strategies for managing accessibility to healthy dietary options were included for a 3) Fresh City. Strategies for an 4) Equitable City were about improving access to public health organizations and exercise facilities.

Conclusion
This guideline can be applied to various licenses and projects such as the promotion of public works in the area and construction of the district, and it is planned to impose a bylaw for the legal basis for the future. We will continue to make scientific evidence for spreading and applying the urban planning guideline, increase the applicability by establishing a collaborative governance system.
**Abstract Title**: Community Participation in Build Environment Planning to Promote Active Lifestyle among Adolescent

**Presented By**: Dr Rosalia Saimon

**Author**: Rosalia Saimon, Chang Kam Hock, Choo Wan Yuen2, Awang Bulgiba, Ng Chirk Jenn, Abdul Riezal Dim, Alan Dilani

**Co-authors**

**Organization**: Universiti Malaysia Sarawak, UNIMAS

**Introduction**: Prevalence of physical inactivity among Malaysian adolescents is severely high. Apart from schools, neighbourhood is a key setting for adolescents to be physically active. Provision of recreational facilities, aesthetic design and public spaces may predict participation in physical activity (PA). These provisions require government funding which might be limited. This has necessitated community participation in built environment planning.

**Objective**: This project aimed to explore the feasibility of community participation in built environment planning to promote active lifestyles.

**Methodology**: The project site is located at the south of Siburan town, about 31 km from Kuching city. In Phase I, 36 adolescents were involved in the neighbourhood environmental audit by using a photovoice research technique. Audit findings were used to inform designers for the purpose of built environment planning. In Phase II, six factors principle of “pull strategies” design was applied on selected sites. In Phase III, the audit findings and built environment design outcomes were informed to relevant authorities through a community dialogue. Community participation was evaluated based on motivations for participation and satisfaction levels.

**Results and Discussion**: The lack of PA facilities; poor pedestrian infrastructure; poor maintenance of natural resources (e.g. rivers and hills) were identified as factors that limit adolescents’ engagement in PA. The design outcomes on selected sites were constructed based on community-participatory research. The community seems to have an interest in their neighbourhood environment planning processes in regards to health issues. Their satisfaction level in this project was high. Their participation was motivated by relevant issues and expertise provided to support their concerns.

**Conclusion**: Photovoice is a suitable technique for engaging young people and community as a whole in built environment planning process. Community participation is an essential first step for successful planning and implementation.

**Keywords**: Adolescents; Built environment; Community participation; Photovoice; Physical activity
Parallel Session 1: Healthy Cities for “People” IV (Transport, Healthy Life Styles & Environment)

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<tr>
<th>Abstract Title</th>
<th>Health Conscious city: The 100-year lifetime</th>
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<tr>
<td>Presented By</td>
<td>Harada Hideyuki</td>
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<tr>
<td>Author</td>
<td>Harada Hideyuki</td>
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<tr>
<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Fukuroi City, Shizuoka Prefecture</td>
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**Introduction:**
In 1993, Fukuroi City declared itself to be ‘Japan’s Number One Health Conscious City’ to appropriately respond to different situations in each area and has been working towards creating a city where residents can live a fulfilling life until 100 years old.

**Objectives:**
To ensure that citizens can lead a healthy lifestyle in the region they are comfortable living in.

**Methodology:**
Established the ‘General Health Centre’ in 2015, as the center for community-based integrated care, in which health, medical care, welfare and aged-care departments collaborate.
Hold walking events and provide dietary guidance at each of the 14 areas with community centers for citizens to become proactively involved in health activities and to guide lifestyle improvement. Exercise classes and health consultations are also held in each area at approximately 150 community halls.
Developed a smart phone application that records and manages walking. It provides incentive to stay healthy and points can be exchanged at local stores.

**Results and discussion:**
As citizens have become health conscious, there has been a higher number of in-depth medical checkups and low percentage of deaths caused by lifestyle diseases, which has seen a rise in the population.
Fukuroi is continuously chosen as the “city individuals want to keep living in” due to recognition of its “healthy lifestyle” initiatives.
Enactment of Fukuroi’s ‘Health Conscious City Ordinance’ further promotes health development based on cooperation and collaboration.

**Conclusion:**
Continue to support and train instructors and volunteers so as to encourage citizen’s proactive participation in health activities.
Strengthen relations with corporations by supporting initiatives related to employees’ health promotion.
Continue to promote health and encourage active participation in the community so that citizens can continue to lead a fulfilling and engaging life in this ‘100-year lifetime’ period.
Parallel Session 5: Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation
### Parallel Session 5: Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

<table>
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<tr>
<th>Abstract Title</th>
<th>Korean Healthy City Quantified Ranking System (KHCQ) for Healthy Cities in Korea</th>
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<tr>
<td>Presented By</td>
<td>Prof. Ku-jeom Chung</td>
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<tr>
<td>Author</td>
<td>Prof. Ku-jeom Chung, Prof. Kwi-back Kim, Ph.D. Mi-jung Park, Ph.d. Candidate Danny Kessler, Ju-suk Son</td>
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<tr>
<td>Organization</td>
<td>Wellness Tourism Institute, Y'sU Youngsan University, Republic of Korea</td>
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**Introduction & Objective**

This study examined the components and effects of the development of an assessment system called KHCQ (Korean Healthy City Quantified). This assessment scores a healthy city ranking among the 254 Korean cities. Political impacts and effects on Government election results will be examined in 2018.

**Method**

The experts’ interview techniques were applied to examine the components and effect of the development of assessment system KHCQ (Korean Healthy City Quantified).

The major components of indicators were analyzed and the developers of the KHCQ were interviewed respectively.

**Results**

The interviews revealed 9 indicators were used to assess each community without a statistical bias. This was to prevent the ranking reliability from possible complaints of lower ranked community leaders. Furthermore, the effect of each community’s healthy city ranking made a huge impact not only on city officers but also for citizens. Social media, radio stations, TV newscasters, and major newspapers all discussed KHCQ and its effects on the 2018 election voting preferences.

**Conclusion**

The effect of KHCQ was recognized beyond the researcher’s expectations. This year is an election year for Mayors & Governors, which happens every four years in Korea. Unlike previous elections, many of the candidates who were up for election and reelection are competitively trying to apply the KHCQ policy to their communities, to utilize this healthy city ranking, to get the more attention from the voters.
## Parallel Session 5: Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Citizen Participation as an Effective Strategy of Creating Healthy Cities</th>
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<tr>
<td>Presented By</td>
<td>Dr Te-Jen Hung</td>
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<tr>
<td>Author</td>
<td>Dr Te-Jen Hung</td>
</tr>
<tr>
<td>Organization</td>
<td>Taipei Health Promotion Association, Taipei City, Taiwan</td>
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</tbody>
</table>

### Names and addresses of authors:
Te-Jen Hung MD, Standing Adviser, Taipei Health Promotion Association 45-1, Chung-Yang South Rd., Section 1., Beitou 11236, Taipei City, Taiwan.

### The Introduction:
Community participation is one of the most important part of the healthy cities plan. “Building a livable and sustainable healthy city” has been the vision of Taipei City since 2015. Citizen Participation Committee was set up to provide mechanisms for citizen participation in public affairs. Citizen Participation Committee has Open Data task force provides open access to government big data; Participatory Budgeting task force holds i-voting to decide budget.

### Objective(s):
In the past two years (2015 and 2016), the public consultation and i-voting has passed 130 participatory budgeting proposals of district and city levels, which were transformed into policy options.

### Methodology:
We use quantitative analysis of these participatory budgeting proposals in the past 2 years.

### Results and discussion:
After a deeper analysis of these proposals, we find that these proposals reflect the needs of living in the neighborhood. Most of the proposals reached the 17 sustainable development goals (SDGs) of United Nations.

### Conclusion:
Citizen participation provides a mechanism of bottom up for healthy city. This article will demonstrate how citizen participation in accordance with Arnstein’s “Ladder of citizen participation”, and is an effective strategy of creating healthy
Abstract Title | Community participation and empowerment: findings from the recent evaluation of three healthy cities in the eastern Mediterranean Region
---|---
Presented By | Dr. Nazar A. Mohamed Elfaki
Author | Dr. Nazar A. Mohamed Elfaki
Organization | Ministry of Health, Sultanate of Oman

**Introduction:**
Healthy city concept has been widely accepted globally and has been established in all six World Health Organization (WHO) Regions. Community involvement, empowerment and leadership are embedded core principles in the Healthy Cities projects.

**Objective:**
This paper aims at presenting the findings from the recent evaluation of three healthy cities in the Eastern Mediterranean Region carried in 2018 with a main focus on community participation and empowerment.

**Method:**
The evaluation was based on the WHO/EMRO healthy city 80 indicators which overarched around 9 domains. It included three cities (Al-Dariyah and Al-Jamoum in Kingdom of Saudi Arabia and Al-Yarmouk in Kuwait) which went through the WHO/EMRO process i.e. they registered in RHCN; undergone the self-assessment and applied to be recognized as healthy city based on the 80 indicators.

**Results & Discussion:**
45 indicators are related directly or indirectly to community participation and empowerment, which constitutes 56% of the 80 indicators. The findings revealed that three cities were peculiar in demonstrating the concepts of community involvement, empowerment and leadership in reality terms. Al-Dariyah and Al-Yarmouk cities achieved 89% of the indicators, while Jalajil city achieved 87%. The three cities had well mechanisms for communities to voice themselves and participate in decision-making, assessing the needs, setting priorities, planning better for their cities, as well as monitoring. The community engagement was based on voluntarism with high sense of loyalty, and it has been well demonstrated in community organizations like women and youth groups.

**Conclusion:**
The evaluation demonstrated the added value of the HCP vision, values, concept
and approaches in empowering the communities through different innovative mechanisms and modalities. The concept of community participation and empowerment has generally moved from specific ad-hoc or occasional events to an inbuilt and integrated strategic component that plays significant in the success and sustainability of the city development.
Introduction:
In view of Taiwan’s understanding of the importance of community empowerment for urban sustainable development in the process of global urbanization, it has learned from the examples of the University of the Third Age in the U.K. and the Sweden Reading Club. It has been two years since Taiwan pioneered in establishing the “Elderly Self-directed Learning Group Experimental Project” in 2016. With the concept of active ageing as the basis, the purpose of the project is to import a learning group made up of elders in order to meet their diverse learning needs, to enable elders to share their learning experiences and form a support network to resolve problems through joint efforts.

Objective:
Explore the facts and influences of the “Elderly Self-directed Learning Group Experimental Project” implemented in Taiwan to gain an initial insight.

Research Method: The document analysis and questionnaire survey methods were employed. “Elderly Self-directed Learning Group Project” implementation related data was adopted, which was browsed and compiled through descriptive analysis, classification and interpretation.

Results and Discussion:
Classified by age, 890 people belonged to the “below 64 years old” age bracket (35.77%), 1,154 people belonged to the “65-79 years old” age bracket (46.38%) and 444 people belonged to the “above 80 years old” age bracket (17.85%); classified...
by special status, 86 people were under “indigenous peoples,” 110 people were under “disabled persons” and 179 people were under “elders living alone.” From 2016 to 2017, a total of 2,388 persons participated in elderly learning activities for the first time.

Conclusion:
(1) This project created more opportunities for the elderly to participate in learning and elderly human resources development and reutilization, with positive significance on community participation;

(2) The government’s expenditure on elderly education was effectively reduced, and the community resources were integrated with maximum effectiveness; (3) Overall, the project contributed to urban continuity as well as elderly development in terms of health promotion, interpersonal interaction, family harmony and physical and mental health through the implementation of community self-directed learning activities.
Parallel Session 6: Healthy Cities in the Digital Age
Healthy living, inclusive of ‘Health’ is a broad concept, affected by various individual and aggregate factors. These factors can be synergistic only in the presence of ‘Objective’ decision making at individual and community (policy) level. Policy makers and funders of the policies have to decide what to promote, what to discourage, and how to acquire the funds for their policies. Together, these policy decisions determine the individual and community life style and in turn contribute to the quality of health in the society. Incorporation of information technologies in our day to day affairs has not only revolutionize our life, but has also resulted in the massive generation of real time representative data at personal and aggregate level. This data is reflective of the way we live our lives and should be used for future decision making for improving our living standards. Unfortunately these data generating system exist in ‘silos’. There is an urgent need to standardize and integrate these system for better decision making. The main objective of this presentation is to highlight the principles of objective decisions making, and demonstrate that the day to day data collected at various individual as well as institutions levels can be a useful tool for making objective decisions that contribute to healthy living.
## Introduction:
Frailty increases the risk of disability, reduces the averaged healthy life expectancy (HALE, REF). To effectively prevent frailty of elderly, the “Fit for Age Cloud Information Platform” is developed to integrate health promotion assessment, exercise and nutrition records management services, and achieve the goal of reversing frailty by public promotions.

### Objective:
1. To decrease the deterioration rate and extent of disability through affordable and accessible rehabilitation programs conducted in healthcare units.
2. To promote health, and to prevent or reverse frailty through prescribed exercise program conducted in the community.
3. To create partnership with private sectors, including commercial and/or social entrepreneurs, and to facilitate development of the exercise and health managing industry.

### Methodology:
1. Community campaign: it mobilized all departments of the city government, including Department of Health, Social Welfare, Education, Civil Affairs, Labor, etc., aiming to advocate and increase the public awareness.
2. Data collection and management: to collect data of frailty tests, before and after the interventions.
3. Information aggregation: “Fit for Age Cloud Information Platform” is developed to perform personal health records.
4. Business opportunity: Integrating private-public partnership to achieve the goal of sustainable development.
5. International collaborations: combination experiences in frailty prevention, like “Exercise is Medicine, Taiwan”.

## Results and discussion:
From August 2016 to the end of December 2017, key results are: 38,323 promotional events were held, 1,559 sites had been set up in the community, 320,913 current registered users (App downloaded: 65,551 people). The monthly population active utilization ratio is 12.0%, exercise & nutrition active utilization ratio is 8.4% and 2.2%, respectively.

**Conclusion:**
The program utilized various ICT platforms, such as personalized WEB accounts and multifunctional module APP, to enhance citizen’s awareness and literacy to frailty, and to help individual citizens to conduct their own self-managed exercise and nutrition interventions against frailty.
### Abstract Title
Promotion of Infants’ Low Sodium Diet Using A Mobile App

**Presented By**
Mrs Park, Seongjung

**Author**
Kim, In-Guk, Shim, Ji-Woo

**Organization**
Songpa-Gu Public Health Center, Republic of Korea

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**Introduction:**
As infants develop the eating habit which determines life-long health habits and excessive sodium intake of Koreans is attributed to the habit of having soups and stews, Songpa-gu operated the ICT-based monitoring program for daycare centers in Songpa-gu.

**Purpose:**
This program aims to help infants’ development for the healthy eating habit by reducing sodium intake of infants through controlling of the salinity of the food provided in daycare centers, using “Food Service Sheriff,” an ICT-based mobile app.

**Methodology:**
The sodium intake through soups and stews served at daycare centers in Songpa-gu was identified in 2013. A mobile app (Food Service Sheriff) was developed from January to September 2014, and the sodium intake was calculated based on images of meal trays from April 2015 after registration of the service on the app for online and offline monitoring and feedbacks. In addition, an education program for salt reduction1 was adopted and the standard recipes were developed and distributed.

**Findings:**
The salinity2 of soups and stews served by daycare centers providing high sodium foods3 decreased by 46.6% from 0.71% (397.6mg) in July 2013 (before the program was launched) to 0.38% (212.8mg) in 2017 when the program was completed. That of the daycare centers providing low sodium foods4 decreased by 12.2% to 0.36% (201.6mg), and remained at 0.37% (207mg) in December 2017.

The salinity of soybean paste soups 5 served at daycare centers decreased by 51.9% to 0.38% (212mg) after on-site education 6 was provided (December 2017), compared to 2013.

---

1 Education and mentoring customized for cooks, parents and infants
2 Salinity of the solution (NaCl, %)
3 Salinity of 0.70% or higher (392mg)
4 Salinity of below 0.50% (280mg)
5 Selected the food with the high average salinity among foods served at daycare centers
6 On-site one-to-one low sodium cooking education and mentoring for cooks

According to the test on infants' taste for salinity7, 60.0% of infants attending daycare centers distinguished mineral water and the standard solution8.
to the research on the preference between mineral water and saline solutions of each concentration, 61.4% of infants attending daycare centers researched preferred mineral water, indicating that infants are developing the healthy taste and preference for salinity.

■ Conclusion:
Sodium intake through soups and stews served at daycare centers has continuously decreased. The absolute threshold against the salty taste of infants attending daycare centers utilizing a mobile app was significantly lower than that of infants attending daycare centers not utilizing the mobile app, indicating that the monitoring and feedback system provided using a mobile app effectively helps infants’ development of the healthy taste for salinity, the healthy preference for salinity and the low sodium eating habit.
Parallel Session 6: Healthy Cities in the Digital Age

<table>
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<tr>
<th>Abstract Title</th>
<th>Digital Road, Sustainable Operation</th>
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<tr>
<td>Presented By</td>
<td>Chun-Cheng Chen</td>
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<tr>
<td>Author</td>
<td>Chun-Cheng Chen, Chin-An Su, Jiung-Ye Fan, Chih-Ying Lin, Ming-Hung Hsieh</td>
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<tr>
<td>Organization</td>
<td>Tainan Public Works Bureau Planning Division, Taiwan</td>
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**INTRODUCTION**

In the past few years, GIS and the overall IT environment have undergone rapid development. Owing to limited governmental resources and manpower, how to utilize IT effectively in improving governmental management efficiency has become an important issue.

**OBJECTIVE(S)**

As information technology continues to develop, creating road related facilities and managing information have become simple tasks. The integration of digital roads from Google Maps and the comprehensive application services offered by information service provider are expected to improve the efficiency of the government in road management.

**METHODOLOGY**

In this study, GIS technology and mobile devices will be used to build a digital management platform and APP. Furthermore, road related information and real-time announcement of any road construction work will be introduced to WEB, allowing people to receive information instantly and to immediately provide feedback. On the other hand, government staff can also apply the integrated information system to emergency road repairs, which not only increases repair efficiency but also prolongs the lifetime of roads.

**RESULTS AND DISCUSSION**

By creating the digital management platform and APP, management efficiency can be significantly improved. Working personnel no longer need to spend so much time on road inspection. Through video streaming and online photographs, working personnel can see immediately what’s happening on site. By implementing project integration, at least 1,000 paving construction jobs can be reduced every year, which not only saves governmental funds but also leads to the benefit of energy & carbon reduction.
CONCLUSION

It is known from this study that GIS digital management platform exhibits very strong functional benefits. Not only can the system can be applied to improve road management, if in the future buildings and traffic information can also be integrated into the system, further advancement in government management efficiency can certainly be expected.

KEYWORDS: GIS, Road, Excavation
Parallel Session 7: Healthy Cities and Disaster Preparedness and Recovery
### Abstract Title
The iHydro/Storm Water Project

### Presented By
Author

### Co-authors
-

### Organization
Department of Irrigation and Drainage Sarawak

Sarawak being a rapidly developing state and fast approaching its advanced status by the year 2030 with more intensive urbanization, rapid agricultural and industrial development, it is anticipated that its future flooding issues would be more severe and devastating. In this respect, the State Government is adopting a more pro-active and dynamic approach towards sustainable flood management by combining both the structural and non-structural measures. The structural measures include flood bypass channel, bunding of rivers, retention ponds and land use planning whereas non-structural measures comprise of adaption of Sarawak Urban Stormwater Management (SUStoM) guideline, Integrated River Basin Management (IRBM), stormwater management studies, rainfall and water-level real-time monitoring system (iHydro) and flood detector and warning system (i.e. Intelligent Gauge - IG).

Long term measures for flood management, structurally, shall include land use master plan that must incorporate stormwater management requirements such as river reserve and regional retention / detention for integrated planning. Sustainable and effective flood management demands a holistic approach, linking social and economic development with the protection to the natural ecosystems and providing appropriate management between land and water uses.

Non-structural measure, on the other hand, with early flood warnings and timely emergency action are essential for proper monitoring of the events, to mitigate the damages of extreme events and also enable the proper co-ordination, operation and management of disaster relief. A combination of clear, accurate and timely warning messages with a high level of community awareness gives the best level of preparedness.
<table>
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<tr>
<th>Abstract Title</th>
<th>Monitoring for Haze (Outdoor Air Quality)</th>
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<tr>
<td>Presented By</td>
<td>Mr Peter Sawal</td>
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<tr>
<td>Organization</td>
<td>Controller, Natural Resources Environmental Board (NREB), Sarawak, Malaysia</td>
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Parallel Session 7: Healthy Cities and Disaster Preparedness and Recovery

<table>
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<tr>
<th>Abstract Title</th>
<th>R.I.D.E.R.S. Riders in Disaster and Emergency Response Squad</th>
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<tr>
<td>Presented By</td>
<td>Dr Olga Z, Virtusio</td>
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<tr>
<td>Author</td>
<td>Dr Olga Z, Virtusio, Ruben Ver, Md, Jimenez, Flaviano Jr</td>
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<tr>
<td>Organization</td>
<td>Parañaque City Health Office, Philippines</td>
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In a highly urbanized city, the impact of health emergencies and disasters are magnified given a densely populated area. With Metro Manila’s burden of traffic congestion, responding to such a crisis is a great challenge to Emergency Responders. Thus, the city’s Health Emergency Management Services (HEMS) Unit partnered with the community by tapping into the rising number of motorcycle riders thru their respective organizations. The objective of which was to capacitate fast and agile motorcyclists as first responders during emergencies such as vehicular accidents, natural or man-made disasters. Thru the Parañaque Riders Organization, the HEMS Unit opened up for volunteers willing to be trained on Basic Radio Communication and Coordination, Basic First Aid, Incident Recording and Reporting as well as Basic Life Support. Aside from training and technical assistance, HEMS provided volunteers with basic first aid logistics to be used when responding to health emergencies. Launched in 2016, the RIDERS have since become the city’s rapid initial responder for vehicular accidents. Providing early coordination with HEMS, traffic management office, central communication office, as well as providing initial medical management, crowd control and even convoy assistance for a more rapid ambulance conduction. Also, it has expanded from the initial 13 volunteers to now 40 motorcyclists functioning as force multipliers for the city’s HEMS unit thereby increasing coverage citywide. Building on this foundation of partnership, the City Health Office plans to increase its functionality for large scale natural disasters when mobility and transportation of crucial first logistics may be hampered. This model of community engagement for disaster and preparedness can be shared with other countries where 2-wheeled motorcycles are highly patronized.
Parallel Session 7: Healthy Cities and Disaster Preparedness and Recovery

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<tr>
<th>Abstract Title</th>
<th>Post-Typhoon Moranti Taitung County Hongyeh and Aikuopu Relocation Project</th>
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<tr>
<td>Presented By</td>
<td>Lu, Chao-Yang</td>
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<tr>
<td>Author</td>
<td>Lu, Chao-Yang, Huang, Chien-Ting; Wu, Huei-Chin; Fang, Ming-Tsung, Pan, Yao-Jen</td>
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<tr>
<td>Organization</td>
<td>Taitung County of Indigenous Peoples, Taiwan</td>
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**Introduction**

Typhoon Moranti devastated the county with torrential rains. Homes in Hongye and Aiguopu Tribes were buried in mudslides. In order to provide the disaster victims a safe living environment, the relocation project was carried out. 220 Hongye tribal people and 158 Aiguopu Tribal people, 378 people in total needed to be relocated. The project was the first undertaking following the termination of the “Special Act for Post-Typhoon Morakot Reconstruction”. The project promotion facilitated agencies’ administrative integration and innovation. In addition, upholding “away from the disaster, not away from the village”, the completed community features tradition and modern green energy in coexistence.

**Objective**

50 sustainable communities in Hongyeh and 47 sustainable communities in Aikuopu were constructed, heading toward the overall operational direction of anti-disaster, sustainability, and green energy.

**Methodology**

Safety assessments were carried out on the original residence and the planned relocation site. After the land acquisition, public facilities and houses at the relocated base were constructed. Upon completion, houses were distributed to the disaster-stricken tribal people, while continuing to pay attention to and promote environmental, spiritual and industrial rebuilding.
Results and Discussion In addition to accommodating disaster-stricken tribal people, the original natural landscape environment of both tribes was retained, while the solar photovoltaic system with an area of 3,200M² and a daily electricity output of about 1,000 kWh was constructed. Furthermore, through architecture, culture and vocabulary, a special tribal atmosphere was created, thereby building a sustainable community with cultural connotations and green energy.
Parallel Session 8: SDG2: Zero Hunger / SDG7: Affordable & Clean Energy / SDG16: Justice and Peace
<table>
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<tr>
<th>Abstract Title</th>
<th>Green Energy for Sarawak</th>
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<td>Presented By</td>
<td>Sarawak Energy Berhad</td>
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Abstract Title | Hawker Food Safety  
Presented By | Dr Drend Jores  
Author | Dr Drend Jores, Mohd. Taha Arif, Md Mizanur Rahman  
Organization | Universiti Malaysia Sarawak (UNIMAS), Malaysia  

**Introduction:**
The safety and quality of street foods are still questionable. Street food vendors are often poorly educated and untrained in food safety with lack of food safety knowledge and poor hygiene practice. **Objective:** This study aims to identify the factors associated with hygienic practice of food safety among the streets food vendors in Padawan district, Sarawak, Malaysia.

**Methods:** This was a cross-sectional study conducted in Padawan, Sarawak. Data was collected by face-to-face interview using a validated structured questionnaire. The practice of food safety was observed using a structured observation checklist. Data entry and analysis was done by SPSS version 22. A p-value <0.05 was considered as statistically significant.

**Results and discussion:**
A total of 117 street food vendors were interviewed. Bivariate analysis revealed that religion, knowledge and attitude appeared to be statistically significant predictors of food safety and hygiene practice. However, multinomial regression analysis revealed that only religion appeared to be an important predictor of food safety and hygiene practice (AOR = 14.730, 95% CI: 1.267, 171.228), with Muslim vendors having a better food safety and hygiene practices. The findings suggest that both knowledge and attitude towards food safety did not have any influence upon the food safety and hygiene practices when the effects of other variables are controlled for.

**Conclusion:** Although this study failed to establish a statistically significant association between knowledge and attitude with the hygiene practice due to inadequate sample size, some relationship does seem to exist, suggesting that food safety knowledge is vital for all street food vendors to have the necessary skills to enable them to handle food hygienically and ensure food sold is safe for consumption.

**Key Words:** Food Safety, Hygiene Practices, Food Vendors, Sarawak
## Parallel Session 8: SDG2: Zero Hunger / SDG7: Affordable & Clean Energy / SDG16: Justice and Peace

<table>
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<tr>
<th>Abstract Title</th>
<th>Healthy City: A Safe and Prosperous Greater Taoyuan That Provides Excellent Quality of Life</th>
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<tr>
<td>Presented By</td>
<td>Chih-Yuan Lin</td>
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<tr>
<td>Author</td>
<td>Huei-Ya Hu, Shyi-Jen Chen, Yuan-Ruo Zhu, Yu-Ting Liao</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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### The introduction

Taoyuan neighbors the political and economic centers of Taipei City and New Taipei City. It is in an advantageous geographical location with robust external connecting networks. Therefore, the population of Taoyuan has steadily increased in recent years. Moreover, Taoyuan features diverse ethnicity and lively energy. It is a promising emerging city.

### Objective(s)

To develop a healthy city, enhance industrial competitiveness, and create a high-quality living environment to achieve sustainable living, all while promoting regional innovative ecosystems, as well as facilitating industrial clustering and creating a risk-free city that features human ecology through the development of major transportation and public infrastructure.

### Methodology

The Taoyuan City Government has introduced various projects by focusing on both urban development and human ecology and employing overall planning and land development strategies, including a number of industrial strategies and urban blueprints, launch of Asia Silicon Valley, and Taoyuan Aerotropolis. The government has provisioned over 4,000 hectares of land to create a smart, sustainable, peaceful, safe, and high-quality city full of military relics and ecological ponds.

### Results and discussion

Taoyuan is a young and vibrant emerging city with an increasing population. It has an abundance of human resources, attracting talent, industries, and businesses. The Taoyuan City Government continues to promote public infrastructure, industrial planning, business investment, and land development, facilitating the continued development and prosperity of Taoyuan. Taoyuan offers three major benefits centered on child and senior care. Benefits include a childbirth subsidy of NT $30,000 and a childcare allowance of NT $3,000.
per month, which benefits an estimated 73,800 residents. In addition, seniors receive a maximum healthcare allowance of NT $749. Moreover, every residential area features public daycares, parent-child halls, daytime care centers, and public health centers, providing not only employment to young adults but also care for children and older adults.

**Conclusion**
Taoyuan City Government aims to provide sustainable living, work, and entertainment environments to its residents. Through development and construction, it anticipates building a new and robust city for both administration and recreation, thereby creating a peaceful, accepting, and healthy city.
**Parallel Session 8: SDG2: Zero Hunger / SDG7: Affordable & Clean Energy / SDG16: Justice and Peace**

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**The introduction**

“Taoyuan’s dried bean curd” is the epitome of Taiwan’s dried bean curd culture, profound and diverse. It promotes local and international tourism. However, the production process of soy bean industry is traditional and small, with undesirable environment for operation. Being high moisture and low acidic, germs grow easily on soy bean products, causing high risk in food safety.  

**Objective(s)**

Analyzing the inspection data, it is discovered that the rate of not keeping clean in the operation zones is as high as 73.3%. Therefore, keeping the environment clean is of the high priority. Likewise, the bureau implemented the upgrading project of soy bean manufacturing industry from 2015-2016 and the promotion plan of food micro food industry’s hygiene and food safety in 2017.

**Methodology**

A professional team was established to inspect the hygiene of the operation environment to implement graded management and promote subsidization scheme. Reviewing the improvement plans of the manufacturers, subsidization was provided by ratio (at 50% the highest). Eventually, benefit analysis and satisfaction survey were conducted regarding their improvements.

**Results and discussion**

103 manufacturers in Taoyuan City were inspected. They were classified in different grades, A, B, and C, with 27, 16, and 60 of them respectively. Taoyuan City Government promoted the improvement schemes and provided subsidization at the values of NT$ 2,032,332. The manufacturers inspected expressed that it was helpful in upgrading food safety. For example, the improvement of the ceiling could decrease bacteria count, the adding of ventilation equipment could lower the temperature to avoid food from deteriorating.

**Conclusion**

With the government help and manufacturers’ autonomous management, it improves the micro food industry’s facilities and environmental hygiene to enhance food safety, safeguarding consumers’ rights and health.
Parallel Session 9: SDG11: Sustainable Cities & Communities
Parallel Session 9: SDG11: Sustainable Cities & Communities

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<tr>
<th>Abstract Title</th>
<th>The Smart Mobility Project - Intelligence Traffic Light Management System in Kuching City</th>
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<tr>
<td>Presented By</td>
<td>Mr Norman Jan</td>
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<td>Co-authors</td>
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<td>Organization</td>
<td>Public Works Department, Sarawak, Malaysia</td>
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Urban mobility is a major contributor towards city economic activities. Road traffic congestion easily be part of the many of wicked problems in most cities. For many years, we are still struggling to manage health issues city pollution from fossil fuel combustion engines and noise pollution in major cities.

Mobility in a Smart City uses digital technologies in getting the community connected throughout their daily travel. These enhancements enable the city to reduce emissions and minimize citizen’s commuting cost, at the fastest possible time. The city, with increasingly limited resources, manages its infrastructure digitally by capitalising on community-driven connectivity.

Travel time in the city is greatly affected by the volume of traffic, depending on the time of day. Increasing road capacity is simply not an option especially within the limited space available in the city. One of favoured solution to address travel time in a city is to coordinate all its traffic controlled junctions with an intelligent system. Studies have claimed significant improvements in travel time by improving coordination between signalised traffic junctions. Studies have shown the effects of reducing traffic stops and travel time resulting in a significant reduction of suspended air pollutants. Merging the traffic junction controller systems across the presently separate stand-alone systems within each municipalities and agency is deemed necessary to achieve city-wide traffic solution. Kuching is currently implementing a pilot project to integrate city traffic management for a better traffic monitoring and coordination within the Smart City.

The Intelligent Traffic Management System in Kuching is a combination of cutting edge technologies readily available. These technologies include traffic light adaptive systems, Waze’s community-based traffic and navigation app, iHydro rain and flood reporting system, Google Traffic, Telegram, and CCTV.
The Agenda 2030 for Sustainable Development was approved in September 2015 and has the 17 Sustainable Development Goals (SDGs) as a central component. Recently, the role of healthy cities in achieving the SDGs, including SDG 11 - "Make cities and human settlements inclusive, safe, resilient and sustainable", was reinforced at the 9th Global Conference on Health Promotion (WHO, 2017). SDG 11 covers a range of distinct aspects, including urban inequalities, planning, mitigation and adaptation to climate change and resilience to disasters, and can be considered as the connection between national governments and other partners. It is very likely that previous initiatives such as the Healthy Municipalities, Cities and Communities (HMC), sponsored by the World Health Organization (WHO), could be a complementary framework to support the implementation of SDG 11 at local levels. Considering that HMC seeks to integrate health promotion and urban issues, this paper draws on a review of relevant literature and interviews with four HMC experts in Brazil to examine how HMC initiatives can help to integrate health into the implementation of Goal 11 at local levels. The analysis of interviews suggests that two key issues seem to have hindered the potential of HMC in Brazil. Probably, these issues could also be critical factors for the integration of health into SDG 11 at local levels. The first barrier identified was the lack of a national strategy in the general guidelines for implementation in municipalities supported by the federal government. The second was the absence of effective evaluation of the results achieved by HMC. Findings suggest that there are several achievements and lessons learned from the implementation of HMC, which could contribute to integrating health into SDG 11 at local levels in Brazil.
Abstract Title: Making Sustainable City Through the Reduction of Waste

Presented By: Mr. Hidetaka Kawamoto
Author: Mr. Yoshinori Mizuno
Organization: Mayor of Owariasahi City, Japan

1. The title

Making a sustainable city through the reduction of waste

2. Names and addresses of authors

Yoshinori Mizuno, Mayor of Owariasahi City

3. The Introduction

To protect the global environment, we need to reduce the impact on the environment by reducing waste.

4. Objective(s)

To raise citizens’ awareness for waste reduction through the reduction of waste, reuse, and recycling of resources.

SDG 8: Providing work opportunities for elderly and disabled persons.
SDG 11: Making cities that are pleasant to live in by having citizens reduce waste.
SDG 12: Have people of all generations hold interest in the 3Rs (Reduce, Reuse, and Recycle), and thereby reduce waste.

5. Methodology

The city supports citizens groups which work on making fertilizers from food waste from lunches served at nursery schools and homes.

The city acts as a pipe between people who have things that can still be used but don’t know what to do about them, and people who have things they need but cannot afford to buy them.

The city collects garbage and recyclable resources sorted and put out by residents at designated locations on designated days. In addition to regular collection, the city made a recycling plaza where citizens can bring in. The city entrusts the management of this plaza to bodies which support the employment of elderly and disabled persons.
6. Results and discussion

Owariasahi has succeeded in reducing the amount of waste by 22% from about 15 years ago when the amount of waste peaked.

Citizens are now careful to refrain from buying things that may be wasted and are more responsible in their consumption.

Elderly and disabled persons have more purpose in life, and we have made the city better from the aspect of environment and employment.

7. Conclusion

Owariasahi City’s program has contributed to not only maintaining a clean environment and enhancing mental and physical health, but has encouraged citizens to think about the future of the city by actively engage in waste reduction.
Abstract Title  Guiding Animal Husbandry to Use Pig Toilets (Defecation Racks) and Reduce Wastewater Emission

Presented By Yang, Kai-Chieh

Author Yang, Kai-Chieh, Chen, Shih-Huang; Chen, Ping-Shen; Hsieh, Ching-Chuan

Organization Taitung County Environmental Protection Bureau, Taiwan

Introduction
Animal husbandry wastewater is one of the primary causes of river and water pollution. If the animal husbandry operators can establish pig toilets to collect the manure and turn it into fertilizers, the practice would follow the trend of circular economy.

Objective
Change the habits of pig bowel movement, collect the pig manure and urine, reduce the water needed and the range of the pigsty that must be cleaned, reduce the amount of wastewater generated, reduce the load to the wastewater treatment facilities and the amount of wastewater discharged, and improve the river water quality.

Methodology
The government agency would guide the operators to establish the system and invite experts and scholars to teach the operators and provide knowledge on raising domesticated pigs. Use cross-field mechanisms and invite scholars and experts of water pollution prevention and livestock conservation field to jointly provide counseling. Hold 2 demonstration/promotion events per year.

Results and discussion
From 2016 to 2017, the 17 model farms have saved an average of 1.23~1.39 hours of cleaning time and approximately 30~35 work hours each month. The improvement rate of suspended solids (SS) has reached 47.52% to 50%, the
biochemical oxygen demand (BOD) has improved by over 50%, and the chemical oxygen demand (COD) has improved by 37.26% to 70%, in discharged water from wastewater treatment facilities.

**Conclusion**

According to the results of the study, statistical analysis indicated that a single defecation rack can save 0.06 CMD (m³/day) of water, effectively reduce animal husbandry wastewater, recycle the pig manure collected as fertilizer, reduce the use of chemical fertilizers by farmers, and conform to the latest circular economy trend.
Parallel Session 10: SDG11: Healthy Cities for “PARTNERSHIP”
The introduction

For a long time in Korea, people with disabilities were invisible. The Republic of Korea is famous for its rapid economic growth, but it has long been indifferent to guarantee the basic rights of the weak and has only recently begun to reflect and improve its policies. Last year, legislation has been enacted to guarantee the health rights of disabled people in Korea, and the government and related organizations are paying keen attention. Each institution is overwhelmed with no way to cope this issue for the disabled. We should develop a community model with multi-disciplinary approach, but successful experience is so small in Korea that every organization is troubled. Under the circumstance, we tried to create a program model for the health of disabled people by linking the scattered resources of three districts (Jung-gu, Jongno-gu and Dongjak-gu) in Seoul and their public health office with National Rehabilitation Center’s research team.

Objective(s)

The purpose of this project is to build a step-by-step model for community engagement and to make personalized health care programs for people with disabilities.

Methodology

The project was carried out over a total of six months. A 10-week program was provided to 47 people with disability in mobility from physical structures or brain lesions, 7 with hearing disability and 15 with disability in cognitive and learning function. All participants had physical checkups, basic blood testing to assess risk factors of cardiovascular disease, and exercise function assessment before the program got started. According to the number of health risk factors for each type of disability, the level of intervention was divided into 1) active support groups, 2) motivational groups and 3) information-providing groups. Programs were also divided to subgroups depending on their functional level (motor skills or learning skills). Exercise education, nutrition education, and psychological support education were provided to all participants. Caregivers of people with developmental problems were also provided separate programs. At the end of the project, we received comments about the program from people with disabilities themselves, officials at
each public health center, social workers, caregivers, program instructors, and the National Rehabilitation Center's research team.

**Results and discussion**

Although it was a short program for 10 weeks, there was a significant change in the health of the participants. For all participants, strength and dynamic balance were improved, and depression index was lower. There are variations depending on the type of disability, but the total cholesterol and triglyceride levels, blood pressure, waist circumference, motor function (MAS, FMA), physical strength level (SFT), upper and lower extremity flexibility, activities of daily living (MBI), quality of life (EQ-VAS), support and relationship index and self-efficacy levels were improved.

We divided the groups by types of disability then made subgroups by motor function or cognitive function level, and it seemed to be effective to provide a program tailored to the needs of the individual health care. Through cooperation with local community members, they have found that they can provide a high level of support for health services for the disabled.

**Conclusion**

There was also some new information we learned on this project. There are variations in health information for each type of disability, different ways to accept it, and preferences for health promotion programs. The project let us know new challenges and get solid consensus about cooperation for the disabled. We have plans to develop electronic medical record communication system, provide video materials for home training. We made up our mind to find methods for the existing health service to be applied to the disabled. Creating a cooperative network is difficult, but once you have a successful business, members learn their unique roles and also partners'. The stronger the network becomes, the healthier the vulnerable group will be. We firmly believe that our achievements will be a cornerstone for ensuring the health rights of people with disabilities.
Parallel Session 10: SDG17: Healthy Cities for “PARTNERSHIP”

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<th>Abstract Title</th>
<th>Internationally-Friendly Taitung</th>
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<tr>
<td>Presented By</td>
<td>Mr Kuo-Chin Hung</td>
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<td>Author</td>
<td>Mr Kuo-Chin Hung, Ming-Shun Yu, Shu-Chin Lo</td>
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<tr>
<td>Organization</td>
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**Introduction**

Located on the east side of Taiwan with poor accessibility, Taitung’s economic development had been restricted for the longest time. Ridding itself of the labels of poverty and low household income, and moving towards an international city, have become important indicators of how Taitung is facing its challenges and continuing to make strides.

**Objective**

To create an international happiness city and achieve sustainable development through educating the residents, overcoming development challenges, and stimulating internationalization of Taitung.

**Methodology**

Concepts of global thinking have been rooted in deep education and everyday life in Taitung. In addition, we have improved the image of Taitung through focusing on English learning in elementary and junior high schools, holding host family training workshops, establishing the Taitung Youth Ambassadors team, providing English-speaking training for enterprises and placing internationally-friendly public signs throughout Taitung. To further strengthen the progress made in the aforementioned projects, we have strengthened diplomatic ties with sister cities, set up a multilingual lifestyle website, promoted the unique cultures and landscapes in Taitung, and built strong links with the rest of the world.

**Results and Discussion**
Within two years, the number of stores attaining English service emblem certification has grown by more than 50%, and the county’s bilingual signage system has been well established. We were the first in Taiwan to establish a youth ambassador team, and have provided 50 homestay host families with English training courses. Interaction with citizens in English on a notification app developed by the county government has allowed English learning to become integrated into daily life. In addition, through development of an English-friendly environment and marketing, more foreign tourists are expected to choose Taitung as their travel destination in the future.

Conclusion

We have strengthened the links with sister cities and we hope to make Taitung a desirable place to live through creating an internationally-friendly environment, and fostering the global mindsets of the residents in Taitung.
The mode of community services connecting partnerships of basic organizations and developing “Neighborhood Health Day”

Chen, Ching-Ju

Chen, Ching-Ju, Chou, Chen-Chen; Chang, Man-Lin; Lin, Yueh-Liang; Chen, Shu-Chuan

Xinyi District Health Center, Taipei City Government, Taiwan

The Introduction
70% of global deaths are attributable to non-communicable diseases (NCDs). From 2013, Taipei City, Taiwan, Xinyi District combined basic social organizations, developed the partner relationships, and created the first “Neighborhood Health Day Community Service Model”. We used roles of “advocate,” “enable,” and “mediate” to promote local accessibility, empowering community health service.

Objective(s)
Utilizing ““Neighborhood Health Day Community Service Model” to reduce risks for NCDs by adjusting the lifestyle habits.

Methodology
We build up partnership by means of convening consensus conferences with district government, cooperate with 41 village organizations in Xinyi District, empower chiefs of village and residents, and plan together the service mode of “Neighborhood Health Day”. Moreover, the experts were involved to plan the promotional modules, and the following five issues: cancer screening, mental health, physical ability, chronic disease prevention and case management were included. In addition to drawing a ““Health Day Resources Map,”“we have also continued exploring and collaborating with local medical units, to establish an ever-lasting partnership for society management.
Results and discussion
Partnership of basic social organization development has accomplished and achieved for 5 years (2013-2017)

(1) Health services had increased: cancer screening coverage of 41.2% (compared to 2013, increased 78%); blood pressure, blood sugar, cholesterol screening up to 15,208 people (increased 52%). Participation in health promotion activities by elderly reached 31.6% (increased 31%) as well.

(2) Chronic diseases in the Ten Leading Causes of Death in Xinyi District (Cerebrovascular disease, Diabetes, and Hypertension) mortality had been decreased. (3) Suicide mortality dropped out Ten Leading Causes of Death.

Conclusion
Community cohesion is the most important asset to society. Continuously to expand community partnerships and service network can be a supportive environment for the health promotion.
## Parallel Session 10: SDG17: Healthy Cities for “PARTNERSHIP”

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Transforming the Inner-City Shoemaker Community into A Model of Healthy City: The Effect of Creative Partnership Between Public Health Office, Academia, And Artists</th>
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<tr>
<td>Presented By</td>
<td>Professor Dr Haekyoung Lee</td>
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<tr>
<td>Author</td>
<td>Professor Dr Haekyoung Lee, Soon Park, Jayoung Choi</td>
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<td>Organization</td>
<td>Kookmin University, Republic of Korea</td>
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This is a report on the <Yeomchungyo Shoe Street Regenerating Project> which was proposed by Seoul Junggu Health Office in conjunction with Korean Ministry of Land, Infrastructure, and Transport (LIT) to establish an innovative model of city revitalization. As project manager, I combined the frameworks of healthy city, creative city, and urban regeneration with three goals: enhancing human capacities of community, developing health-related products, and regenerating the local economy.

Fostering creativity and connectivity through a partnership with academia and artists was the main strategy. Junggu Health Office provided financial and administrative support, Kookmin University contributed expertise from multiple disciplines and leading-edge technologies, and artists injected inspiration and creativity. We connected shoemakers with medical professionals to enhance their capacities in developing products.

We opened a private museum in Yeomchungyo to commemorate the neighborhood as historic site of the nascent Korean shoe industry and to celebrate shoemaking artisanship as a valuable legacy of urban manufacturing. We performed their stories as verbatim theatre. Putting their lives and works in dramatic narratives provided them with confidence and context that motivated the shoemaker-driven process. These experiences afforded us an opportunity to verify the power of art to connect and enliven people.

Our project was recognized three times as a successful case of city revitalization by the Ministry of LIT, Korean Alliance of Healthy City, and the Metropolis of Seoul. The most significant accomplishment for us, however, was the transformation of shoemakers from passive onlookers into active initiators.
taking on the responsibilities of revitalizing their own declining shoe district in the inner city. As a result of the project, they founded a social cooperative to share their craftsmanship and products to propagate the common good in their neighborhood, which now has a great potential to grow into an effective model for the 21st century healthy city.
Parallel Session 11: SDG3: Healthy Cities for Good Health and Well-Being – Healthy Settings
### Parallel Session 11: SDG: Healthy Cities for Good Health and Well-Being - Healthy Settings

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Healthy Environments for Healthy Living – The Singapore Experience</th>
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<tr>
<td>Presented By</td>
<td>Ms Lee Yi Ling</td>
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<tr>
<td>Author</td>
<td>Ms Lee Yi Ling, Isaac Yee</td>
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<tr>
<td>Organization</td>
<td>Strategic Planning and Collaborations,</td>
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<td>Health Promotion Board, Singapore</td>
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#### Introduction:
Singapore residents have good access to infrastructure such as sports centres, parks and gardens. Yet, only 61% of Singapore residents aged 18 – 69 years had 150 minutes of total physical activity per week (National Healthy Survey, 2010). The Health Promotion Board partnered the public infrastructure agencies to increase usage of sports centres and parks and proportion of Singapore residents who were physically active. In September 2012, the Healthy Living Master Plan (HLMP) Taskforce, an inter-agency committee led by the Ministry of Health (MOH) and the Health Promotion Board (HPB), was formed to look into ways to ensure a healthy lifestyle is within reach for all Singaporeans.

#### Methodology:
The HLMP leveraged existing infrastructure to bring healthy living to the “doorstep” of every home, workplace and school. For example, HPB worked closely with the National Parks Board, People’s Association and Sport Singapore to make available free sports programmes in the parks and community. The “Walk, Cycle, Ride SG” initiative promoted active commuting for a healthy and sustainable city. Workplaces were roped in to encourage employees to enjoy free workouts at HPB’s partner gyms during off-peak hours with the “Sunrise in the City” programme. Such partnerships were extended to private sector landlords, e.g. shopping mall operators, to leverage their spaces for the public to participate in free mass workouts.

#### Results and discussion:
The government’s concerted efforts have boosted the prevalence of Singapore residents aged 18 – 69 years with sufficient total physical activity to 81% in 2017 (National Population Health Survey). The challenge now is to sustain their active lifestyle, with minimal free programmes by the Government.

#### Conclusion:
Good design of physical infrastructure coupled with active programming optimises the impact for healthy living.
Introduction:
1 out of 5 children under age 19 in Korea are obese (in 2016), and the healthcare cost for obese children and teenagers has sharply risen by 82.9%. More notably, the obesity of lower grade students in elementary school tends to increase more steeply, and we selected three elementary schools in Gangdong gu, Seoul to perform the school environment establishment project ‘Classroom on the Move and Healthy School.’

Objective:
We intended to examine the obesity prevention effects of increased physical activity, healthy diet education, and weight tracking on students in three elementary schools in Gangdong gu selected for this pilot project.

Methodology:
Three elementary schools in Gangdong gu and a total of 430 second and third graders in those schools took part in this pilot project. To increase their physical activity in school, we made the classroom environment more physically active. We developed physically active class programs, and developed instructions for the new classes. To improve their dietary habits, quality food ingredients from the eco-friendly farm produce market in Gangdong gu were provided to the schools, and the Haley application, a smart platform to improve children’s dietary lifestyle, was used. The conclusion that Gangdong-gu has been trying to solve the problems of child obesity and health for many years is that child obesity problem cannot be solved by single policy by gu-office or public health center’s efforts. The ‘child
obesity prevention committee’, which consists of specialists in various fields such as Seinajoki(Finland) and Gangdong Public Health Center, 3 participating elementary schools, business consignment agencies, and Gangdong Education Support Office, and the ‘child obesity prevention TF team’, which consists of 7 related departments in Gangdong-gu, became partners and established health governance and pursued children's obesity prevention business with the strong will and leadership of the Mayor's health.

Results and Discussion:
Applying the Finnish case to the schools that participated in this pilot project, we developed a classroom on the move and health school model that fits in with Gangdong gu, and increased the time spent on physical activity via standing classes. 95.4% of the children responded that they found it fun to have classes in the classroom on the move, and there were positive effects that their personality changed from passive to active (36.4%), and it was effective for obesity prevention (27.3%). Gangdong gu established the Child Obesity Prevention Project Ordinance to prevent and address health problems such as child obesity. We decided to revise class programs so that they can be used more easily in schools and are planning to spread the classroom on the move across schools in Gangdong gu and nationwide to improve children’s health and quality of life.
Abstract Title
Improving Awareness of HIV/AIDS Prevention Among Under Age Children

Presented By
Hsu, Chiung-Wen

Author
Hsu, Chiung-Wen, Chung, Ming-Hsia; Chen, Chien-Chih; Hsin, Chin-Hsiang; Huang, Chien-Ting

Organization
Public Health Bureau, Taitung County, Taiwan

Introduction
In recent years, the age of the people in HIV cases has gradually declined in Taiwan. Taiwan has 37,051 (220 in Taitung) confirm cases of HIV, and people under the age of 20 accounted for 10% of the confirmed HIV cases in Taitung (5% in the nation). Considering that many campuses have advocated large-scale teaching and education, the method is ineffective. So, a new method of health education has been evaluated in 2016.

Objective
Improve the awareness of HIV/AIDS prevention among underage children, reduce the incidence of HIV in this age group, and provide early screening and treatment.

Methodology
In addition to the original school uniform promotional events for high school and college students, the HIV/AIDS case managers of the various towns and villages have also conducted small workshops in classes since 2016 to provide case samples on correct sexual attitudes and safe sex. Health screening vehicles have also started since 2018 to provide accessible services and anonymous screening for people who do not want to be exposed.

Results and discussion
In 2016 and 2017, small campus workshop classes have been held 8 and 26 times, respectively. The incidence of HIV diagnosed in Taitung County for people under the age of 20 in 2017 was 0%, which has significantly reduced. Diversified
screening, and the active discovery of positive cases has increased from 0.04% to 0.07%.

**Conclusion**
The implementation of the small health promotion workshop classes is able to provide better individualized education and inspire healthy sexual behaviors by igniting discussions amongst peers and clarifying the concepts of the sexual process. The incidence rates for juveniles have clearly declined, which demonstrates the importance of health education. However, the differences between the urban and rural areas must be considered because it may be possible to compress each manager's efforts in metropolitan districts with many school campuses. AIDS education reduces the public's stigma toward AIDS.
Parallel Session 11: SDG: Healthy Cities for Good Health and Well-Being – Healthy Settings

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Healthy City Awards in South Sulawesi, Indonesia: Expectations and Challenges</th>
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<tr>
<td>Presented By</td>
<td>Professor Dr Sukri Palutturi</td>
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<td>Author</td>
<td>Professor Dr Sukri Palutturi, Stang Abdul Rahman, Andi Mansur Sulolipu, Aslina Asnawi</td>
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<td>Organization</td>
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South Sulawesi is one of the most successful provinces in Indonesia to develop Healthy Cities (Kabupaten/Kota Sehat). This can be characterized by awards Swasti Saba, an award given by the central government to the districts/cities that successfully held Healthy Cities. The purpose of this paper is to test the appreciation of the implementation of Healthy Cities is a hope to achieve the goals of the essence of Healthy Cities or challenges. Through literature review and experience, this paper found that there is a tendency that the implementation of Healthy Cities in South Sulawesi, or perhaps in Indonesia as a whole, is due to the desire to achieve the Healthy Cities award, not the essence of Healthy Cities. This can be shown in the activities of the managers, the stakeholders involved tend to decrease after the award is reached. This paper suggests that the implementation of Healthy Cities emphasizes the essence of achieving Healthy Cities goals (clean, safe, comfortable and healthy).

Keywords: Healthy Cities, Award, Expectations, Challenges
Parallel Session 12: SDG3: Healthy Cities for Good health and Well-Being - Community
### Sex in The City: Sexual Behaviour Among Adolescents in Kuching, Sibu And Miri

**Abstract Title**

Sex in The City: Sexual Behaviour Among Adolescents in Kuching, Sibu And Miri

**Presented By**

Mr Albeny Joslyn Panting

**Author**

Mr Albeny Joslyn Panting, Dr. Haslinda Abdullah, Dr. Samsilah Roslan, Dr. Ismi Arif Ismail, Teresa Yong Sui Mien

**Organization**

Institute of Health Behaviour Research, Ministry of Health Malaysia

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**Introduction:**

Urbanization plays an important role in adolescents’ sexual behaviour besides other aspects like family and religious values, community connectedness, rural-urban migration and socio-economic status. Adolescent risky sexual behavior are rather rampant in major towns in Sarawak however limited studies focus on these issues. One related issue is teenage pregnancy that involves unmarried young girls below 19 years old.

**Objective:**

The purpose of this study is to determine the prevalence of adolescent involvement in premarital sex in three major towns in Sarawak namely Kuching, Sibu and Miri.

**Methodology:**

Findings in this paper is part of a study concerning risky sexual behaviour among adolescents in Sarawak. A cross-sectional study using multistage clustered sampling (N=1146) was conducted in Kuching, Sibu and Miri respectively. The subjects were adolescents aged between 15 and 19 years old. Self-administered and validated questionnaire was used and done from August to November 2016. Descriptive and bivariate analyses were conducted using SPSS version 22. Ethical approval was obtained from UPM Ethics Committee and Ministry of Health Malaysia.
**Results and Discussion:** Response rate were 94% (N=1086) with male (42.6%) and female (57.4%); mean age (17.3 years old, SD 1.3) and still studying (80%). Overall prevalence of premarital sex was 9.5% (n=103). In terms of location, the highest prevalence was in Sibu (13.8%) followed by Kuching (8.3%), and Miri (6.5%) respectively. Whereas by ethnicity; Iban (3.3%), Malay (2.8%), Chinese (1.8%), Bidayuh (0.9%) and Orang ulu (0.5%) respectively. By age group, the highest prevalence was among adolescents aged between 16 to 18 years old (5.8%). Sexual debut reported was as early as 13 years old. Risky sexual behavior scale scoring also indicated subject involvement in unsafe sex (mean score 1.11 out of 5 points).

**Conclusion:**
This finding may further improve the understanding of adolescents’ sexual behaviour and provide input for better planning and developing sexual health programs in Sarawak.
To Establish a Mental Health Promotion Model based on the Concept of the 3-Levels of Prevention in Public Health

Yang, Ching Ting
Yang, Ching Ting, Chou, Chen-Chen, Chen, Shu-Chuan, Chang, Man-Lin; Hsieh, Ming-Yu
Taipei City, Taiwan

The Introduction
In 2013, the suicide rate was 11.84 (per 100,000 population), in Xinyi District, Taipei City, Taiwan, has been the 11-leading cause of death which was higher than Taipei City, (9.74 per 100,000 population), and therefore ranked as the second place among the 12 districts in Taipei.

Objectives
To enhance community mental health awareness, and to reduce suicide mortality.

Methodology
Xinyi District has collaborated with over 30 units from different field to create the “Intentional Injury Prevention Committee”. We make an effort to promote mental health and strengthen the connections of communities’ resources network. Utilizing strategies of early detections and early treatment, the Primary Prevention Level: we are the first one to use the method of movie appreciation and discussion to improve mental health for the elderly. Furthermore, we established mobile “Spirit Mini Troupe,” trained voluntary suicide gatekeepers based on the unit of villages. The Secondary Prevention Level: applying the Geriatric Depression Scale (GDS-15) to monitor older adults. The Tertiary Prevention Level: mental counseling referral. To enhance the community resources connection, the service of mental counseling referral, allowing the issue of mental health to be promoted smoothly.

Results
49 movie appreciations and discussion were held with 952 participants, 38 tours
by “Spirit Mini Troupe” attracted 797 viewers, 494 people were received voluntary suicide gatekeepers training, 35 lectures on mental health with 672 people participated. A total of 3,032 elderly were screened for the GDS-15, with 281 of them being referred. Reported suicidal case raised up from 300 to 406 (increased 35.33%). The suicide rate declined from 11.84 to 7.44 per 100,000 population (decreased 37.16%) became ranked at the 15th leading cause of death, showing the effectiveness of our promote strategies.

**Discussion and conclusion**
At the beginning of our campaign to promote the mental health in Xinyi District, Taipei City, Taiwan. We integrated community resources and employed a variety modification of strategies to maximize the benefits of the services. Apart from acquiring investments of resources, we also brought the issue of "Mental Health Promotion" to different fields, and carry on the responsibility of an advocator
Background: Increased elderly population in Sarawak together with their morbidities and increase women workforce influence the norms of caring environment. Arrangement of suitable accommodation for the elderly has become an issue. This study explores the concept of senior living which is preferred by them. The senior living concept range from resort-like homes to village ambience.

Methodology: This was a state-wide, cross sectional study using stratified sampling method. A total of 520 elderly age 60 years and above participated. Data were collected using guided questionnaires and the type of senior living arrangement shown to them using photos. Univariate and multivariate logistic regression analysis were used.

Result: The mean age for the respondents was 68.5 (7.00) years ranging from 60 years to 93 years. Most of them stay with families and only 4.8% staying alone. More female respondents as compared to male with ratio of 1:1.87. The highest prevalence of morbidity was vision problem. About 55.2% perceived as having good quality of live, however only 42.3% were independent for their activity of daily living. Majority do not agree with senior living arrangement and only 26.9% accepted the senior living concept. Of those who agreed, majority of them preferred the village-model concept. Significant factors for the acceptance were Iban ethnicity and having joint pain as co-morbid.

Conclusion and recommendation: Majority of our elderly still stay with their families. Most of them did not agree with Senior Living Concept. With their current status of health, activity of daily living and living arrangement, the responsible agencies should create more supportive environment to support their wish to stay with families. The existing elderly programme which focuses on promotion, prevention, early diagnosis and treatment, rehabilitation and social activity should be strengthened. The Reviewed Approach (REAP) which addressed wellness and illness simultaneously is a good approach to prevent morbidities among the elderly. This will shift elderly care from sickness towards wellness and maintenance of health. In addition, for those who need Senior Living arrangement, the respective agencies need to do analysis for the acceptance of this concept.
### The introduction

According to the Diabetes Taiwan yearbook, the prevalence of diabetes had reached 6.4% in 2008; there were 172,479 diabetic patients in Taoyuan in 2017, accounting for 7.9% of the city’s population. Diabetes can cause systemic complications and lower patients’ quality of life.

### Objective(s)

This diabetes care certification program aims to nurture highly qualified diabetes caregivers. Diabetic patients’ self-care ability is developed through the diabetes care team’s tracking management on the patients, so the incidence of complications in diabetic patients can be delayed or reduced.

### Methodology

1. Promote the certification and continuing education and training for medical personnel in the Diabetes Shared Care Program (DSCP).
2. Establish diabetic patient groups to offer a psychological support system for the patients.
3. Offer referral service based on diabetic fundus exam and go on community eye-screening tours.
4. Provide home-based remote diabetes care services with the use of 4G technology.
Results and discussion
The diabetes care quality indicators in 2017 showed increases in the glycated hemoglobin examination rate to 94.51%, blood fat examination rate to 85.43%, microalbuminuria examination rate to 57.14%, fundus examination rate to 38.81%, and number of care recipients to 62,006. In addition, the City’s diabetes mortality rate was lower than the national rate.

Conclusion
By promoting the DSCP, Taoyuan City has seen year-on-year improvements in the diabetes care quality indicators. In the future, efforts will be put to increase the public’s understanding of diabetes and facilitate the early detection and intervention of diabetes to achieve a comprehensive control of diabetes and lower diabetes-induced complications.
7.2 PARALLEL PAPERS FOR POSTER
HEALTHY CITIES IN THE DIGITAL AGE
**Abstract Title**  Household Registration Service for Citizen Convenience  

**Author**  LI, CHUNG-LUN  

**Co-authors**  -  

**Organization**  Taitung County Civil Affairs Department  

### Introduction
Population aging is serious in Taitung County because of its vast territory and inconvenient transportation.

### Objective
The county government started the mobile service in 2015 to save citizens from travel.

### Methodology
Add household registration services to the citizen service center. Supply mobile devices to provide home services for citizens with disabilities or living in remote areas. Combine with NHI card renewal and reissuance services.

### Results and discussion
1. Service satisfaction: Up by 11%.
3. Expenses saved from travel for citizens: Up to NT$95,472 in 2017 and over NT$1,600 per citizen in remote areas.
4. Time saved from travel for citizens: Over 40 minutes per citizen on average and 2 hours per citizen in remote areas.

### Conclusion
1. Assistance with the neutralization for Br. Buchel Augustin and Fr. Gottfried Vonwyl.
2. Active care and assistance for new immigrants in divorces.
3. Delivery of the citizen identity card to veterans’ homes.

Assistance with the reunion for Mr. Zhong working in mainland China.
Healthy Cities in the Digital Age

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<tr>
<th><strong>Abstract Title</strong></th>
<th>E-Tax Services for the Elderly</th>
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<tr>
<td><strong>Author</strong></td>
<td>Chin, Chiao-Chiao</td>
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<tr>
<td><strong>Co-authors</strong></td>
<td>Cheng, Chun-Chu; Liu, Feng-Ying; Li, Su-Chin; Huang, Chien-Ting</td>
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<tr>
<td><strong>Organization</strong></td>
<td>Tax Bureau, Taitung County</td>
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**Introduction** With 15% of the population being elderly people, population aging is serious and ongoing in Taitung. Due to geographical hindrances and limited transportation, services at the tax bureau are inconvenient, costly, and time-consuming for elderly people. An online tax service is thus tailored for elderly people with IT and the internet.

**Objective** Build a smart tax system with IT to reduce inconveniences for citizens and enhance administrative efficiency.

**Methodology** Offer e-home service, home installation of online declaration software, video equipment installation in community offices, online customer service system, and information security control for the tax administration database to maintain efficiency and security. Arrange local publicity activities and form a tour service team to publicize and provide services in local community.

**Results and discussion** A total of 2,157 applications for e-home services were accepted in 2017 to shorten a total of 8,628 hours of travel, four hours each case. A total of 91 publicity activities were organized in collaboration with agencies and civilian groups for 30,428 people.

**Conclusion** Neither geographical hindrance or inconvenient transportation is an issue hindering elderly people from accessing tax services and enjoying “ubiquitous”, “friendly”, “proximate”, “timely” full-range tax services.
Healthy Cities in the Digital Age

Abstract Title 5 Intelligent Policing Project of Chiayi City - 5i Chiayi, I Love Chiayi

Author Chan, Yung-Hua

Co-authors -

Organization Chiayi City Police Bureau, Chiayi City Health Promotion Association

The introduction:
As the guardian of Chiayi City, CCPB makes efforts in fighting against crime, maintaining traffic safety, providing public service, etc. **Objective:** In response to information technology, aging of population and human rights protection, CCPB performs a wide variety of police administration to ensure a healthy and livable community.

**Methodology:** By combining Information and Communication Technology (ICT) and Internet of Things (IoT) into application, CCPB put forward “5 intelligent policing projects of Chiayi City” (5i Chiayi) based on local circumstances. The projects are as follows: (1) iPatrol Cars -- Cloud Intelligent Patrol Cars. (2) iWatch -- Intelligent Security Surveillance System. (3) iCall -- Intelligent Reporting System. (4) iAPP -- EZ Police. (5) iData -- Crime Data Analysis.

**Results and discussion:** Through 5i projects, Chiayi City was one of the only two cities in Taiwan which had a decrease in criminal offenses, an increase in the number and the rate of crimes solved, for two consecutive years (2015 and 2016). According to crime data analysis of the past 12 years, the criminal offenses has decreased to 3,765 (53.5% decrease) and the crime solving rate has increased to 92.48% (20.8% increase) in 2017.

**Conclusion:** CCPB will continue to utilize big data in police governance and provide a wider variety of public service to its citizens. With the help of intelligent technology, we aim to protect our homes, bring our residents a safe, sound and healthy community and keep building Chiayi City as one of the top safer and healthier city worldwide.
# Healthy Cities in the Digital Age

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<tr>
<th>Abstract Title</th>
<th>The Smart Groundwater Management Framework and Prospect in Taoyuan City</th>
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<tr>
<td>Author</td>
<td>Yu-Bei Liu</td>
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<tr>
<td>Co-authors</td>
<td>Chen-Wuing Liu, Yuen-Tan Lee, Chi-Chung Ho,</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association</td>
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**The introduction**
Taoyuan City is densely populated. Business cluster with numerous industrial zones has yielded highest production value in Taiwan. However, due to the impacts of climate changes, the risk of water shortage rise significantly, and thus groundwater must be used as an alternate water resource.

**Objective(s)**
More than 1,100 companies in Taoyuan City consume exceeding 1000 tons of ground water per month per company. To make the best use of groundwater resources for the goal of sustainable development, Taoyuan City starts to construct a smart groundwater management system in 2018.

**Methodology**
The concept of smart groundwater management system is to enable dynamic feedback of the groundwater consumption of water-right holders and the groundwater level via the extensive deployment of smart water meters and water level gauges, and facilitate timely and accurate decisions of the management by AI and big data analysis.

**Results and discussion**
To this end, Taoyuan City has begun the pilot plan of setting 20 smart industrial wells, with the final goal of integrating all the 1,100 wells in the system. An over-consumption warning is established via real-time feedback of water pumpage and groundwater level every 10 minutes. The system also integrates the water level of all units, water pumpage, rainfall forecast, and other data to predict the changes in groundwater level with its smart core modules, providing management sector with decision advices on safe water yields, granting of water rights, and groundwater allocation during droughts.

**Conclusion**
Taoyuan City has developed the smart groundwater management system via info-tech, and hence gained an effective control of groundwater consumption by keeping track of all available water used data, so that a novel management protocol for sustainable operation is established. The improved water resource distribution system can prevent the land subsidence caused by overpumping and reduce drought risk by conjunctive use of groundwater. The smart groundwater management system has making the Taoyuan City to become a resilient healthy city.
Urban parking management is closely related to urban transportation development. It is always an important goal for traffic bureau to let driver gets the information of parking lots which he/she needs rapidly, and can use the parking lots convenience and safely. Bureau of Transportation, Tainan City Government, which took ‘park at Tainan within intelligence’ as its core strategy, gradually outsourcing the parking lots for non-governmental, professional parking management companies to manage them. By outsourcing the parking lots to non-governmental businesses, we expected that they can introduce intelligent parking manage facilities and innovative service model to meet the needs of elders, women, children and people with disabilities to park safely and without barriers. Recently, Bureau of Transportation, Tainan City Government also expanded the establishment of smart roadside parking facilities by ‘Build, Operate Transfer’ in order to give our elders, women, children and people with disabilities a more elastic offer and friendly parking environment. Within these acts, it is our expectation to give our people not only to meet their parking needs but also provide a smart, high quality, non-barrier and safe parking environment.
INTRODUCTION
South District is a coastal area. Therefore, disaster prevention is one of the important topics; among the multiple health promotion issues, the outbreak of dengue fever in 2015 was the most serious. The first death case was found in Da En village in south district. The annual dengue fever exceeded 30,000. In the case, Tainan City accounted for 21,942 cases. There were 3,529 notified cases in south district, which accounted for about 15.5% of the city.

OBJECTIVE(S)
Make citizens be able to manage their own health and become part of the drive for sustainable development through smart technology.

METHODOLOGY
Use “the mosquito man” cloud epidemic prevention application, which provides immediate dengue fever outbreak maps, rapid screening of medical clinics, messy points and mosquito bite returns and other functions for citizens. We also extensively set up Beacon, Wireless Communication Bluetooth Micro Location Signal Transmitter, to enhance disaster prevention effectiveness by instant messaging system.

RESULTS AND DISCUSSION
Taking the dengue fever project as an example, the number of local dengue fever cases in the South District has dropped significantly. In 2015, there were 3,529 cases. In 2016, only one case was a continuation case, and in 2017, 0 cases were achieved.

CONCLUSION
According to the data, smart technologies, such as the applications, not only make citizens take the initiative in participating more easily, but help the implementation of the health promotion plans.
INTRODUCTION
Dengue fever spreads in tropical and sub-tropical countries in Asia, Africa and the America. The whole-year-high temperature caused by global warming, torrential rains (which create an appropriate environment for mosquito), typhoons and abundant rainfall in 2015 left Tainan city a history-record outbreak with 22,754 Dengue cases and 112 dead. It threatens people's safety and influencing the economy.

OBJECTIVE(S)
Overcoming climate change, using scientific and technological methods to prevent and reduce the number of cases.

METHODOLOGY
In response to the outbreak, the whole city government has been mobilized to promote the prevention methods. Tainan City Government set up the dedicated Center for Dengue Prevention and Control in April 2016. In September 2016, geographic information systems (GIS) were introduced for dengue surveillance. A GIS platform was set up as an inter-agency dengue prevention and control platform; the data collected are processed to identify hot spots and prompt notification. The GeoJSON data are shared with NCKU to co-create an APP named "Mosquito man" and to geographically locate the ovitraps to collect the number of eggs, the average temperature and cumulative rainfall to predict the hot spots and vector-mosquito population reduction. NCKU also co-developed a smart electric mosquito killer with MediaTek to achieve an effective dengue control.

If there is a dengue case, we refer to the natural disaster response mechanism. We further set up an inter-departmental emergency response center in a hierarchically partitioned manner to formulate preventive measures immediately.

RESULTS AND DISCUSSION
Since its creation, the Center has been successful in preventing and controlling dengue and Tainan City has seen a decrease in the numbers of dengue cases reported: in 2016, 10 indigenous; and in 2017, 0 indigenous.
CONCLUSION

The outbreak awakens the citizens’ awareness of the crisis. Everybody moves on. Using GIS in combination with big data analysis, IoT concepts and collaboration between government, academia and industry, to facilitate dengue prevention and control. Set up an inter-departmental emergency response center when there is a dengue fever case immediately. The dengue fever prevention and control measures have proven to be effective.

KEYWORDS ︰ Dengue fever, GIS, platform, IT
Abstract Title  |  Gis Decision Support System and Big Data Analysis  
--- | ---
Author  |  Chung-Lin Lee  
Co-authors  |  Ming-Hsun Yu, Shu-Chin Lo, Gui-Tsung Lu  
Organization  |  International Development and Planning Department, Taitung County Government, Taiwan  

**Introduction** Through traditional methods of socio-economic information collection, such as graphs and statistics, it is difficult to draw connections between places and events. In addition, information is scattered and distributed across a variety of government departments and bureaus, which equates to a lack of broadness, is limited to internal use, and causes difficulties when developing data applications. Therefore, the establishment of a GIS and big data analysis system would be able to provide accurate decision-making references.

**Objective** To integrate the collection of socio-economic data, combine GIS and map overlay analysis, establish a mechanism for automatic data updates, provide decision-making references, and to develop public value-added data applications. **Methodology** Constitute a small team to collect all data, build the system, integrate GIS positioning functions, utilize the concept of basic statistical area to perform buffer zone analysis, and provide open API application services. Once completed, the system would be able to be used by businesses or citizens to develop a variety of added-value data applications.

**Results and Discussion** Over 270 pieces of data from 17 government departments and bureaus have been integrated. At present, 533 pieces of data have been published on the central government’s open data platform, such as the Taiwan Geospatial One-Stop Portal, or TGOP for short. Taking traffic accidents in Taitung County as an example, the traffic accident rate was reduced by 8.5% in 2017 compared to 2016.

**Conclusion** The GIS decision-making system was established, and through the application of added-value big data analysis, accurate decision-making references are effectively provided, and affirmed by the Executive Yuan’s fifth and seventh Government Service Quality Award.
<table>
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<tr>
<th>Abstract Title</th>
<th>Construct a Smart Health Management Model</th>
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<tr>
<td>Author</td>
<td>Chiang, Hsiao-Chien</td>
</tr>
<tr>
<td>Organization</td>
<td>Public Health Bureau, Taitung County, Taiwan</td>
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</table>

**Introduction** Heart disease, cerebrovascular disease, and hypertension are all within the top 10 causes of death in Taitung County, and the standard death rate per 100 thousand people for these diseases rank first in the nation at 89.2, 39.4, and 25.3, respectively. Taitung County is located in a remote area with a long and narrow span. Its medical resources and infrastructure are less sufficient than those of other counties and cities, which highlights the health inequality. So, we hope to combine science and technology with health care to improve people's health awareness and self-management.

**Objective** Construct a smart health management system to improve the health of residents and reduce mortality.

**Methodology** Provide 60 remote blood pressure measurement stations throughout the community. After the blood pressure measurements have been taken, the data is automatically transmitted to the cloud database. Provide a remote care APP with functions such as home safety, self-dieting evaluation tables, online hospital registration, pharmacist consultation services, and home drug delivery services as the health management tool. When the blood pressure measurement is abnormal, the system automatically sends a short message to the friends and relatives of the patient to urge them to remind the patient to seek medical care. The system also uses an incentive mechanism to improve the measurement usage rate.

**Results and discussion** The blood pressure measurement abnormality rate in 2017 decreased by 2.4% compared to that of 2016, and the tracking completion rate increased by 11% as well. Among the users, the blood pressure measurement abnormality rate for the elderly in 2017 decreased by 2.6% compared to that of 2016, and the tracking completion rate increased by 11% as well.

**Conclusion** Smart health management system for rural people can help to complete the tracking for blood pressure abnormalities and reduce the blood pressure abnormality rate.
Healthy Cities in the Digital Age

<table>
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<tr>
<th>Abstract Title</th>
<th>The Human Library-Building Greater Understanding and Partnership for Diversity in Communities</th>
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<tr>
<td>Author</td>
<td>Yu Yun Shen</td>
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<tr>
<td>Co-authors</td>
<td>Ming-chun Chen Pei-hua Wang I-chin Wu Ching-yao Chiang</td>
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<tr>
<td>Organization</td>
<td>Department of Personnel, Tainan City Government</td>
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</table>

INTRODUCTION Difficult questions expected
Have you ever been stumped by new challenges in life? The problems from your job, being forced to learn foreign language, or your adolescent kids refuse to communicate. The Human Library will help when you run out of steam.

OBJECTIVES Difficult questions appreciated and answered
With the “software”, tangible knowledge of real people from business, the public sector and academia, and the “hardware”, a digital platform, the Human Library offers a more user-friendly and efficient way than traditional books for people to find solutions for their problems.

METHODOLOGY 3 Advantages, 3 Highlights, Triple Assets of the HUMAN LIBRARY
The Human Library represents a disintermediated platform, which facilitates the matchup of supply and demand; it is a decentralized solution that builds quality partnerships; it is without-border so readers and human books from all fields can make inter-disciplinary learning happen. The synergy between platform solutions, technologies and collective wisdom enables the Human Library.

RESULTS AND DISCUSSION
“Taiwan needs a movement inspired by partnership processes.”
The Human Library is inspired by the spirit of altruism. Since its launch in July, 2015, the platform, which has 273 human books, has received 64,245 visits, and 2,562 checkouts of its collection. User satisfaction rate reaches as high as 85.08%. These statistics suggest a successful community partnership for the sustainable development of healthy cities, enabled by intersectoral action, and the engagement of all people.

CONCLUSION TEAM – Together We Achieve More
We engage the community and businesses and find great support in the masses, who offer social-contact-based solutions to City Government employees through the Human Library partnership. You will too – find mutual understanding through conversations and story-sharing when you check it out!

KEYWORDS: Human Library, Partnerships, Altruism
Healthy Cities in the Digital Age

Abstract Title
Three Innovation Strategies for People With Disabilities

Author
Lin Cheng

Co-authors
-

Organization
Social Affairs Department, Taitung County Government, Taiwan

Introduction
The total population of Taitung is 219,436 people, and 7.8% are people with disabilities. Previously, welfare services were disassociated, time-consuming, and inefficient, causing the public various inconveniences.

Objective
Enhance service efficiency and promote the wellbeing of people with disabilities through technology innovation, process innovation, and resources integration.

Methodology
Plan and develop a smart dispatch system app for rehabilitation bus with demand analysis in collaboration with suppliers and experts through three strategies: technology innovation, process innovation, and resources integration innovation. Introduce the “compensation and advance” mechanism to enhance the efficiency by replacing the purchase-&-apply by users with the collect-&-claim by suppliers practice for assistive products. Integrate assistive product resources with rehabilitation center functions to deliver integrated services.

Results and discussion
Before the smart dispatch system went live, it took 3 persons to dispatch a rehabilitation bus and 3 hours to process one request, now it needs only one person and 1.5 hours. Before process re-engineering, the rehabilitation center received 761 applications for assistive products and handled each for two months in 2016. After process re-engineering, the number of applications increased to 1,049 applications, up by 40%, and the processing time reduced to 2 weeks each in 2017. Before integrating assistive product resources with rehabilitation center functions, 5,304 people received life rehabilitation service in 2016; after the integration, 8,806 people received the service, up by 66%.

Conclusion
The smart dispatch system enhances dispatch efficiency; process re-engineering enhances application processing efficiency and assistive product proximity; and the integration of assistive product resources and rehabilitation center functions improves user independency. The service
Healthy Cities in the Digital Age

Abstract Title
Digital Life SI Convenient, Let Rural Elder Be Electronic

Author
Ming-da Yang, Hsiao-hui Wang, Wei-ting Chen, Tzu-yu Yen, Chun-Cheng Chen

Co-authors

Organization
Tainan City Government Bureau of Education

INTRODUCTION
The knowledge explodes in Information Era. Therefore, there are still many country areas which electronical development doesn’t go fast. The usage rates of computer using and surfing the net are low. Especially, it’s not easy for elder people to learn 3c equipment.

OBJECTIVE(S)
The city government promotes information education in rural. They teach people there to use computers tablets or smart phones. Hoping there are more elder people participating, and making their life richer and more convenient.

METHODOLOGY
1. Make a friendly rural digital learning environment. Establish 12 Digital Opportunity Centers (DOCs) at remote area in this city and combine 37 senior citizens learning centers to open information courses.
2. Meet the elder’s need with life teaching ways and local characteristics courses.
3. Combine the resource of schools and communities, and then enforce propaganda to make more elder know.
4. Provide mobile DOC at remote area to open tablet course in community centers.
5. Cooperate with public health pharmacists to promote long distance medication and health education service.
6. Use Facebook to provide consultation about computer problems.
7. Recruit the elders to be management committees and volunteers

RESULTS AND DISCUSSION
1. Promote the usage rates of computer and Internet for rural people.
2. Cooperate with mobile courses long distance medical consultations and health education propagandas to increase the amount of people who willing to use and learn computers.

CONCLUSION
By delivering the information courses to communities, increase the elders’ abilities
Hsinchu County, together with private enterprises, successfully used Hsinchu County government public information to develop a “Hsinchu Pharmacy App” with highly user-friendly interface and interactive experience design to help elderly, disabled, and caregivers to find instantly pharmacies that can provide advice and professional services when they need medication assistance. The 24 key medication information provided by the APP are collected by different sectors of the Department of Health, including drug counseling, prescription dispensing, and continuous prescription for chronic diseases... In addition, the “Hsinchu Pharmacy App” not only integrates the pharmacy administration routines that the Department of Health conducts every year, but also adds value to the information for public use. It also cooperates with the private pharmacists/pharmaceutical associations in Hsinchu County to become an important supporting network to promote pharmacies to participate in the medication safety and community counseling services for the elderly. The combination between technology and pharmacy deepens service innovation. Besides, the Office of Integrated Development of Hsinchu County Government is currently planning to design an O2O IoT intelligent location-based information broadcast system with sensing capacity for the “Hsinchu Pharmacy App” based on intelligent Bluetooth equipment iBeacon. In the future, the county government can use the APP to take the initiative to send information to the township drugstores at the right time and place, and remind the elderly about important health information. The “Hsinchu Pharmacy App” successfully established an innovative service and support network for safe medication of the elderly. It can serve as an example to promote the use of government public data, and as a reference to promote age-friendly city under the cooperation of public-private mechanism.
# Healthy Cities in the Digital Age

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>New Destination that combine Sport Tourism and Smart Travel- using the Shihmen Reservoir Cross-Boundary Cooperation Project As an Example</th>
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<tbody>
<tr>
<td>Author</td>
<td>Sheng-Ping Yang, Hsiang-Hua Chang, Yu-Ning Su</td>
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<tr>
<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association</td>
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## The introduction

The Shihmen Reservoir is a popular destination in Taoyuan. The reservoir provides water resources and environmental education and its spectacular views attract thousands of cyclists and joggers, serving as a highlight for sports enthusiasts.

## Objective(s)

The Department of Tourism of the Taoyuan City Government aims to introduce new life to this old attraction by changing the existing travel model to one that focuses on walking, jogging, and cycling. The department anticipated creating a new sport-centered tourism brand by integrating sports with the ecological and cultural beauty of the reservoir.

## Methodology

The improvements include the establishment of a transit station and a visitors’ center, transformation of unused reservoir spaces into sports and leisure sites, planning of multifunctional jogging and cycling routes, control of fuel-powered vehicles, and introduction of low-carbon electric buses. Changes to sports and travel models must be based on the Sport Tourism Smart Information System to provide travel experiences that promote mental and physical health and spiritual pleasure.

## Results and discussion

The smart information system is in the form of a mobile APP. It includes (1) a customized sports and leisure menu that offers healthy trackers and data analysis; (2) VR renditions of the ecological sites and jogging/cycling routes, transcending conventional spatial limitation; (3) an exercise score system that can be traded for discounts on services within the park; and (4) a one-stop service menu that consolidates peripheral dining, accommodation, and transpiration services for added convenience. The system enables visitors to reap rewards while shedding calories, enjoying amazing food, and taking in the sights.

## Conclusion

The new sport tourism brand of Shihmen Reservoir injects new life into the tourism of the reservoir. The model promotes low-carbon and healthy living without increasing the burden of the reservoir, becoming a new standard for sustainable tourism.
**Healthy Cities in the Digital Age**

<table>
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<tr>
<th>Abstract Title</th>
<th>Use of Smartphone and Its Relationship with Depression, Anxiety and Sleep Quality Among Unimas Students, Sarawak, Malaysia</th>
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<tr>
<td>Author</td>
<td>Mizanur Rahman</td>
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<tr>
<td>Co-authors</td>
<td>Najwa, Nithiya Lakshmi, Wan Nurfitri Athirah,</td>
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<td>Organization</td>
<td>Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak</td>
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**Introduction:** Smartphone use has been much integrated into daily life and more people own smartphones, including those in the rural areas, due to the fast development of technology. However, uncontrolled use of smartphones has been associated with many negative impacts to the health of the individual and society such as anxiety, depression and poor sleep quality.

**Objective:** to determine the pattern of smartphone use and its relationship with depression, anxiety and sleep quality among the university students.

**Methodology:** A total of 650 students from UNIMAS participated in this study. The students were selected by systematic random sampling from nine faculties. Data were collected using a structured self-administered questionnaire. Data entry and analysis were done by IBM SPSS version 22.0. A p-value of less than 0.05 was considered statistically significant.

**Results:** The mean age of students was 20.5 years with a standard deviation of 0.9 years. The male to female ratio was 1:2.53. All the students had a smartphone. However, 3.1% had both smartphone and mobile phone. Data analysis found that 15.1% of the students had low use of smartphone and another 16.2% were heavy users of the smartphones. Smartphone dependency index revealed that 15.2% of the students were extremely dependent on smartphones and another one-third were highly dependent on the smartphone. More than half of the students had poor quality of sleep. Bi-variate analysis revealed that quality of sleep was highly correlated with smartphone use (p<0.05) and also significantly associated with depression and anxiety.

**Conclusion and recommendation:** Though the use of smartphones is generally beneficial, high and extreme dependency on smartphones are correlated with negative health impacts. Health education campaigns should encourage people to use smartphones effectively within a set of specific boundaries. We do not advocate messages such as ‘Do not use smartphone’.

**Key Words:** Smartphone, Depression, Anxiety, Sleep quality, University, Sarawak
Healthy Cities in the Digital Age

<table>
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<tr>
<th>Abstract Title</th>
<th>Mobile E-Services</th>
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<tr>
<td>Author</td>
<td>Chung-Lin Lee</td>
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<tr>
<td>Co-authors</td>
<td>Ming-Hsun Yu, Shu-Chin Lo, Chia-Chien Huang, Ru-Wei Lin</td>
</tr>
<tr>
<td>Organization</td>
<td>International Development and Planning Department, Taitung County Government, Taiwan</td>
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**Introduction** Taitung County has a large population of elderly and disadvantaged people. Living in remote areas with poor accessibility, these residents are sometimes forced to give up applying for government services. Therefore, the introduction of mobile e-services provides a convenient solution to this problem, as it saves time for senior citizens who do not have to submit applications in person as before.

**Objective** To provide house calls, cross-domain and value-added services for the public through the processes of integrated services, innovative services, and digital services.

**Methodology** To provide house call services for senior citizens and others in need through the use of mobile devices. In addition, the multifunctional one-stop service, which is available in the Taitung County Civil Service Center, not only improves the process of providing services, achieves the freedom of information and integration of cross-departmental administrative resources, but also provides a complete service for the convenience of both the residents and government.

**Results and Discussion** The township offices and household registration offices in Taitung County jointly promote the e-services provided. From 2013 to 2016, we have provided over 17 e-services across categories such as tax, land and emergency assistance. With 60,501 completed home e-service cases in total, the number of citizens receiving assistance has grown by 29%. Taitung County Civil Service Center provides over 200 services, and from October 2011 to March 2018, it had accumulated 33,685 over-the-counter cases, helping more than 30,000 citizens in rural areas. Since March 2018, we have taken the initiative to send 870 personal messages over our government notification APP service, making our services instant and accurate.

**Conclusion** Being the first and the only county in Taiwan to promote mobile e-services, Taitung has managed to improve administrative procedures by launching innovative one-stop mobile services. As a result, Taitung proudly received the Executive Yuan’s fifth and seventh Government Service Quality Award.
SDG3: Healthy Cities for Good Health and Well-Being – Community
The ranking among the top 10 death causes and death rates of diabetes in Hsinchu County are both higher than those in Taiwan. To construct the “Diabetes Care Network” has been confirmed as an effectively control the diabetes. Unfortunately, there is a significant urban-rural gap in the diabetes care resources in Hsinchu County, especially in nine remote rural areas. Hsinchu County Government have organized five strategies to reduce the occurrences of diabetes. First, we established the health public policy by integrating the co-boring model to develop a community-wide diabetes care network. Second, we created a supportive environment for assisting the rural areas to establish diabetes supporting groups, especially expanding nutrition and education resources of diabetes to provide ophthalmic clinic services. Third, we reinforce the community action by organizing meetings among medical institutions. Fourth, we develop the teaching mode of Diabetes Watch and Talk to enhance the diabetes prevention activities. Also, we designed relative teaching materials and teaching aids to establish nutrition and health education clinics. Final, we adjust the service direction based on the establishment of special diabetes clinics, set up eye clinics, and development of ophthalmic referrals mechanisms and patient data transfer mechanisms. Due to the five action strategies and joint efforts, the ratio of care for diabetes patients admitted to rural health clinics increased from 8.9% in 2013 to 23.8% in 2016. The examination rate of Diabetic fundus examination or Diabetic fundus color photography increased from 34.6% in 2013 to 42.6% in 2016. Supporting groups have also been awarded the Model Sugar Friends Award by the Ministry of Health and Welfare, Taiwan. The goal is to build a nutritionist supporting network to promote the Diabetes Care Network so as to reduce the urban-rural disparity of diabetes care resources and improve the accessibility and availability of diabetes care resources.
**Abstract Title** Using Behavior Change Theory and Social Media to Build up Campus Health Behavior - Taking an example of promoting healthy diet and physical activity among students of a vocational in Taipei City

**Author** Chi, Yu-Chiu; Cheng, Xiao-Ju1; Tu, Wen-Chi1; Lin, Meng-Hui; Chen, Pi-Yun1

**Organization** Neihu District Health Center, Taipei

**The Introduction** Despite the heavy weight of teenagers in Taiwan, there is a tendency to increase year by year. Therefore, it is necessary for health authorities to adopt effective intervention methods.

**Objective(s)** This study aimed at overweight teenagers in a vocational school in Taipei City, using behavior change theory and social media to plan healthy intervention programs to enhance their balanced diet and regular exercise behavior.

**Methodology** Taking 92 (BMI>24) vocational students randomly assigned as course plus community intervention (community intervention group), course intervention, and control group, intervention group received six nutrition courses for two months or participated in social media interaction. The "high school students healthy lifestyle questionnaire" was used for analysis.

**Results and discussion.** The community intervention group significantly scored higher in dietary self-efficacy and regular exercise than the other two groups (p < .05). On the contrary, the post-test body weight of the control group was significantly higher than before (p<.001), while the other two groups had no difference. Therefore, nutrition education courses combined with social media intervention can enhance the effectiveness in health knowledge and dietary self-efficacy among overweight students, especially the social media intervention which can better promote dietary self-efficacy and regular exercise benefits.

**Conclusion** In the future, a support platform can be built up for overweight students to strengthen personal health awareness, maintain fitness of teenagers, and promote healthy campus.
Abstract Title | Occupational Wellness From the healthy Cities Perspective Case Studies in Korea
---|---
Author | Prof. Ku-jeom Chung, Mi-jung Park, Prof. So-hyun Park, Danny Kessler
Co-authors | 
Organization | 

**Introduction**
Workplace wellness is a $6-billion-dollar industry in the United States. Employers offer the programs to improve the health and well-being to their employees, increase their productivity, reducing their risk of costly chronic diseases, and to help improve control of chronic conditions. The employer’s wellness program has two components: a lifestyle management program and a disease management program.

**Objective**
This study focused the lifestyle management programs which were provided for the thousands of Korean Government employees in various provinces throughout Korea in order to find out which wellness modules were most effective reducing workplace stress.

**Method**
This study examined the questionaries’ attained from participating employees of the occupation wellness improvement programs. Then the statistical analysis was implemented and outputs were gathered.

**Results**
The most significant data we found was 89% of the employees agreed the stress-management related programs were the most powerful in reducing stress. The second most effective program was the human relationship program.

**Conclusion**
This study discovered that the lifestyle management programs, which were provided for the Government employees was not a waste of Government resources but instead help Government employees reduce stress in the workplace. We highly recommend employers to apply the wellness improvement programs to their firms to support the employees in reducing those work-related stress risks which helps to prevent the development of chronic diseases.
**Abstract Title**
Fostering the Soft Power of Food-Processing Industry in Taitung and Enhancing the Effectiveness of Hygiene Self-Management and Knowledge

**Author**
Ku, Yu-Wen; Lin, Yu-Wen; Hsin, Chin-Hsiang; Chen, Hsin-Hsien

**Co-authors**

**Organization**
Public Health Bureau, Taitung County, Taiwan

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**Introduction**
Due to Taitung’s vast area, inconvenient traffic, inadequate industrial and geographical environment, lack of resources and other specificities, and limited health inspection industry-academia-university-research manpower, the county has failed to provide complete information and guidance to food operators and implement food hygiene self-management.

**Objective**
Enhance the county food industry’s operating environment, perfect food industrial chain management at the source, strengthen professional food knowledge, and implement hygiene self-management competency through interdepartmental cooperation and professional guidance team intervention.

**Methodology**
Targeting the county’s food manufacturing and processing companies (35 in all), on-site guidance was carried out, including classes on food regulations, food labeling counseling, network platform information development and industrial promotion, hygiene self-management field survey guidance, final product inspection, etc. The results were evaluated, and a cross-assessment review mechanism was established.

**Results and Discussion**
Through the 40-hour education training, two field survey guidance sessions of the professional team, actual observations and visits, and independent inspection and cross-assessment of food labels, the field survey guidance pass rate increased from 6% to 88%, the food label passing rate increased from 6% to 97%, and the final product inspection pass rate reached 100%. A total of 29 operators passed and completed the assessment.

**Conclusion**
Through the guidance of the professional team, the operators’ hygiene self-management increased significantly, confirming the operators indeed needed the professional information as well as field survey guidance. Through individual instructions and improvement, the hygiene self-management competency and food safety guarantee were improved.
Abstract Title | Quit Smoking for Impeccable Health
---|---
Author | Wen-Yen Wang, Li-Chuan Chen, Kuo-Ning Lin, Chieh-Ying Yeh, Yu-Bei Liu
Co-authors | 
Organization | Taoyuan Healthy City Promotion Association

The Introduction
As stipulated by the Tobacco Hazards Prevention Act, smoking is prohibited in any indoor workplace shared by 3 or more people. The city government has reinforced the efforts in smoking prevention through inspections and promotions on various relevant services. The city’s adult (over 18 years old) smoking rate was 12.4%, showing a 16.6% decline from 2006 to 2016. However, considering the city’s large population, it is estimated that approximately 218,594 smokers require assistances to quit smoking.

Objective(s)
To reduce the adult and adolescent smoking rate of the city.

Methodology
Reinforcing inspections of cyber cafes and other public spaces, providing guidance for medical care institutions on smoking cessation services, hosting smoking prevention events for adolescents, and creating smoke-free outdoor environments.

Results and discussion
14,478 tobacco selling locations were inspected, 130 smoking cessation sessions by medical care institutions were conducted under guidance, 12,297 smokers received smoking cessation services, and 55 smoking prevention promotional events were hosted. The city has also added 27 streets, temples and offices, 327 public parks, and 281 elementary schools, junior high schools, senior high/vocational schools and their surrounding areas to the nonsmoking area list. There are a total of 635 smoke-free environments.

Conclusion
To protect the health of the city’s over 2 million citizens, the government has collaborated with local industries for the dissemination of the quit-smoking promotional material. The government has also endeavored to create a healthy and smoke-free living environment in Taoyuan City by referencing the tobacco hazards prevention strategies around the globe.
Abstract Title
Development of Adolescent Tobacco Refusal Skills in Taipei City

Author
Chi-Hung, Lin, Hui-Ping, Lin, Jia-Ling Hou.

Co-authors
Organization
Department of Health, New Taipei City Government

**Introduction**: Smoking is the entry point for substance abuse in young people; once they start smoking, they have a higher chance of using alcohol and drugs in the future. Therefore, the "Tobacco Hazard Health Service Program in Classrooms" aimed to 6th and 7th grade student groups, we hope to strengthen the students' anti-tobacco awareness and use of anti-smoking skills in daily life through interesting teaching methods, establishing a healthy, smoke-free learning environment, to reduce the rates of student smoking.

**Objective and Methodology**: In this study, 2,524 classes for a total of 69,700 people participated in this tobacco hazard health education, of which 45 classes 1,145 people were randomly sampled, for the pre- and post-test questionnaire survey. The improvement of literacy rates were performed by frequency and stratified analysis.

**Results**: (1) The success rate of intervention: more than 90% of this Municipality’s public elementary school 6th grades and private junior high school 7th grades completed the in classroom tobacco hazard health education and advocacy. (2) The improvement of literacy rate: analysis of the pre- and post-course questionnaires showed that the average rate of increase for the correct rate about second-hand smoke knowledge was 37.9%, average rate of increase for the correct rate about third-hand smoke knowledge was 18.2%. (3) Smoking rate: in 2017 junior high school students’ smoking rate was 3.0%, declined 0.9% compared to 3.9% in 2016.

**Discussion**: If we can provide tobacco control concept to young people at the earliest possible time, it can not only reduce smoke rate but also enhance tobacco hazard health knowledge in adolescents and keep them away from tobacco and possible drug hazards.

**Conclusion**: (1) Through the completion of in classroom education and advocacy, to reduce student smoking rate. (2) To gain the correct knowledge and attitude about tobacco hazard and learn how to tobacco refusal skills.
Tuberculosis not only endangers people’s health and life, but also seriously damages the national competitiveness and its image in the international community. The plan will follow the principle of SDGs (Sustainable Development Goals) “Health and Well-being”, which can be further described as “eradicate AIDS, tuberculosis, malaria, and other neglected tropical diseases by the year of 2030, and fight against hepatitis, waterborne disease and other infectious diseases”. All of these are the theoretical foundation to prevent and terminate tuberculosis in the future. The incidence of tuberculosis in Wufeng Township and Jianshi Township of Hsinchu County was respectively 174.3 and 42.5 people per 100,000 people in 2016, both of which is higher than other townships in the town. Residents living in the original folk townships have chest X-ray screenings every year. Based on the belief or customs of the local residents, it advocates church activities or hygienic education. In addition, concerning the Wufeng Township “Daai Village” and “Taoshan Village” with high incidence of tuberculosis, screening program of high-risk latent tuberculosis infection is promoted. There were 320 residents participating in the program, with 123 positive cases and the positive rate 38.4%. At present, there are 67 people (the rate of treatment over 50%) who has finished the treatment of latent tuberculosis infection. And we continue to try to persuade them to receive treatment of latent tuberculosis infection so as to reduce the risk of tuberculosis. In the future, we will continue to promote DOTS (Directly, Observed Treatment Short-Course), the treatment of latent tuberculosis infection, take active effective measures to break through the bottleneck of prevention and treatment of tuberculosis. By doing these, we expect to guarantee people’s health and seek for the well-beings of all residents so as to achieve the goal of “terminating tuberculosis”.

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**SDG3: Healthy Cities for Good Health and Well-Being – Community**

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<tr>
<th>Abstract Title</th>
<th>Hsinchu County Fighting against Tuberculosis, Goodbye Tuberculosis!</th>
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<tr>
<td>Author</td>
<td>Tung-Cheng Yina, Hui-Yun Changa, Ming-Fen Choa</td>
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<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Public Health Bureau, Hsinchu County Government, Hsinchu County 302, Taiwan</td>
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Tuberculosis not only endangers people’s health and life, but also seriously damages the national competitiveness and its image in the international community. The plan will follow the principle of SDGs (Sustainable Development Goals) “Health and Well-being”, which can be further described as “eradicate AIDS, tuberculosis, malaria, and other neglected tropical diseases by the year of 2030, and fight against hepatitis, waterborne disease and other infectious diseases”. All of these are the theoretical foundation to prevent and terminate tuberculosis in the future. The incidence of tuberculosis in Wufeng Township and Jianshi Township of Hsinchu County was respectively 174.3 and 42.5 people per 100,000 people in 2016, both of which is higher than other townships in the town. Residents living in the original folk townships have chest X-ray screenings every year. Based on the belief or customs of the local residents, it advocates church activities or hygienic education. In addition, concerning the Wufeng Township “Daai Village” and “Taoshan Village” with high incidence of tuberculosis, screening program of high-risk latent tuberculosis infection is promoted. There were 320 residents participating in the program, with 123 positive cases and the positive rate 38.4%. At present, there are 67 people (the rate of treatment over 50%) who has finished the treatment of latent tuberculosis infection. And we continue to try to persuade them to receive treatment of latent tuberculosis infection so as to reduce the risk of tuberculosis. In the future, we will continue to promote DOTS (Directly, Observed Treatment Short-Course), the treatment of latent tuberculosis infection, take active effective measures to break through the bottleneck of prevention and treatment of tuberculosis. By doing these, we expect to guarantee people’s health and seek for the well-beings of all residents so as to achieve the goal of “terminating tuberculosis”.

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**SDG3: Healthy Cities for Good Health and Well-Being – Community**

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Tuberculosis Elimination for Everyone</th>
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<tr>
<td>Author</td>
<td>Chung, Ming-Hsia; Liu, Hsiao-Ying; Wu, Hsiao-Hui; Hsin, Chin-Hsiang; Huang, Chien-Ting</td>
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<tr>
<td>Co-authors</td>
<td>Public Health Bureau, Taitung County, Taiwan</td>
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**Introduction** The national incidence rate reduced from 48.4/100,000 people to 45.7/100,000 people in 2015, and Taitung's incidence rate reduced from 69.8/100,000 people to 62.2/100,000 people and ranks No. 3 nationwide.

**Objective** Early diagnosis, early treatment, and reduction of community transmission.

**Methodology** Strengthen local inspection operations and technologies: Establish laboratories in the county to enhance the testing capabilities. Improve the timeliness of inspections and the quality of services - implement GeneXpert, whereby only 2 hours are needed to generate the test results as the basis of diagnosis. Use X-ray screening vehicles to provide accessible services and add instant video interpretation systems. For abnormal cases, immediately prescribe the patient to provide a sputum sample in order to shorten the time needed and reduce the burden of the public health personnel. Improve the professional level of tuberculosis diagnosis and treatment - set up special outpatient tuberculosis clinics to provide medical services for complex and special cases. Train the local people as volunteers and maintain operation sustainability. Use the power of the local people to strengthen the prevention efforts, raise the public's awareness of tuberculosis, and reduce the stigmatization of tuberculosis.

**Results and discussion** We used the rapid sputum molecule analysis method to screen a total of 596 people; a total of 59 cases showed positive, and a total of 54 people were confirmed positive and are receiving treatment. The system has an accuracy rate of 92%. There were 137 cases in 2017 with 13 cases that were actively discovered, with an active discovery rate of 9.7%. Taitung County had a total of 26 cases as of April 2018, which is significantly lower compared to 41 cases during the same period in 2017.

**Conclusion** Use the rapid screening tools comprehensively to shorten the diagnostic time, start treatment drugs earlier, and reduce community transmission. Use the human resources of the community to promote prevention and get twofold results with half the effort.
**Introduction** In 2015, due to climate change and convenient international transportation, the dengue fever epidemic caused 218 deaths in southern Taiwan, and 157 cases of infection in northern Taiwan. For the past 3 years there are still cases of inland and offshore infection. Dengue fever has become an important public health issue for the communities, and adequate environmental hygiene, breeding source elimination and epidemic prevention in communities are thus necessary.

**Objective(s)** To link all departments to collectively maintain a decent community environment; to mobilize all residents for breeding sources elimination; to safeguard the health of the general public.

**Methods** (1) To integrate collaboration across departments e.g., environmental protection, civil services and health policies for the promulgation of community pest control; (2) to build community pest-control volunteer networks for vector indices surveillance; (3) to galvanize the entire community for breeding sources elimination and environmental hygiene maintenance.

**Results & Discussion** Cross-departmental communication led to partnership between 12 departments; built 7 sub-district mosquito SWAT teams and nurtured 232 volunteers, 88 campus pest-control little front-line fighters; (3) Built key pest-control zones in the mountains

**Conclusion** In 2017, mobilizing the community for the implementation of breeding sources elimination and containers reduction led to **zero** cases of local dengue fever infection and its extermination in Shilin District, Taipei.
SDG3: Healthy Cities for Good Health and Well-Being – Community

<table>
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<tr>
<th>Abstract Title</th>
<th>Community Safety, Treasure Da’An - Creating a happy Community Suitable for both the young and the old alike</th>
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<tr>
<td>Author</td>
<td>Kung Yong-Chun; Tseng Yu-Ling 1; Chen Chiu-Fang 1; Ou Chia-Ling 1; Shu Fen-Yu</td>
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<td>Co-authors</td>
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<td>Organization</td>
<td>Daan Health Promotion Association</td>
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**The Introduction** The accidental injury and suicide mortality rate are high among the elderly in Da’An District. Accidental injuries are also the common cause of death among young children. Therefore, it is primordial to strengthen the home, schools and community areas to promote road safety, suicide prevention and medication-use safety issues for young children and the elderly.

**Objective(s)** Build a multiagency community safety net for a happy community of young and old.

**Methodology** At home: provide frailty assessments for the elderly, verify the environmental safety for solitary elderly and children of new immigrants, screening for depression among the elderly and provide health education and referrals for atypical persons. At schools: promote campus safety to all categories of schools. At the community: hold lectures, in conjunction with the Borough Office, on fall prevention, traffic, suicide and medication-use safety; integrate visits of medical institution to the 123 nursery schools to conduct health screenings to provide referrals and tracking.

**Results and discussion** At home: according to the frailty assessment, 17% of the elderly tend to be weak. They have been provided with health education and referred to sports healthcare classes. On the verification of bathroom safety in the home environment, only 61.5% have installed handrails; on the screening for depression of the elderly, 9% presented atypical symptoms. They were referred for counseling and medical attention. At schools: accidents occur frequently at preschool playgrounds and classroom; thus, school compound safety has been promoted; awareness on medication-use safety has been enhanced in all categories of schools. At the community: 88 safety lectures were organized with 1,905 attendees.

**Conclusion** The safety of the bathroom environment will be strengthened, the road courtesy of drivers shall be promoted and inter-departmental cooperation will be expanded to make the service more diversified in the future.
**SDG3: Healthy Cities for Good Health and Well-Being – Community**

<table>
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<tr>
<th>Abstract Title</th>
<th>Remarkable Effective Control for Tuberculosis in Hsinchu City, Taiwan</th>
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<tr>
<td>Author</td>
<td>YANG CING-MEI, Wang Fang-Shih, Lu Shu-Ya</td>
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<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Hsinchu City Healthy City Promotion Association</td>
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**Introduction**: Tuberculosis (TB) is still one of the major infectious diseases in Taiwan nowadays. The population density in Hsinchu City is the third rank of Taiwan so that this disease easily spreads to whole city.

**Purpose**: We evaluate the strategy and performance of TB control for the health authority to make future plans in Hsinchu City.

**Methods**: At the start of implementing Directly Observed Treatment Short course (DOTS) plans, it is acknowledged that enthusiastic, industrious and conscientious DOTS observers are critical to the success of this proposal. We demand the observers to directly deliver medicines to patients and witness the taking of these medicines. In addition, we also improve the professional knowledge and communication skills of the nurses, which benefits in persuading the patients into joining the DOTS plan as soon as we receive the reports of TB cases.

**Results and Discussion**: The 10-year plan of 50% reduction in TB incidence has been implemented since 2005 and the performance in Hsinchu City has been very remarkable. The TB incidence was decreased from 48.6 persons per 100,000 population in 2005 to 27.3 persons per 100,000 population in 2016, which makes Hsinchu City with the lowest incidence in Taiwan island.

**Conclusion**: We will continue the high-quality management for TB cases and to examine the contactors by the progressive principle to discover the tuberculosis patients in advance, which stops the chain of infection and prevent the onset of latent TB infection. WHO has set the targets to end TB in 2035 and we will endeavor to achieve it.
Abstract Title | Building 101 Healthy Life for Children in Taipei Urban Areas
--- | ---
Author | Kuo, Yi-Jiun, Chou, Chen-Chen; Lin, Yueh-Liang; Hsieh, Ming-Yu
Co-authors | 
Organization | Taipei City Government, Xinyi District Health Center

**The Introduction** Raised BMI is a major risk factor for Non-Communicable Diseases (NCDs). Obese children are likely to stay obese into adulthood and more likely to develop noncommunicable diseases like diabetes and cardiovascular diseases. In Taiwan, the prevalence of overweight and obesity for children was up to 30.4% in 2013. Taipei’s Xinyi District, in which Taipei 101 is located, initiated a Child-oriented diet education project “Delicious 100 and health plus 1”. The project hopes to affect children as early as possible in healthy dietary behavior.

**Objective(s)** We promote the health literacy of Elementary school children through nutrition education and create a healthy food supportive environment.

**Methodology** From 2015 to 2017, Xinyi District Health Center, Taipei City began promoting a plan to combine healthy diet education for Elementary school children and providing counseling services for restaurants in the neighborhood. Our department aimed at building an environment that is conducive to healthy diets and raise awareness by joining forces resources of dieticians and retired medical personnel. We offered the children food sensory experiences and nutrition facts literacy education, and continued monitoring children's health behaviors.

**Results and discussion** (1) Sugary drinks consumption among children decreased 10%. (2) School children nutrition knowledge increased 26% ($P<.001$) and attitude toward healthy eating. (3) 33 restaurants join our action and revel calories or nutrients labels for 212 dishes. (4) More than 86% of the parents think the project is helpful.

**Conclusion** Through public sector, we can integrate professional resources to improve student learning outcomes and build a healthy food support environment. The “Delicious 100 and health plus 1” project involves children, school parents' associations, schools, and restaurants. We expect to influence family dining options through children. It is hoped to enhance tremendously the children and families’ knowledge of nutrition and cultivate the habit of eating a "healthy diet."
**SDG3: Healthy Cities for Good Health and Well-Being – Community**

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<th><strong>Abstract Title</strong></th>
<th>Linking Drugstore's Bases: Construct a Safety Drug Using Network in Communities</th>
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<tr>
<td><strong>Author</strong></td>
<td>Wen-Yen Wang, Po-Wen Su, Kuo-Ning Lin, Ching-Wei Chang, I-Chien Yang</td>
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<tr>
<td><strong>Co-authors</strong></td>
<td>Taoyuan Healthy City Promotion Association</td>
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**The introduction**

In 2016, the Public Health Bureau discovered that about 60% of people were far from satisfactory regarding the consumption of medicine. To promote people’s understanding of drug safety and minimize drug problems, it collaborates with the drugstores in the communities to form a medicine service network.

**Objective(s)**

Constructing a drug service environment approachable to people, it promotes proper concept of drug consumption and encourages people to become seeds in their communities to communicate the concept of safety drug consumption.

**Methodology**

Departing from the perspective of the people, “Senior Friendly Drugstores” will be established to provide 8 friendly services, including drug instruction and consultation. Collaborating with the care and concern points and pharmacists in the communities in this city, the service bases in the manner of “one pharmacist in one base” will be launched to promote drug consumption safety and clarify people’s doubts in drug consumption.

**Results and discussion**

In 2017, 181 senior friendly drugstores were established, serving more than 200 thousand people. At the same time, 152 drug safety campaign were held in the manner of “one pharmacist in one base.” More than 7 thousand people attended. From the questionnaires, 98% of the people understand the correct concept of drug consumption, 97% of the people will apply the contents of the instruction onto daily life situations and feedback their sharing. In addition, 92% of the people are satisfied with this service.

**Conclusion**

The Public Health Bureau provides “senior friendly drugstores” and “one pharmacist in one base” community network of to allow people enjoy professional drug services and promote the correct concept of drug consumption to senior citizens. It aims to construct a safe environment for drug consumption to senior citizens.
A well-organized hospice care system in Nangang District Taipei
Lin Li-Ling; Chang Li-Ching1; Huang Chen-Kuan1; Kuo Hsien-Wen
Nangang District Health Centre, Taipei City
Background: People are apprehensive when faced with the prospect of aging, getting sick, and dying, and this is particularly true for the terminally ill and their families. Therefore, psychological, psychological, and spiritual support networks that provide information on hospice care and connect individuals with medical and charity organizations and with long-term care resources are needed.

Purpose: To provide a medical care service that provides integrated home-based palliative care consultation and hospice care (end-of-life care, pain control, and comfort care).

Method: Promoting long-term care services at locations where community-dwelling older adults congregate and providing a channel for older adults to participate in health promoting activities to enhance the effectiveness and capacity of long-term care services. Educating people and respecting their right to know and autonomy, and combining them with the home-based hospice care services of the Taipei City Hospital.

Results: A total of 89 individuals attended the “effective physician–patient communication,” “palliative care,” and “organ procurement” seminars, of whom three signed the “Advance Hospice Palliative Care and Life-Sustaining Treatment Choices of Intent”. At the time of writing, the service has provided integrated home-based palliative care, integrated home-based palliative care consultation, and hospice care (end-of-life care, pain control, and comfort care) to 30 individuals. The promotional activities for long-term care were attended by 3,908 and 4,410 individuals in 2016 and 2017, respectively.

Conclusion: We promoted “effective physician–patient communication,” “palliative care,” and “organ procurement” to community-dwelling citizens and the provision of consultation and referral services have enabled more end-of-life patients and their families to receive integrated hospice care.
Title: Taitung County Long-Term Medical Care Model

Author: Chou, Shih-Hsuan; Wang, Ju-Chieh; Hsin, Chin-Hsiang; Liu, Feng-Chin; Huang, Chien-Ting

Introduction: As of the end of 2017, the elderly population in Taitung had reached 15.56%, which meets the social standards for an “aged society”. Its aging index is 129.40%, indicating that the demographic structure is rapidly aging, and the corresponding population of the disabled will also increase substantially. Taitung County has long transportation distances and lacks medical personnel and resources because of its long and narrow terrain located in the east. So it is difficult to deliver care resources to Taitung County. This project is aimed to overcome the current plight and provide better services.

Objective: Integrate long-term care services and the civil service resources in order to provide a series of services from discharge planning to home medical care and reduce people’s transport costs and promote service delivery.

Methodology: Establishment hospitals and rural public health centers to form home medical teams. Shorten the people’s services waiting times, reduce transport costs, and enhance the care quality via long-term care management center assessments, plan formulation and management, and case dispatches.

Results and discussion: The number of people receiving care in 2017 increased 12 times compared to that of 2016. The service waiting time will reduce from 30 days to 3 days (a reduction of 90%), which vastly improves the access to public services. In terms of costs, the plan can save NT$30 thousand per person and reduce the hidden costs from medical vehicle deployment, mental nuisances, and the need for caregivers to take leave in order to accompany a patient.

Conclusion: The implementation of the long-term medical care model can enable citizens to enjoy the right to medical care as well as reduce the economic and psychological burden on the caregivers.
Abstract Title | Physical Fitness Center for Individuals with Disabilities
---|---
Author | Nai-Wen Hsu, Jia-Peng Wang, Yi Chen
Co-authors | Tainan Social Affairs Bureau

**INTRODUCTION**
The World Health Organization (WHO) regards physical fitness as a comprehensive ability to adapt to life, activities and the environment. In 1999, Taiwan's Sports Administration Ministry of Education, announced a white paper on "Building a Vision of Physical Fitness for People with Physical and Mental Disabilities in the 21st Century", and promoted the demand for physical activities for the disabled people. People with disabilities are affected and hindered from engaging in physical activities due to fitness and external environmental limitations. To address this, Tainan City Government has established the Physical Fitness Center for Individuals with Disabilities in 2013. By providing a fitness center for this group of people, it aims to improve their participation in fitness and leisure sports, thereby delaying the aging of physiological functions and promoting physical and mental well-being.

**OBJECTIVE(S)**
In order to understand how the city fitness center has achieved the goal of promoting fitness and leisure sports for the disabled people, its service achievements over the years will be reviewed and analyzed to examine and explore the effectiveness.

**METHODOLOGY**
For the disabled people, it aims to enhance personal fitness through personalized sports training, and to encourage social interaction through various group classes. Moreover, it emphasizes the importance of physical fitness and promotes implementation in several welfare organizations and community service units throughout-reaching services, so that the community has a better awareness of the physical fitness for the disabled people.

**RESULTS AND DISCUSSION**
Since the establishment of the fitness center in 2013, the number of people with disabilities served has been increasing every year. Regarding the different physical conditions of the disabled people, personalized fitness classes are designed to cultivate autonomous sporting habits. Meanwhile, group classes are designed for both the disabled people and their companions to encourage positive interaction. Occasionally, public sports and leisure activities are organized to increase the opportunity for the disabled people to attend events and socialized with the general public.

**CONCLUSION**
Tainan City has created the nation’s first fitness center for the disabled people in 2013. In addition to providing a safe and friendly space for them to carry out sports and leisure activities, the fitness center also collaborates with non-governmental organizations to actively promote the concept of physical fitness and good sporting habits, so that people with disabilities are living a healthier and more carefree life.
**Abstract Title**

Establishment of home-based and patient-oriented holistic care in Nangang District, Taipei

**Author**

Lin Li-Ling; Chang Li-Ching; Huang Chen-Kuan; Kuo Hsien-Wen

**Co-authors**

**Organization**

Nangang District Health Centre, Taipei City

**Background:** The prevalence of chronic diseases, particularly diabetes, has become increasingly high in Taiwan. However, the quality of medical care for patients with chronic diseases is being affected by the excessive workload and high attrition rate for nurses.

**Purpose:** To provide a holistic care program with customizable care services based on home-based and patient-oriented principles.

**Method:** Establishing with patients holistic nursing care program that enables effective resources applications, and reviews performance regularly to adjust the standard operating procedure of case management. Home-based and patient-oriented holistic care provides packaged services with m-Health practices to ensure its quality.

**Results:** A 2016 survey determined that patients’ satisfaction with service quality scored 93.63 points, which is 2.9% higher than the average for Taipei City’s 12 administrative districts. Among patients with diabetes, satisfaction with the program reached 98.8%, health behaviors and self-care ability improved, average blood glucose level decreased by 6.9 mg/dL, average body weight decreased by 0.04 kg, and average systolic blood pressure dropped by 4.33 mm-Hg, whereas average diastolic blood pressure dropped by 2.66 mm-Hg. Furthermore, within 1 year, the level of LDL-Cholesterol <100 mg/dL improved by 27.43%, self-monitored blood glucose level premeal and postmeal improved by 9.30%, and the results of dilated fundus examination improved by 8.11%.

**Conclusion:** “Nangang Three-more Group” has strengthened family support for patients with diabetes using sharing of experience and encouragement by support groups motivate patients to improve their self-care knowledge and capability, thereby delaying the occurrence of complications.
### The introduction

Taoyuan City has a population of 2,190,000, with over 16,000 drug addicts having received counsel at the City’s Drug Abuse Prevention Center in the past decade. The drug addiction relapse rate goes up to 35%. Therefore, a better intervention model must be found.

### Objective(s)

Understanding the risk factors and protective factors of drug addiction relapse and strengthening the preventive measures.

### Methodology

A drug addict database is established on a people-oriented basis by integrating multiple mental health systems with the Tableau and QGIS tools to analyze the addicts’ characteristics and identify cohabiting addicts and those with mental comorbidities.

### Results and discussion

The results showed that drug addicts often had comorbidities such as suicidal tendency, mental illness, domestic violence, or sexual assault. 6% of the addicts have suicidal histories, 3% exhibit severe mental illnesses, and approximately 2% are domestic violence perpetrators. It was also found that 18% addicts have kinship to each other, and that cohabiting addicts with comorbidities have a higher relapse rate. However, in the past, counselling services were offered individually by different professionals with little interaction. Therefore, services across different domains should be integrated to provide intervention.

### Conclusion

Taoyuan City has reinforced the collaboration between the addiction case managers, professional psychiatric care and public health nurses, and suicide prevention officers. The cooperation has formulated the most effective intervention for 1,500 identified addicts with multiple problems. Effective collaboration is enhanced through online network. In the future, it is hoped that the online collaboration services will be developed towards family-centered care, extending the service from individual addiction cases to families with multiple mental health problems.
Abstract Title | Building Healthy Life for Children in Taiwan Urban Areas
---|---
Author | Kuo, Yi-Jiun; Chou, Chen-Chen; Lin, Yueh-Liang; Hsieh, Ming-Yu
Co-authors | -
Organization | Taipei City Government Xinyi District Health Center

**The Introduction** Raised BMI is a major risk factor for Non-Communicable Diseases (NCDs). Obese children are likely to stay obese into adulthood and more likely to develop noncommunicable diseases like diabetes and cardiovascular diseases. In Taiwan, the prevalence of overweight and obesity for children was up to 30.4% in 2013. Taipei's Xinyi District, in which Taipei 101 is located, initiated a Child-oriented diet education project “Delicious 100 and health plus 1”. The project hopes to affect children as early as possible in healthy dietary behavior.

**Objective(s)** We promote the health literacy of Elementary school children through nutrition education and create a healthy food supportive environment.

**Methodology** From 2015 to 2017, Xinyi District Health Center, Taipei City began promoting a plan to combine healthy diet education for Elementary school children and providing counseling services for restaurants in the neighborhood. Our department aimed at building an environment that is conducive to healthy diets and raise awareness by joining forces resources of dieticians and retired medical personnel. We offered the children food sensory experiences and nutrition facts literacy education, and continued monitoring children's health behaviors.

**Results and discussion** (1) Sugary drinks consumption among children decreased 10%. (2) School children nutrition knowledge increased 26% (P<.001) and attitude toward healthy eating. (3) 33 restaurants join our action and reveal calories or nutrients labels for 212 dishes. (4) More than 86% of the parents think the project is helpful.

**Conclusion** Through public sector, we can integrate professional resources to improve student learning outcomes and build a healthy food support environment. The “Delicious 100 and health plus 1” project involves children, school parents' associations, schools, and restaurants. We expect to influence family dining options through children. It is hoped to enhance tremendously the children and families' knowledge of nutrition and cultivate the habit of eating a "healthy diet."
Exploring the relationship between physical environment and diabetes

Islamic Azad University of Tehran
Central Branch, Tehran, Iran

**Introduction**: Prevalence of diabetes is growing fast in Iran and more has to be done for preventing this chronic disease. The built environment play a critical role to encourage human behaviors related to diabetes mostly physical activity and diet.  

**Aim**: This paper aims to explore the chain of relationship between physical environment, two behaviors including physical activity and diet, and diabetes. 

**Method**: Research method is quantitative using comparative study. Two neighborhoods were chosen with the most and least population of diabetic patients. Then characteristics of physical environment related to physical activity and diet were measured via "SPACES", a reliable audit tool. For data analysis t-student and chi-square were used.

**Results**: The results indicate that physical characteristics such as accessibility to destinations, safety and security, aesthetic qualities and greenery, climate comfort, and cleanliness, have obtained more scores in one neighborhood, which has resulted in encouraging more residents to physical activity. Furthermore environmental characteristics such as available healthy food and ease of access to it have obtained more scores in one neighborhood, encouraging residents to healthy diet. The mentioned characteristics support two health-related behaviors resulting in a less population of diabetes in one neighborhood.

**Key words**: Urban design, environmental characteristics, physical activity, diet, Diabetes, SPACES, Iran
SDG3: Healthy Cities for Good Health and Well-Being – Healthy Setting
The evaluation of the strategy and efficiency of promoting intelligent buildings and communities in Taiwan Kaohsiung City

Cheng-Chen Chen, Chang-Chan Tsai, Chun-Chang Chiang, Ping-Chieh Tzeng, Chiu-Fen Hsieh

Tungfang Design University, Kaohsiung City Taiwan

1. The introduction
With climatic change, the climate in Taiwan might change from subtropical climate to tropical climate. As the second largest city in Taiwan, Kaohsiung is also under the challenges of environmental problems, such as heat island effect, heavy carbon emission, air pollution, and energy and water deficiency. To deal with these challenges, the authorities of Kaohsiung is proactively promoting sustainable building policies, in order to provide a good-for-living city environment for residents and investors. At the same time, the city is also trying to promote the development of new industries like intelligent buildings, Internet of things and big data.

2. Objective
In 2012, Kaohsiung issued the Green Building Regulations on the Exercise of Autonomy. According to the regulation, the Public Works Bureau under the municipal government will lead implementation of serial policies of “Kaohsiung House and Green Building”. These policies, aiming “mitigation” and “adaptation”, promote the practices of disaster prevention, water and energy saving, green roof, innovation of relevant technologies, and etc.

3. Methodology
Though documents analysis, experts consultation, and cases studies, this research evaluate the strategy and efficiency of the implementation of policies of intelligent buildings and communities promoting. The results of this research can be taken as reference for legislation and further study.

4. Results and discussion
The research surveys nine application areas of intelligent technologies, including smart disaster prevention facilities (security), cloud management of smart community, (cloud calculation), smart gas supply management (green energy), smart gardening (gardening), smart water meters (water resource), and smart health care (long term care). These cases, in general, approve the efficiency and
achievement of Kaohsiung’s efforts on the promotion of smart and green communities.

5. Conclusion
To mitigate and adapt to the climate change, the introduction of intelligent technologies into building will provide great help to the life of all ages, especially the elders and the young children. The government shall give priority to the promotion of intelligent building and smart communities.
INTRODUCTION
In recent years, Tainan’s city government employees have faced serious work challenges in the form of emergency crises. Working through these crises has put a heavy toll on the mental and physical well-being of them. The result is that, not only are they unable to bring their full capabilities to bear in the workplace, but their overall mental health has also been adversely affected.

OBJECTIVES
Thorough systematized innovative assistance measures to discover and solve potential problems in the areas of work, family, and life and to help promote a healthy mind and body.

METHODOLOGY
In accordance with the scope of target group involved, a four-tiered strategic system with corresponding goals and methods has been adopted.

- **Handling**: To effectively handle 0.5-1% of crisis cases and events.
- **Counselling**: To help 3-5% of employees take up an effective attitude and behavior when solving problems.
- **Preventing**: To prevent and eliminate areas of worry and concern in 20-50% of employees.
- **Empowering**: To strengthen the mental capital and work capabilities in 100% of employees.

RESULTS AND DISCUSSION

- **Awards**: This program has been awarded 1st place 3 years in a row—i.e. from 2015-2017—by the Taiwan Central Government.
- **SOPs**:
- **Effectiveness (Consumer Satisfaction)**
For every four employees, one participated in this program. The number of employees actively applying for counselling services grew by over ten-fold.

- **Achievements**:
656 activities promoting employee enhancement and work-life balance have been held, with a total of 14,533 participants.

CONCLUSION
The Tainan City Government has created healthy workplaces, maximized the quality of city services, and transformed Tainan City into a city in which all citizens enjoy a healthy body and mind.
**Introduction**: In the poultry slaughtering process, poultry easily become agitated leading to prolapse of the anus, and wings beating, causing feathers and feces to be scattered, falling into the blood collection tank. To prevent the cross contamination problem and ensure the hygiene and safety of blood products and to enhance the additional value of slaughterhouses, New Taipei City Government inspected a food factory and conducted a thorough understanding of slaughtering, collecting blood, shipping, manufacturing processes and environment, in addition to implementing controls on food additives. **Objective**: To improve equipment for the collection of blood and to establish the new poultry blood product source management.

**Methodology**: In consideration of the New Taipei City Poultry Marketing Cooperative slaughterhouse (NTCPMCS) procedural steps, the existing blood collection tank, chicken carcass transport line and poultry blood collection process, where there is ease of contamination; it was proposed to correct existing facilities. In principle, this separates urine and blood, improving the blood tank equipment.

**Results and discussion**: As chicken feces and urine contain high levels of uric acid, the level of uric acid in the blood after slaughtering is the basis for measuring the degree of contamination. There was an obvious difference between the two (p<0.05). The amount of sewage increased from 10ml/chicken to 12ml/chicken, showing that the improved method of blood collection tank can significantly reduce the degree of cross contamination in collection tank. Therefore, environmental impact was decreased and hygiene quality in poultry blood products was increased.

**Conclusion**: Processes related to "blood" and "blood cake" is often questioned by industry outsiders especially customers; therefore, through facilities engineering design, the hygiene quality of poultry blood collection is improved, strictly controlling blood product manufacture hygiene to protect the safety of food products for consumers.
Abstract Title | Bringing Hot Springs Into Households
---|---
Author | Da-Chi, Lin Chi-Lien, Yen Yi-Chen
Co-authors | -
Organization | Tourism Bureau of Tainan City Government

INTRODUCTION
Guanzuling Hot Spring, Taiwan’s only mud hot spring, is rich in minerals including chloride ions and bicarbonates, which makes it an ideal resource for developing innovative high-value products and industries. As a result, we began to organize hot spring festivals and events, expand the hot spring experience, and cultivate a series of hot spring-related industries to boost the overall economic output of Tainan’s hot springs.

OBJECTIVE(S)
The goal is to make these high-value hot spring products the most significant local souvenirs, and let some of the products gain more exposure by making them available at local hotels and hot spring bathhouses. We hope to help hot spring towns provide authentic local services, and, by forming a comprehensive hot spring industry chain, improve the economic benefits of hot spring industries.

METHODOLOGY
We aim to transform and upgrade hot spring industries and their products while maintaining the sustainability of hot spring resources, and to build Tainan’s hot springs into a distinctive and well-known international brand.

RESULTS AND DISCUSSION
1) Profits from the hot spring industries can be used on hot spring preservation projects.  
2) Media marketing exposure results. (In recent years, there have been nearly 100 articles on printed and digital media channels.)

CONCLUSION
This project shows that through collaborations between the industries and the public, private, and academic sectors, we can protect and preserve precious natural hot spring resources and simultaneously help communities leverage local resources and share the benefits. By presenting the brand value of Tainan’s hot springs and extending hot spring products into households, we can share a hundred-year old history, a rich culture, and a LOHA lifestyle that leads to healthy recreational experiences and cultivates related industries which can benefit local communities and maintain environmental sustainability.

KEYWORDS: hot spring, health, health regimen, high-value
SDG3: Healthy Cities for Good Health and Well-Being – Healthy Setting

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Promotion of Health in Schools in Taoyuan City Project</th>
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<tbody>
<tr>
<td>Author</td>
<td>Hsiu-Yu Kang, Ying-Chun Lin, Yu-Bei Liu</td>
</tr>
<tr>
<td>Co-authors</td>
<td>Taoyuan Healthy City Promotion Association</td>
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</tbody>
</table>

The introduction
Taoyuan City Government provides guidelines for teachers and students to conduct “autonomous health management” to implement “Health Promoting Schools” program in Taoyuan City, cultivating school children’s healthy lifestyle.

Objective(s)
1. Early discover physical defects or illness to provide follow-up inspection and therapy.
2. Help schools to promote health education with useful strategies to improve students’ health.

Methodology
1. With physical checkup of school children and data analysis, the bureau will decide the focus of health promotion at health promoting school.
2. Establish health committee and demonstration centers at health promoting schools, in collaboration with schools with high health check failure rate, to construct an inter-school alliance to help schools use effective strategies to improve health problems effectively.
3. Establish Taoyuan City Government team to communicate horizontally. Collaborating with social groups and medical, public hygiene, and health professionals and resources in hospital to promote preventive medicine and related health concepts together.

Results and discussion
1. From the data of the students’ physical checkup in 2017, it indicates that the vision of elementary school students shows to have significant improvement (the visual defects decreased from 48.17% in 2016 to 47.00%).
2. From the data of the school children’s health check in 2017, it indicates that there have been significant improvements in the dental caries rate of junior high school students and elementary school students (the caries rate of junior high school students dropped from 39.06% in 2016 academic year to 37.09% this year; elementary school students, dropped from 45.56% to 45.08%).

Conclusion
The successful experience regarding the operation of health promoting schools provides schools with ways for future endeavors and substantial goals. Taoyuan City will continue to work ceaselessly to secure funds and human resources from the central government to promote health promoting schools sustainably to provide school children with a healthcare network, constructing a healthy city.
### SDG3: Healthy Cities for Good Health and Well-Being – Healthy Setting

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>To Change the Nearsighted-Troubled Childhood: Creating Eye-Friendly Environment</th>
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<tbody>
<tr>
<td>Author</td>
<td>Chen Yi-Hsin, Chen Shou-Chen1, Wang Ya-Chun1, Lin Hsueh-Lan1, Lin Meng-Hui1</td>
</tr>
<tr>
<td>Co-authors</td>
<td>Department of Health, Taipei City Government</td>
</tr>
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**Introduction** According to the Child Welfare League Foundation (2012), 79.9% of third- and fourth-grade children in Taiwan attend the after-school care services. Children attending the care services may have an increased probability of having nearsightedness by 20%. **Objectives** To establish an eye-friendly environment in after-school care service facilities for children in Taipei communities and families, reducing annually the rising prescription number of second to fourth grade nearsighted children. **Methodology** The Health Department of Taipei City, in collaboration with fields in production, government, education, and civilians, has jointly established standards for the eye-friendly after-school care service environment. Experts from relevant fields such as ophthalmology and public health were also invited to set up a counseling team to conduct on-site visits and counseling for children attending after-school care services; providing assistance to create an eye-protecting environment. This project model is the first in Taiwan. **Results and discussion** After visits and consultations, in terms of lighting equipment and regulations, the desktop illumination has improved by nearly 60%, more than 90% completed the standards of operation for using electronic products, nearly 80% completed their adjustments of children's studying time by arranging class hours and increase the amount physical activities by making good use of school spaces, and In accordance with heights, children are provided with suitable tables and chairs. In terms of foods provided, roughly 90% can provide good quality vegetables. Overall, the prescription numbers of second to fourth grade nearsighted children has been gradually decreasing annually. **Conclusion** This project shows that forming partnerships for conducting visits and counsels can effectively create an eye-friendly environment for children attending the after-school care services and should be continuously promoted so that children can have eye-friendly learning environment after school.
Abstract Title | Local Strategies and Implementations to Creating a Health-Supportive Environment for a Small Community in Kaohsiung City, Taiwan
---|---
Author | Lih-Yau Song1, Chih-Sheng Yeh1
Co-authors |
Organization | National Taipei University of Technology

**Introduction** In 2005, WHO began to actively promote plans for the establishment of a physical activity environment in various countries. Many countries have responded in succession. In 2006, the main goal was to create healthy and dynamic communities. The legislation and related measures of the countries or municipal governments of the world create a space that is healthy and pleasant. However, the factors affecting health are diverse and complex and have already surpassed the burden of the public health departments. Therefore, it is imperative to effectively integrate all government departments, non-governmental organizations, social enterprises, and community people to jointly take effective measures to solve the health problems of local urban residents. **Objective** This article is to explore how to integrate local resources and use community health creation within a small community in Kaohsiung City, Taiwan. By facilitating physical activity environments in combination with various industry, government, education, and civil cross-cutting areas focused on the “bottom-up” method, the local residents and community groups’ consensus, and together with topics such as health, safety, and senior citizenship, to promote their local community environments. **Methodology** Based on the theory of building a healthy supportive environment, the study adopted literature reviews, field surveys, and depth interviews methods to explore the current situations and problems of the establishment of local physical environments, and the management of community organizations. **Results and Discussions** The study puts forward feasible solutions include the improvements and constructions of the local physical environments, the organizations and management of the social environments and the shaping of the atmosphere, as well as the integration and connection of the surrounding health resources, and the team composed of community residents. **Conclusion** With the participation of residents and the help from local public organizations, to create a healthy supportive environment to maintain and enhance the health of local residents and neighbors.

Keywords: Supportive Environments, Healthy Promotion, Healthy Community
Establishing a Multiple and Convenient Service Network for Long-Term Care in Urban and Rural Areas in Hsinchu County

Tung-Cheng Yina, Shu-Ping Weia, Shu-Fang Shena

Public Health Bureau, Hsinchu County Government, Hsinchu County 302, Taiwan

As population aging, changes of disease types and a great increase of the disabled, the demand for long-term care increases year by year. According to the report from the Ministry of Health and Welfare, the number of the disabled in the future is 16,589 in 2017, and estimated to be 18,094 in 2019, which showing the importance of long-term care service. To embody the connotation of long-term care service, the Hsinchu County Government plans to streamline administration, increases the demand and strengthens the quality control to provide local long-term care service with high-quality and wide accesses to residents. The purpose of the project is to improve the utilization rate of long-term care service of residents in the county through various service plans. It is also aimed to accelerate the service schedules in remote rural areas, and promote long-term care service capacity and build the network of long-term care service. In order to raise the coverage scope of the use of the long-term care service, the following mechanism is established: (1) strengthening the integration of related departments in the Hsinchu County Government to streamline administrative procedures; (2) establishing Wufeng Township Health Center for long-term care service so as to provide immediate and convenient services for locals; (3) integrating resources of private organizations and public sectors; (4) providing personalized services of half-day respite care at home and respite care in holiday; (5) strengthening advocacy of long-term care service; (6) providing multiply methods of applying for long-term care. Based on the previous strategies, the service units increased from 86 in 2015 to 90 in 2017 and the long-term care utilization rate increased from 30.1% to 34.1%. Also, the number of enjoying home-based care, respite care and rehabilitation service increased 9.6% so that the satisfaction degree of residents is up to 98%.
Abstract Title | Residential Fire Prevention And Safety Measures
---|---
Author | Shen, Wei-Hsiang; Kuo, Chun-Hung; Lu, Tung-Fa; Kuan, Chien-Hsing; Huang, Chien-Ting
Co-authors | 
Organization | Fire Department, Taitung County Government, Taiwan

**Introduction** Residential fires account for more than 60% of all building fires in Taitung County. This represents greatest risk category. Therefore, it is necessary to promote fire protection and safety measures in homes in order to reduce losses.

**Objective** The objective is to promote fire and disaster prevention, raise community awareness about residential fire hazards, and enhance overall fire safety in homes.

**Methodology** Firefighters and volunteers help improve residential fire safety with various means. They conduct home inspections, evaluate potential fire hazards, and install live detection systems in elderly folks’ homes to alert first responders. In addition, streets are cleared of obstruction to enable fire truck access. Illegally constructed buildings are also demolished to minimize fire risks. To raise community awareness, an education center is open to the public to gain first hand firefighting experience. Furthermore, a team of trained paramedics is formed, and they assist in spreading CPR knowledge.

**Results and Discussion** In 2015, early smoke detector warnings helped survivors flee from a residential fire. To contrast, in 2016, a residential fire in a building without smoke detectors resulted in the death of three occupants. Statistics such as these show that the installation of live detection systems reduce casualty rates. In 2018, firefighters and volunteers inspected 31.32% of all houses. The installation rate of detection systems in elderly folks’ homes is up to 77.27%. 21.42% of identified street obstructions have been removed, and the success rate of CPR application for out-of-hospital cardiac arrest incidents is at 27.56%.

**Conclusion** Establishing trained paramedics, promoting CPR knowledge, integrating smart dispatch systems, and building a database for at-risk households improve the overall wellness of the community. Ultimately, the increase in firefighting and fire prevention awareness help enhance residential safety.
**Abstract Title**
Effective Mosquito Extinction and Prevention in Daily Life of Taipei City

**Author**
Huang, Shier-Chieg、Chen, Shao-Ching、Lin Liu, Su-Chin、Lo, Lih-Ru、Tseng, Y-Yi

**Co-authors**

**Organization**
Department of Health, Taipei City Government

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**The introduction**
As an international metropolitan city, Taipei City is also likely to be exposed to the crisis of migrating infectious diseases. The seasonal epidemic of dengue fever is one of the major public health challenges in Taiwan in recent years.

**Objective(s)**
The goals dengue fever prevention and control program of Taipei City are prevention of disease migration, eradication of mosquito growth environment, and shorten of the incubation period.

**Methodology**
Taipei City first launched the Dengue Fever Prevention program, and is the first in the country to promote the “key performance indicators for first-level agencies of the City Government”. We adopted a mosquito-borne infectious disease control information system, conducted hot-spot risk management, cooperated cross counties and city epidemic prevention, and established a dengue fever epidemic prevention network for community clinics’ quick screening and notification, so as to reduce the potential risks of the infectious incubation period. We also formulated the "Taipei Dengue Fever Prevention Manual", and trained a “bug-fighting” task force and little fighters for campus epidemic prevention to strengthen and implement localized prevention and control based on an innovative strategic thinking modules.

**Results and discussion**
31 community clinics joined the dengue fever prevention program to popularize dengue fever screening. In 2017, level 2 mosquito density decreased by 5.3% and the incubation period decreased by 2.1 days, compared to 2016. Finally in 2017, zero case was achieved with 100% effectiveness.

**Conclusion**
The establishment of a community-care network of national epidemic prevention for combating dengue fever by rapid screening, immediate notification and reduction of the incubation period, as well as self-monitoring management for 40 KPIs are the keys to the success of the dengue fever prevention and control program in Daily life of Taipei City.
SDG11: Sustainable Cities & Communities
**SDG11: Sustainable Cities & Communities**

<table>
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<tr>
<th>Abstract Title</th>
<th>Conservation and Utilization of Important National Wetland to Increase Biodiversity</th>
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<tr>
<td>Author</td>
<td>Yeh, Cheng-Lin</td>
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<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Agriculture Department, Taitung County Government, Taiwan</td>
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**Introduction** The important wetlands in this study rated national level are situated within the Xinwulu River Fish Protection Zone, Haiduan Township, Taitung County. With an area of 317 hectares, the entire scope of the wetland is in the river valley. Following Typhoon Morakot in 2009, the Fish Protection Zone habitat was severely damaged, resulting in greatly reduced fish group populations.

**Objective** In order to maintain the ecological environment of the wetlands and protect biodiversity, achieve sustainable management, develop tourism and recreation industries, and provide tribal community economy, and have the opportunity to achieve a win-win situation of substantive conservation and development, this conservation and utilization project was carried out.

**Methodology** Through the water resources system, ecosystem, and environment-based survey and analysis, and the conduction of various monitoring surveys, the wetland system was divided and designated for the sensible use of items, taking into account the balance between traditional culture and Taiwan's native fish conservation.

**Results and Discussion** After the typhoon, 12 surveys were carried out in three years from 2013 to 2015. A total of 152 fish belonging to three families and eight species were caught. In order to gain an insight into environmental change variations, five surveys were conducted this year. One family and four species were found, a total of 205 fish/per survey fish caught. The number from the visual inspection was 35 fish/per survey, the second highest over the past five years.

**Conclusion** This project has been conducted for five years. Although the Xinwulu River was gradually restored after Typhoon Morakot struck, fish resource access is still not advisable according to the current assessment.
### SDG11: Sustainable Cities & Communities

<table>
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<tr>
<th>Abstract Title</th>
<th>The Renovation Subsidy Program of Chiayi City</th>
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<tr>
<td>Author</td>
<td>Chen Kuan Chung</td>
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<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Cultural Affairs Bureau of Chiayi City, Taiwan</td>
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Since 2014, the Cultural Affairs Bureau of Chiayi City started “The Renovation Subsidy program of Chiayi City”. The applicants of program can choose from two different subsidies, house rental fee subsidy or renovation subsidy. The purpose of this series program is to help operators of the old house self-sustained and encourage operate with cultural creativity. Preserve potential historic relics or monuments by renovating old house and establish good cooperation relationship between local government and citizens. By using “Cross-sector cooperation”, “Citizen Participation”, “Counseling Group”, and “Public-Private Collaboration” policy strategies, the Cultural Affairs Bureau of Chiayi City keep creating healthier cultural environment for citizens, enriching tourism resources and improving cultural awareness of the citizens. The ultimate goal of this program is not to let old houses become burdens, but new landmarks of Chiayi City, becoming precious heritages of all Chiayi citizens.

Key words: Renovation, Subsidy program, Public-Private Collaboration
<table>
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<tr>
<th>Abstract Title</th>
<th>Love of Citizen Make the Park Accessible</th>
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<tr>
<td>Author</td>
<td>Min-fu Chen, Yi-Chen</td>
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<td>Organization</td>
<td>Tainan Healthy City Association</td>
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**INTRODUCTION**

Urban Park is an important public good for urban development and plays an important role in the planning of a healthy city. The Tainan City Government has been committed to the improvement of the barrier-free environment for the planning and design of the park. It is hoped that the park can be used as an open space that is easily accessible to users with inconvenient actions. **OBJECTIVE(S)**

Analyze how the Tainan City Government has achieved a friendly link to the park's barrier-free space. Analyze how Tainan City Government integrates cross-divisional tasks for accessible space in the park to achieve sustainable goals. Analyze how the Tainan City Government establishes a communication platform that allows foreign users to easily use parks through hotspots, foreign language signs and icons.

**METHODOLOGY**

This study interviews local opinion leaders and management units to identify key issues in the park's barrier-free environment. Convene stakeholders to carry out SWOT analysis and discussion, and clearly define the advantages, opportunities, and weaknesses and threats faced by the project. Finally, the PDCA's management cycle allowed the project's progress to be successfully completed.

**RESULTS AND DISCUSSION**

Effectively eliminate interference factors in barrier-free environment (car resistance). Effectively enhance the convenience of accessibility. (foreign language signs, illustrations, etc.)

**CONCLUSION**

The improvement of the barrier-free environment of the park in Tainan City included the following points: Effectively improve the accessibility of the various activity areas of the park, and coordinate the different units to find out what works for park management. In addition, different navigation information and internet services are provided, which are of great help to tourists and foreigners.

**KEYWORDS:** Park, Tainan City, SWOT Analysis
Lioujia Wholesome Environment Fostering Project was separated into 2 phases. In the first one an extensive lawn was created, and in the second a garden-style leisure plaza shaded by trees was built. The two engineering works exhibited a shift of the spatial experience at this place, and extended the landscape axis from the Japanese-style dorm nearby. In addition, community building and public participation were incorporated into the project. For example, the old house located by the entrance of the area was adorned as the living room of the train station through Tainan Corner Landscape Design Contest Project. The top of the tree house on the extensive lawn was decorated with a rice-shaped artwork made of bamboo through Corner Embellishment Project, in which both local residents and students from Tainan National University of the Arts participated.

This project combined engineering, community building, and the effort of local residents. Old houses, plants, Lawn of Luck, green transportation modes, and commuters have become the features that make Linfengying Station elegant and romantic. It is not just a train station but a place that extends the memory of old times as well.

**KEYWORDS:** Landscape Improvement of the Surrounding Area of a Train Station
Since more and more people in Tainan City have been engaged in physical activity, the boulevard in Anping Yuguang Island has become a field for night runners and road runners. The crescent-moon-shaped bay, which is called Moon Bay by local residents, is formed by silt. It is a paradise for windsurfers and canoers. In order to provide an incentive for local residents to exercise, tidy up the environment, and prevent disease, this project fully utilizes local resources and unifies local residents to improve the environment.

This project has the following features:

- Maintains and utilizes the seaside landscape. Provides a suitable place for seaside activities.
- Integrates tourism, leisure activities, culture, and natural resources.
- Multifunctional: ecological preservation, sightseeing, and recreation.
- Promotes healthy lifestyle and ecological caring, awakens local identity, and enhances community functions.
- Experiential environmental education.

**KEYWORDS:** Utilization of Protection Forest, Seaside Landscape Improvement
The Makeover of an Industrial Park - Tree Valley Park Ecologized

Stanly Yin, Kuo-ching Hsu, Wei-jane Chang, Ching-Hsiang Chen

INTRODUCTION
Economic development programs and environmental protection causes have long been considered incompatible; yet instead of a heavier focus on economic growth, the Tainan City Government has helped reset the goals of industrial parks in the community by making environmental wellness their core value, and establish sustainable, ecologized industrial estates accordingly.

OBJECTIVE(S)
Creating a sustainability-minded industrial park that supports economic productivity, environmental and lifestyle wellness.

METHODOLOGY
The Tainan City Government welcomes private funding, and encourages the partnership between the public and private sectors to ensure the development and management of the park, the building and protection of a diverse ecosystem and wildlife habitats, the planning of a leisure space on park premises, the preservation of culturally-valuable assets, and proactive citizen engagement mechanisms.

RESULTS AND DISCUSSION
The Tree Valley Park, the first industrial estate built on the principles of Operation and Transfer in Taiwan, is home to 100,000 trees. 40 percent of the premises have been reserved for green coverage and detention basins. The Tree Valley has enjoyed successes in rehabilitating the eastern-collared pratincoles and Gunther’s frogs. An archeology center is established to preserve the relics site found in the Park. As many as 1.5 million participants have joined Tree Valley’s science, education and arts activities.

CONCLUSION
The Tree Valley Park is noted for its economic productivity, ecological robustness, active participation of private citizens and a lively arts presence. The Tainan City Government hopes to make Tree Valley an economically-promising establishment, and a landmark for wildlife protection and cultural preservation.

KEYWORDS: Productivity, ecologized industrial park, sustainability
### Abstract Title

A Study on effectiveness of Beinan River Fugitive Dust Prevention and Control and improvement and Promotion Strategy

### Author

Feng, Chih-Ming; Chang, Chia-Chih; Chen, Ping-Shen; Hsieh, Ching-Chuan; Huang, Chien-Ting

### Co-authors

### Organization

Taitung County Environmental Protection Bureau, Taiwan

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**Introduction**

Taitung has always been known as the City of Sand. Every dry season, the dry riverbed coupled with the northeast monsoon and fugitive dust often seriously affect people’s health and quality of life.

**Objective**

Reduce the harm of Beinan River’s fugitive dust.

**Methodology**

Set up a river fugitive dust forecasting and prewarning system, as well as LED billboards in seven locations in order to update the public with air quality information. A similar way of fish ponds water-retaining embankment was built on the river course, and the exposed land was covered in water, which produced a good inhibitory effect and was easy to repair. The material obtained from local sources produced minimum effects on the environment. Satellite images were used to determine the exposed riverbed distribution and improvement rate, thereby mastering the working area and optimizing the conditions.

**Results and Discussion**

From 2014 to 2017, the water coverage area increased from 327.38 hectares to 645.26 hectares. The days of Taitung Air Quality Monitoring Station’s detection of fugitive dust (PM$_{10}>150μg/m^3$) decreased from 31 days before working in 2009 to 6 days in 2017. The annual incidences of the fugitive days decreased from 8.49% to 1.64%, the improvement of riverbed exposure determined by satellite images reached 77.5%, and citizens’ satisfaction of the strategy reached 95.98%.

**Conclusion**

The water coverage work, combined with the forecast and prewarning system, LED billboards, satellite image determination, etc., indeed led to Taitung City’s significantly decreased fugitive dust event days. The general public also agreed the strategy had been effective.
**Abstract Title**  
Low-Carbon Sustainable Homeland Construction Strategy and Promotion of Low-Carbon Community

**Author**  
Lin, Wei-Chih; Chang, Chia-Chih; Chen, Ping-Shen; Hsieh, Ching-Chuan

**Co-authors**

**Organization**  
Taitung County Environmental Protection Bureau, Taiwan

**Introduction**  
Because of the greenhouse effect, mankind faces to severe challenges from the threat of climate change. Cooperating with the EPA policy 'low-carbon sustainable homeland' actively, Taitung County proposed feasible actions based on local conditions and guiding communities to participate in diversified energy conservation and carbon reduction actions.

**Objective**  
Taking low-carbon city and sustainable development as a blueprint, it promotes communities to implement the diversified and innovative energy conservation and carbon reduction actions.

**Methodology**  
During 2015 to 2017, selecting communities from interested list are guided to implement greenhouse gas emission reduction with the various promotional and action projects.

**Results and discussion**  
There are 147 towns in Taitung County. Totally 109 communities have participated in the 3-year project, which are 13 new joined communities in 2015, and significant increased to 64 in 2017. Based on the theme of ecological greening, low-carbon diets and trash reduction, there are 47,290 participants joined the activities which are the outstanding community demonstration, deep into the community, holding competition, low-carbon folk activity promotion and observation. The carbon reduction was approximately 1,370 tons in 2015, 192 tons in 2016 and 219 tons in 2017.

**Conclusion**  
To adapt the unique population structure and environmental characteristics of Taitung County, combining with the innovative, localized, and sustainable development spirit has continuously applied to revise the driving policies, technological path, and guiding the communities to take the best possible carbon reduction actions.
Solid Gold From Animals- Turning Animal Excrements into manure for Fertilizing Vegetables, for a low carbon, sustainable and healthy city

Lin,Ying-Chu; Huang, Fang-Ya; Tsai, Hui-Ni; Hsu, I-Ping; Fan,Yi-Bin

Wenshan District Health Center, Taipei City

The Introduction The amount of animal excrements handled by the Taipei Zoo exceeds 819 metric tons every year. The processing of such a tremendous amount of animal excrements consumes administration resources and budget. The processing of animal excrements also has a negative impact on the environment ecology.

Objective(s) Integrate the community units with the Taipei Zoo to create a low-carbon, environmental-protective, organic farming supportive environment so as to increase the "recycling" of organic materials, reduce the negative impact on the environment and mitigate the burden of the Earth.

Methodology With the methods of community building, the utilization of animal "gold compost" combined with the promotion of the municipal plan "Garden City" is used to invite citizens to participate in the project and practical promotion is applied to the community.

Results and discussion A total of 34 public and private sectors and organizations have participated in the project. The Taipei Zoo produces 300 tons of organic compost every year. The converted value is worth NT$6.825 million. The economic benefits are significant. The Taipei Zoo uses the compost for planting and saves public funds. The Taipei Zoo also provided 27,108 kg of fertilizer compost free to the citizens last year.

Conclusion The project of animals gold compost can effectively solve the problem of animal excrements and successfully achieve "zero disposal" and "100% recycling" of waste animal excrements.
**Abstract Title**

Retrospective Project-Participatory Plan and Design with Reconstruction of Natural Axis Landscape in Taitung City

**Author**

Lee, Chun; Lai, Chiu-Ming; Wu, Ching-Jung; Tsai, Sheng-Hsiung; Tsai Ping-Hsuan

**Co-authors**

Organization

Taitung County Public Work Bureau, Taiwan

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**Introduction**
The Mountains-Sea Bike Trail which stretching 22km around Taitung County is a place people engage to have their leisure activity in the morning and dawn. As the hardware facilities have reached their usage limit and due to impacts of natural disasters, the Mountains-Sea Bike Trail is now being the target for rebuilding the urban natural axis environment.

**Objective**
The concept of “the integration of participatory planning and natural axis” can help the existing green base of Taitung to give full play of the function, connecting the green spaces and green corridors in the city, strengthening’s the important natural open space and humanity-based network of Taitung City, bringing more colorful for the citizen in daily life, and further creating an open spaces network which are high-quality, multi-functional, cultural immersion and appropriately design.

**Methodology**
Through public participation, plan the urban natural axis concept that by connecting the blue and green belts with the landscape and conduct “event planning” to encourage citizens to interact with the urban green base; therefore, to increase the responsibility of citizens for the city green base and to improve the hardware facilities, thereby continuing the Mountains-Sea Bike Trail imagery and providing better outdoor recreation space for the public.

**Results**
More than ten participatory design workshops will be holed to provide citizens, community residents and students with opportunities to create a healthy living space in the city, increase the citizens’ responsibility for the green base in the city. This project will activate 60 city landscape nodes, continuously provide the good outdoor recreation space for the public, and finally to connect the 22-km long urban landscape axis.

**Conclusion**
Promote the aesthetics sharing in the city, enhance citizens’ colorful daily life, and effectively build the “international happy and livable city.”
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<th>Abstract Title</th>
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### SDG11: Sustainable Cities & Communities

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<th>Abstract Title</th>
<th>Construct The Lung of the city Garden City- Takes Good Care of Everyone Health</th>
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<tr>
<td>Author</td>
<td>Li-Yuan Huang, Shu-Ju Huang, Hua-Jung Mo, Kuo-Yu Yang, Yi-Bin Fan</td>
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<td>Co-authors</td>
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<tr>
<td>Organization</td>
<td>Public Works Department, Taipei City Government, Taiwan</td>
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#### The introduction
Urbanization and growing population have restricted the options to make use of green lands of Taipei, therefore, organic farming is fairly important to maintain environmental sustainability. **Objective(s)** The purpose of the project is to create a brand-new Taipei as the “green, healthy, educational and lively garden city”. **Methodology** The project encourages people to communicate with land to pursue holistic self-healing, meanwhile to reconstruct the civil ethics with harvest and farming process, which resulting in ecological abundance. This project encourages folks to spontaneously promote the construction of garden bases and to group volunteer teams to enhance the responsibility and accomplishment. The garden product can be shared and used for public welfare in order to pay back to the public with what is offered by the land. The “Small Garden” project also provides students opportunity to experience the process from farming to harvesting on campus, to observe the natural forms of foods, and to help treasuring everything. **Results and discussion** Garden City Project receives a lot of positive feedback from citizens beyond the original expectations. Till the 20th of April, 2018, the total garden area has been opened up 156,651 m², and 562 garden bases established, including happy farms, small garden, green roof and citizen farms, by 96,726 farming participants and 418 schools. As far as consultations about greening and farming technologies, there were more than 96,583 participants of gardening courses and more than 880,000 persons using the services provided by the agricultural technology consulting center and the network platform. **Conclusion** Upholding the environmental protection and energy saving concepts, Garden City project has hopefully transformed Taipei Metropolitan City towards sustainable ecological city and community.
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<tr>
<th>Abstract Title</th>
<th>Old House, New Taste - Plan on Building Guanxi-Zhudong Creative Cluster</th>
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<tr>
<td>Author</td>
<td>Yi-Chen Changa, Chiu-Yao Choua, Erh-Mei Hsua, Pei-Hsuan Leea, Szu-Ying Chiua</td>
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<tr>
<td>Co-authors</td>
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<td>Organization</td>
<td>Cultural Affairs Bureau, Hsinchu County Government, Taiwan</td>
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In order to explore the local industry, the Hsinchu County Government builds the “Old House Creative Cluster” for Guanxi and Zhudong Townships. From the perspective of cultural innovation, it activates the local existing industries. Based on the established industries, it invests proper resources to promote the number and highlights of “Creative Cluster” with art, thereby increasing the possibility of connecting more aspects. It will contribute to the economic development of Guanxi Creative Cluster. The old houses are rebuilt in combination with the artist’s creation, and the follow-up operators enter the street. The influence of the Life Creative Market stimulates the operators to explore the meaning of cultural creativity. In addition, the local government develops specialty food and makes a creative use of healthy and safe ingredients. “Creating the flagship brands” and “Guanxi--two days and one night travel” let the local residents and visitors feel the ubiquitous cultural creativity. The new-developed street of Zhudong Creative Village invites 20 artists to create a cultural space. Finally, the activity of “Old House Fashion Week” is held to present the plan’s results this year. In the future, the concept of “sustainable development”, that is trying to accumulate the start-up energy for future development, will be adopted to enable the local people to use their own resources and strength and initiate the long-term plan of “Creative Cluster”. Through the aggregation and presentation of the results, the participants and visitors can encounter with the art and experience the new “taste” of the old houses in Zhudong.
SDG11: Sustainable Cities & Communities

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<tr>
<th>Abstract Title</th>
<th>Affordable Housing for Disadvantaged Groups</th>
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<tr>
<td>Author</td>
<td>Hou, Yu-Kuang</td>
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<td>Organization</td>
<td>Land Administration Department, Taitung County Government, Taiwan</td>
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**Introduction** Currently in Taitung, over 7,000 people are homeless due to poverty, disabilities, aging and being unattended, and other hardships. Charitable housing can resolve the housing problem of these disadvantaged groups.

**Objective** Acquire land for charitable housing with zone expropriation for building charitable, affordable housing let or sold to disadvantaged groups to achieve the vision: housing for all in Taitung.

**Methodology** Select agricultural areas in good condition and location, change them from agricultural land use through urban zoning, acquire them through zone expropriation and development for building charitable housing, and develop public facilities, such as roads and parks, in such areas.

**Results and discussion** About 1.08 hectares of residential areas have been developed for charitable housing to accommodate about 1,348 disadvantaged people, and 4.16 hectares of public facilities were developed; disaster prevention and rescue functions were enhanced, and local culture was preserved at the same time to build a quality living environment.

**Conclusion** Achieve the short-term goal of housing for 20% homeless people from disadvantaged groups and the long-term goal of poverty alleviation and charitable housing for disadvantaged groups for all Taitung citizens to enjoy living and develop careers.
**SDG11: Sustainable Cities & Communities**

<table>
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<tr>
<th>Abstract Title</th>
<th>Experience of promoting the participation of Elderly Volunteers in Environmental and Fire Prevention Organization</th>
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<tr>
<td>Author</td>
<td>Wu Hsu-Chi, Lin Shih-Ming, Chen Ping-Kun, Hsieh Ching-Chuan</td>
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<td>Organization</td>
<td>Taitung County Environmental Protection Bureau, Taiwan</td>
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**Introduction** The current elderly population in Taitung County is 33,060, accounting for 14.97% of the total population in the county, indicating a gradual increase in the elderly population. In order to put elders’ experiences and wisdom to proper use, elders are encouraged to join environmental protection volunteer work, increase social activities, and assist in community environment surveys, while water patrols convey correct environmental concepts to create a healthy and sustainable living environment of blue skies and green pastures, verdant mountains and pure water.

**Objective** Encourage elders to take part in environmental protection policy making and create an elderly-friendly environment.

**Methodology** Through special training and activities of environmental volunteers, impart environmental protection knowledge, set an example by personally taking part in environmental protection, and exert an environmental influence on peers and younger generations.

**Results and Discussion** In the recent three years (2015-2017), environmental protection volunteers involved in community services increased from 2,972 persons to 3,945 persons, a growth rate of 32.7%. Through environmental protection knowledge and policy imparted by environmental protection volunteers, community cohesion was fostered, which also gained the Central Government’s recognition (Jialan Community, Jinfeng Township, Taitung County received the Award of Excellence—“Voluntary Flood Disaster Prevention Community”—from the Water Resources Agency, Ministry of Economic Affairs in 2016; Yong-An Community, Luye Township, Taitung County received the Gold Medal Village from the Council of Agriculture in 2017; and Xinfushui Environmental Patrol, Guanshan, Taitung County was awarded the Special Contribution Water Environment Patrol from the Environmental Protection Administration in 2016).

**Conclusion** Elders are encouraged to join disaster prevention organizations and environmental protection volunteer organizations, actively take part in environmental activities, and assist in environmental protection policy promotion, thereby creating a city upholding elderly health.
Abstract Title | Walking-Friendly City for Sustainable Physical Activity in Case of Wonju Healthy City
Author | Eun Woo Nam, Ha Yun Kim, Byeung Heon Yoo, Ok-kyeong Park, Chang Ho Park
Co-authors
Organization | Healthy City Research Center, Institute of Health and Welfare, Yonsei University, Wonju, Republic of Korea. Healthy and Physical Exercise Division, Wonju City Hall, Wonju, Gangwondo, Republic of Korea.

**Introduction** Based on the 10-Year Plan for Healthy Cities 2010-2020, Wonju city has carried out various projects to promote walking-friendly residential environment and citizens' self-practicing walking culture. **Objective** Wonju city aimed to prevent lifestyle diseases and to promote health by improving walkability. In addition, it aimed to contribute to the revitalization of local economy by linking it with walking culture and ecotourism. **Methodology** First, Wonju city created a walkway around the river, urban health park, and curvy road to create a walking-friendly residential environment. The Wonju Curvy Road was constructed as a total of 16 courses and 245 km of road length. Second, the city conducts the International Walking Competition in conjunction with the local community every year. This competition is held for the 24th time this year. A total of 581,702 people participated by 2017. In particular, it provides additional events as health checkup and nutrition counseling linked with community health organizations for participants. **Results and discussion** According to the results of the Community Health Survey (KCDC), the vigorous-intensity physical activity rate increased from 6.9% in 2012 to 13.8% in 2017, and the moderate-intensity rate increased from 5.0% in 2012 to 8.8% in 2017. The walking rate has increased from 22.3% in 2012 to 30.2% in 2017. In case of obesity rate (BMI), the Wonju city in 2017 was 30.3%, which was lower than 31.4% in Gangwon Province as a whole. In addition, healthy park (32.1%) were the most frequent places for citizens to perform physical activities. **Conclusion** Wonju city created an active society, environment, people system to promote health by improving walkability. As a result, there was an effect on citizen's health status, rising their physical activity and walking rate. In addition, it contributed to regional economic revitalization by building walking and tourism environment. **Keywords**: walking, walking-friendly city, physical activity, healthy cities, urban planning
**SDG11: Sustainable Cities & Communities**

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<tr>
<th>Abstract Title</th>
<th>A Study on Environmental Education Strategy Promotion and Effectiveness</th>
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<tr>
<td>Author</td>
<td>Wu Shu-Chi, Lin Shih-Ming, Chen Ping-Shen, Hsieh Ching-Chuan</td>
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**Introduction** Taitung County has rich natural resources, ecology and humanities. In order for county residents to understand environmental ethics and responsibilities, the government agencies, schools, private organizations, and environmental groups ought to promote environmental education through multiple channels such as publications and online media.

**Objective** Enhance the county residents’ environmental knowledge, skills, attitudes, and values.

**Methodology** Conduct experiential environmental seminars and visit education staff who advocate and nurture the environment, promote green purchases and environmentally friendly hotels, implement recycling and restrict the use of plastic bags and disposable tableware.

**Results and Discussion** The results in the recent three years (2015-2017) show that the total environmental education classes reached 290,000 hours in total; environmental education staff increased from 68 persons to 162 persons, a growth rate of 135%; the environmental education certification service staff increased from 414,254 persons to 1,464,433persons, a growth rate of 255%; green purchases increased from NT$98.59 million to NT$127,030,000, a growth rate of 28%; the environmentally friendly hotels increased from 30 to 90, a growth rate of 200%; issues advocated through news media or online media increased from 388 articles to 735 articles, a growth of 89%; and the average daily waste decreased from 110 tons to 95-97 tons.

**Conclusion** Taitung County already has six certified environmental education sites, 162 environmental education staff members have been trained, and industry-government-academia resources and creativity have been integrated with abundant results. It was evaluated by the Environmental Protection Administration and was awarded the Award of Excellence for three consecutive years.
### Introduction
In South Korea, the rate of daily bicycling was 8.3% in 2017, which is lower than other countries like Japan. The rates of obesity, heart disease, and related health problems increasing in the South Korea, health professionals, urban planners, and policy makers are looking for ways to increase physical activity by changing the urban form. Although walking is an attractive option for many reasons, bicycling offers many benefits and warrants further research. **Objective** This study examines the bicycle environment including facilities, physical environments, and disabilities for cycling and analyse the factors associated with bicycle environment on quality of life and self-rated health among citizens in Seoul. **Methodology** The subjects are citizens using bicycles in the three districts in Seoul. We conducted survey among 193 people from June 2 to 3, 2018. The Questionnaire consisted of bicycle environments, bicycle use and satisfaction, self-rated health, quality of life, and demographic characteristics. Data were analysed using correlation analysis and multivariate regression models at 5% level of significance. **Results and discussion** First, the participants used an average of 9.1 days bicycles for one month. The purpose of using bicycle was leisure and hobby (57.4%), health care (20.2%). The self-rated health was 71.3 points on the average of 100 points scale, and the quality of life score was 6.7 points on the 10-point scale. Second, bicycling environments had a significant positive correlation with riding time, overall satisfaction, self-rated health, and quality of life. Third, multivariate regression analysis shows that bicycling environments was associated with self-rated health. Also, bicycling environments and self-rated health had a significant interaction effect on quality of life. **Conclusion** Improvement of the bicycle environments, including facilities, physical environments and disabilities may be an effective strategy for quality of life and self-rated health among citizens.
SDG2: Zero Hunger / SDG7: Affordable & Clean Energy / SDG16: Justice and Peace
**Abstract**

As food safety problems emerged one after another, people have become more aware to the link among food, health and environment. Actions such as organic-low-carbon-diet and grow-your-own-food have thus become popular in the society. “Food Forest” is a multi-faceted action that covers the above awareness and several other issues: urban greening, reduce carbon footprint, community engagement, environmental education, sustainable development, natural healing and more. By incorporating popular issues into the action, Food Forest builds a public space for people to connect and schools to educate, and a new framework of urban environmental protection. “Food Forest” is designed based the concept of the three-dimensional and multiplex symbiosis of a natural forest, as well as balancing food production and ecological greening. With sustainability as its core value, “Food Forest” is expected to achieve Goal 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture) and Goal 15 (protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss) listed in the Sustainable Development Goals (SDGs) by the United Nations. Participants develop into a strong community as they work to care for their health and the environment, strengthening the link between food safety and the environment. In order to expand the influence of Food Forest, the Environment Protection Bureau of Hsinchu County Government cooperated with Wutong Foundation to establish Taiwan’s first “Food Forest demonstration site” in Shih-Hsin air purification zone as an educational base. In addition, upholding the principle of promoting communal well-being and sharing, EPB has set up at least 50 community-based food forests in the county since 2015, offering people an opportunity to get close to nature and enjoy the fun of hands-on work, while subtly building people’s awareness of environmental protection.
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<th>SDG2: Zero Hunger / SDG7: Affordable &amp; Clean Energy/ SDG16: Justice and Peace</th>
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<td><strong>Author</strong></td>
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**The introduction**
Taoyuan City has been actively promoting safe and organic agriculture in recent years, and has become the largest producer and supplier of organic vegetables in northern Taiwan, providing for the organic vegetable consumers in both Taoyuan and the greater Taipei area. Currently, the city’s planting area of organic crops has been growing annually, of which the majority are organic vegetables, followed by rice, tea, and miscellaneous grains.

**Objective(s)**
The promotion of organic agriculture is an established policy of the Taoyuan City Government, and a budget has been earmarked to subsidize organic agriculture for the promotion of this policy. Farmers are guided to purchase necessary agricultural machinery, production facilities (greenhouses/nethouses), and biological control agents. This is done to reduce labor and costs so as to improve farmers' financial income while ensuring agricultural product quality, and increase the city’s organic agricultural area.

**Results and discussion**
The said policy has been implemented and yielded the following results: By 2016, 167 households had applied to work on 3.37 hectares of land. The area of organic agricultural production in Taoyuan City has grown from 292 hectares with 167 households in 2016 to 323 hectares with 194 households in 2018.

**Conclusion**
Currently, Taoyuan City’s organic agricultural area has been growing due to the government’s promotion and subsidies. Plans to assist organic farmers in product distribution through various channels are also undertaken, aiming to make Taoyuan into a friendly and non-toxic city.
Abstract
The “Hsinchu County Farmers Market” is aimed to develop a reliable agricultural business model where fresh and safe products are secured. By making full use of the agricultural system of production and sales, the farmers make their agriculture more competitive and establish a marketing path from the production to sale, especially sell local agricultural products of the season. Based on the model of “local production-local sales”, the business model provides farmers with channels for self-producing and self-selling to cost down transportation and marketing fees. Accordingly, farmers’ direct income rises and agricultural economy grows so that the goal of a sustainable agriculture is expected to achieve in. The objectives are as follow: (1) build a management system of producing safely and strengthen education on safe use of pesticides for enhancing consumers’ confidence in purchasing; (2) assist farmers to adjust the product period in response to market supply and demands then to avoid oversupply further leading the market price fluctuation; (3) integrate industry-based agricultural resources through exchange and communication and introduce the notion of corporate management and cultivate management talents; (4) promote the safe development of organic agriculture in Hsinchu County to maintain the ecological environment and increase revenues. The market supply items mainly cover fresh fruits and vegetables, processed products and hand-made gifts. They are well-recognized by consumers mostly because they are healthy, safely-produced and secure products. The Hsinchu County Government instructs its farmers to use pesticides safely and improve their cultivation techniques. Meanwhile, it enhances its recognition through promotion and links itself with the new farmers’ market in the Hsinchu County to create a marketing method of local characteristics for agricultural products. Eventually, it helps to create a win-win sales model of securing the benefits of farmers’ associations and increasing the real incomes of farmers.
### Abstract

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<tr>
<th>Abstract Title</th>
<th>High Tech, Safety, and Good Food: Taoyuan Food Safety Carnival</th>
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<tbody>
<tr>
<td>Author</td>
<td>Wen-Yen Wang, Kuo-Ning Lin, Pai-Chuan Kuan, Chia-Hsun Hsu, Yun-Ying Chang</td>
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<tr>
<td>Co-authors</td>
<td>Taoyuan Healthy City Promotion Association</td>
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### The introduction

Taoyuan is a major business and industrial city. About 60% of processed food in Taiwan comes from Taoyuan. In recent years, Taoyuan City Government has introduced resources in education, assistance, inspection, and subsidization to upgrade the quality of food processed in this city. **Objective(s)**

In 2017, the first Food Safety Carnival was held in Taoyuan with the theme of high technology, safety, and delicious food. Food manufacturers, each department of Taoyuan City Government, experts, and scholars were invited to promote the knowledge on food safety and market local food manufacturers.

### Methodology

Local food manufacturers and each department of Taoyuan City government were invited to establish four experience galleries and six major theme zones. The food manufacturers presented the knowledge of food safety and origin management with food processing at site. The government departed from the five-cycle of food safety and food safety education. In the forum, scholars introduced the issues on food safety in depth from farm to dinner table. The industry, government, and academia collaborated in promoting food safety.

### Results and discussion

In 2017, more than 200 thousand people participated in the event, with 80% of them showed to be satisfied and 90% of them expected similar event to be held again. With the gathering of local food manufacturers, international guests, experts, scholars, and different departments from Taoyuan City government, it communicated the issues of food safety and food technology from farm to dinner table, presenting considerable achievements. **Conclusion**

Summarize the issues valued highly by citizens, taking them as reference for future 2018 Taoyuan Food Carnival planning. The topics on food safety will be used as the promotional materials of our bureau in the coming years. We will continue and endeavor to promote food safety.
### Abstract

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<tr>
<th>Abstract Title</th>
<th>Good Food Safety-Policies for Rising the Food Safety Performance of Small Food Proprietors</th>
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<tr>
<td>Author</td>
<td>Yu-chun Chang, Yu-chang Chang, Yu-Wei Liao, Yao-Mao Chang</td>
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<td>Co-authors</td>
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<td>Organization</td>
<td>Chiayi City Health Bureau, Taiwan</td>
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To control the food environment for people, Chiayi has adopted such measures as physical guidance to proprietors and strengthening control over food in all links from farm to dining table. By means of multi-side interventions by networks, the media and general public supervision, proprietors have been encouraged to comply with food health standards and principles to meet the vision of promoting what is beneficial and abolishing what is harmful. Interventions by governments, enterprises, civilians and schools are implemented to raise the performance of food safety of small food proprietors in Chiayi, increase the knowledge of people about food safety, and create a winning situation for proprietors, consumers, and the government. Method is as follows: (1) Relevant experts and scholars will establish a GHP guidance group (2) Discussion of guidance review record forms (3) Provision of onsite guidance (4) Provision of health and safety training courses. By providing physical guidance to proprietors, a customized diagnosis of harmful points was provided. During onsite guidance, self-management record forms and posters for correct hand-cleaning steps were provided. In addition, the control over the proprietors’ food health practices was strengthened on a one-by-one basis to reduce harmful risks. Proprietors who were found to be good and excellent proprietors were issued award certificates to mold a good image for food proprietors in the city, promote the development of the food and beverage industry, and promote beneficial food health practices. This program can substantially raise food safety control for food proprietors by means of physical guidance to create good food control for people; simultaneously, network and media news exposure can raise the consumption consciousness of people and serve as kinetic energy feedback to urge proprietors to make improvements to their food safety practices.
Taking gourmet chicken rice as the subject matter, provides guidance to proprietors for management from the source and strengthens food production and sales chain monitoring, supervision and control. Simultaneously, the intervention of enterprises, schools and governments, provides assistance to proprietors to make improvements and intensify autonomous management. Through the mechanism of rewarding good and excellent proprietors, merchants are encouraged to comply with good food health practices and principles and promote their benefits. The plan will integrate cross-bureau, cross-division, cross-city and cross-county chicken rice proprietors in Chiayi. By relying on the power of scholars, experts and consumers, the health and safety of chicken rice will be raised, thus creating a three-win situation for food proprietors, consumers and government. Method is as follows: (1) Experts make an onsite diagnosis of food safety problems and provide guidance. (2) Good and excellent merchants are appraised, selected, and rewarded. From the one hundred proprietors, 30 good and excellent ones were selected for incentive and sales activities as such as “thumbs up for food safety goal-keeping-healthy chicken rice”. The health and safety of the chicken rice proprietors is supervised together with consumers. Guidance and examinations of one hundred chicken rice proprietors were provided. According to the mistakes often made by the proprietors, the severity and consequences of negligence were stressed to raise the ability of the proprietors for more effective self-management. A series of food safety actions have resulted in raising the confidence of city residents about food safety. An investigation into food safety was entrusted to a survey agency. The investigation showed that the confidence of city residents regarding food safety has doubled, and that 92% of city residents feel that the degree of food safety in Chiayi is better than or the same as other cities, while only 3.2% feel that it is worse than others.
INTRODUCTION
ShihAn community is now facing a number of challenges in various areas such as an aging demographic structure, eldercare, after-school child care, and farming labor shortage.

OBJECTIVE(S)
In order to make it more convenient for seniors to go to hospitals and have nutritious meals, the community launched hospital shuttles with volunteers to accompany the seniors and community kitchen services. However, these services could not be sustained by donations and subsidies alone. Additional income sources were required to keep the projects running.

METHODOLOGY
The establishment of ShihAn community co-op is based on the concept of “produced locally, invested locally, shared locally”. The co-op buys in local rice at a price 40% higher than market prices and an 80% production volume guarantee to encourage farmers to switch to toxic-free farming.

Locals are invited to become shareholders with NTD 100 per share (minimum 50 shares and maximum 2000 shares per person). To avoid the co-op from being monopolized by one family, one household is only allowed to have one vote on the committee. The surplus is used on programs such as hospital shuttles, community kitchens, after-school child care, emergency funds, and basic operations of the community.

RESULTS AND DISCUSSION
So far 119 residents have signed up as co-op members. A total of NTD 13.93 million was collected to set up a product storage and marketing processing room. The rice produced has to pass pesticide residue inspections on 310 items. Between 2014 and 2018, the paddies have increased from 3.5 hectares to 12 hectares, and sales amount has increased from NTD 700,000 to NTD 2.5 million.

CONCLUSION
The toxic-free rice produced in ShihAn community allows it to develop sustainably, and also provide a stable life and income for all residents there.
**INTRODUCTION**
Houbi, the home to best-quality and gold award winning rice, implements environment education and promotes micro-travel to farm villages, featuring the rice industry, so as to carry out the ideal of living in harmony with nature.

**OBJECTIVE(S)**
The main objectives are to keep the environment sustainable and make the place perfect for people at all ages to live and enjoy good health and well-being. By revitalizing the farm villages with the experiential travel program, more decent job opportunities are created and the economic growth is enhanced as well.

**METHODOLOGY**
The adoption of non-toxic farming, the development of the community construction and social enterprise, the raise of agricultural output and the overall tourism planning for local traditional architecture attractions and cultural heritage all contribute to the city’s sustainable development goals.

**RESULTS AND DISCUSSION**
To cherish mother earth, Houbi has put the belief into practice and fulfilled the goal to keep a balance between human activities and environment protection.

**CONCLUSION**
In Houbi, without a doubt, the process of rice production educates people to respect, cherish and learn from nature and to be humble. Also, a local environment that ensures healthy lives and promotes well-being for all at all ages has been created.

**KEYWORDS** ︰ rice、love、cherish、natural
**Abstract Title**  
A Low-Carbon Vision- Taipei Energy Hill

**Author**  
Fan Chiang, Jen-Mao

**Co-authors**  

**Organization**  
Department of Environmental Protection, Taipei City Government, Taiwan

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**The introduction**  
Taipei City is the political, economic and cultural center of Taiwan. Numerous buildings and limited space in Taipei restricted the development of sustainable energy only on hydroelectric power, waste-to-power and biogas power generation. **Objective(s)** Echoing the UN Paris climate agreement of 2015 against climate change, Taipei actively accelerates the development of diversity of renewable energy and launched the “Taipei Energy Hill”, a solar power generation plant project in Year 2016. **Methodology** Through a complicated public-private partnership, Taipei City Government began to transform a waste landfill, which was closed from 1994 to 2004 and an ecological restoration park, into an ecological sustainable educational energy park with the first ground-mounted photovoltaic power plant in Taiwan. **Results and discussion** The infrastructure of the plant was constructed in Jan. 2017, and has started the power generation to achieve the annual goal of 2 million watts of power generation. In addition, in order to campaign energy and environmental education, we integrate this “Taipei Energy Hill” with other renewable energy facilities such as Muzha Refuse Incineration Plant to make our cities and human settlements more sustainable. **Conclusion** Based on the experience of successful “Taipei Energy Hill” project, we have demonstrated that, with all these efforts, it can make the citizens realize the outlook of turning Taipei into a green, sustainable and low-carbon city.
Abstract Title | Safety Mapping in Downtown Kuala Lumpur
Author | Uta Dietrich, Aishwariya Krishna Kumar
Co-authors | 
Organization | Think City Sdn Bhd, Malaysia

**Introduction.** Safety and perception of safety are strongly linked to liveability and health and wellbeing. Downtown Kuala Lumpur is an office hub with many people during the day and few residents at night. As part of community engagement in downtown Kuala Lumpur, perception of lack of safety kept emerging. In order to address this concern, a safe city programme was established. **Objectives.** Before planning interventions, we assessed the level of safety and perception of safety in a defined area in downtown Kuala Lumpur. **Methodology.** Two studies were undertaken. One was an intercept survey seeking people’s experience and views on safety. The second study involved developing, piloting and implementing a spatial safety audit tool specific to urban safety issues in middle income cities. In addition to trained assessors, community members were invited through social media to tag along. We encouraged people with specific perspectives to join (mobility issues, young people, women, migrants etc.). **Results and Discussion.** Over 550 residents, workers and visitors were interviewed. Personal theft and harassment/assault were the most common safety issues experienced and the population experiencing the highest level of crime were migrant workers. Safety concerns and other results will be presented along with maps showing the results of the spatial safety audit. Our learning in applying these tools will be discussed. **Conclusion.** Two different methodologies specifically designed for the local context has provided a useful and necessary foundation for project planning.
### The introduction

Improving public security

**Objective(s)**

To track down and arrest criminals including those who use drugs, possess illegal firearms, engage in theft and fraud activities.

**Methodology and Results**

1. **Drug Use**
   
   (1) Implemented the New-Generation Anti-Drug Strategies and Action Plan, where attention was paid to both quantity of drugs seized and people using the drugs. In addition, suppliers of drugs were tracked down to stop drugs from the source.
   
   (2) 1,756 cases of drug use were solved and 1,911 people were arrested between Jan. 1, 2017 and Apr. 15, 2018 (hereafter referred to as the current period).

2. **Possession of Illegal Firearms**
   
   (1) Increased investigations on the possession of illegal firearms and arresting fugitives at large in areas where shootings were prevalent and where public security was low.
   
   (2) 53 guns and 844 bullets were seized in the current period.

3. **Theft Activities**
   
   (1) In addition to planning the prevention and search of stolen scooters and vehicles, automatic vehicle identification systems were established to search for these vehicles.
   
   (2) 1,433 theft cases were solved in the current period.

4. **Fraud Activities**
   
   (1) Utilized big data to track down criminals when they made cash withdrawals and gain insight into their activities. The information was used to devise plans to track down these criminals and retrieve relevant images, elevate arrest rates, enhance digital identification and correlation analyses, trace criminal masterminds, and annihilate scam gangs.
   
   (2) 6 cases of scams (involving 40 criminals) and 152 cases of fraud (involving 221 criminals) were solved in the current period.

**Conclusion**

Our crime rate was 278.49, the second lowest of the six special municipalities; we solved 94% of our crimes (third highest of the six); and we solved 106% of our theft cases (the highest of the six).
**Abstract Title** Indigenous Family Education Empowerment Promotion Results

**Author** Tsao, Shih-Hua; Wang, Chao-Lan

**Co-authors**

**Organization** Education Department, Taitung County Government, Taiwan

**Introduction** The population of the indigenous people in Taitung county accounts for 35% of the total population. Due to factors such as cultural disparities and unfavorable socio-economic conditions, some families cannot function effectively. To provide good family education, the Empowerment Plan focuses on parents as the center of the curriculum, provide multi-culture curriculum activities, and enhance their parental effectiveness.

**Objective** Guide parents to discover their own family advantages, stimulate family resilience through positive growth, and improve parental efficiency and family sharing habits. Enable participants to form support groups and establish support systems.

**Methodology** Course planning based on the two main curriculum orientations: "Understanding Children's Development" and "Improving Parental Skills." The courses are conducted in the forms of picture books, video viewing, rhythmics, and parent-child DIY. Join forces with schools, communities, tribal development associations, churches, childcare resource centers, etc., to plan 4-8 parental growth group events based on local cultural characteristics.

**Results and discussion** A total of 237 events were held, and a total of 6,251 or over 300 families have participated in the events. 92% of parents are satisfied with the course activities and 80% of the people are willing to change their parenting style after attending the course. After training, some of the parents became story moms to help the preschool children successfully transition into the school system.

**Conclusion** Learner-centered approach and culturally oriented curriculum helped promote the learning attitude more than traditional teaching, which is worth the continual promotion efforts.
INTRODUCTION
Home is where people seek shelter, yet a lot of disadvantaged laborers live in dilapidated houses. Some houses cannot even offer shelter from the elements, but the residents do not have the means and funds to repair them.

OBJECTIVE(S)
To let occupational accident laborers and other disadvantaged families have an adequate standard of living, the Labor Affairs Bureau collaborated with craft unions and launched a house repairing project to improve the house conditions of disadvantaged families so that they can enjoy safe and healthy lives and the right to an adequate standard of living.

METHODOLOGY
I. Combine resources from the private sector.
II. Encourage donations from the private sector to lessen the financial burden of the government.
III. Both public and private sectors can offer their respective expertise to assist disadvantaged groups.
IV. After natural disasters, such as earthquakes and typhoons, we immediately activate emergency repair mechanisms to provide safe living spaces for disadvantaged families who were inflicted.

RESULTS AND DISCUSSION
I. A total of 3,129 repair volunteers were sent out to repair the houses of 76 disadvantaged families. This saved NTD 7,822,500 on costs.
II. Set up a charity account for long-term donations. Establish a flexible government that can roll out policies without spending any budget.
III. Assist unions to set up an example to encourage others to follow their actions.

CONCLUSION
“The greatness of a city is not in how high the buildings are or how wealthy it is, but in how charitable and kind the residents are. The stronger the love, the greater the city.” In the future we aim to establish a government that has comprehensive public welfare policies and take care of more disadvantaged families.

KEYWORDS: volunteer groups, unions, disadvantaged services, occupational
**INTRODUCTION**
Physically and mentally disabled faces challenges and inequality when seeking employment. Tainan has the highest percentage of the disabled among the six largest cities in Taiwan; however, the local labor force participation rate of such individuals is the lowest in the nation.

**OBJECTIVE(S)**
Collect and understand the needs of the disabled seeking employment/starting their own businesses, so that we can help improve their skills, match them with suitable jobs, and increase employment success rate.

**METHODOLOGY**
(1) Survey the needs of the disabled seeking jobs, and integrate resources and job matching services.
(2) Set up an exclusive human resource and talent database to increase job matching rate.
(3) Discover job openings for the disabled and encourage businesses to hire these individuals.

**RESULTS AND DISCUSSION**
(1) Tainan’s labor force participation rate of the disabled has increased 1.2%.
(2) Between 2013 and 2018, 2,620 people have been successfully matched with jobs, which helped increase their family income.
(3) In the past six years, related services have been used 64,876 times, which is 76 times more than that in 2012 (848 times).
(4) Discovered 8,300 job openings in over 3,600 businesses
(5) The employment rate for individuals with disabilities who have completed our employment training courses increased 14%.
(6) The number of people with disabilities who have been hired due to business employment quota policies increased 14%, and the number of people with disabilities hired that exceed business employment quota increased 11%.

**CONCLUSION**
We encourage businesses to hire the disabled, assist these individuals to seek employment or start their own businesses. By doing so we can establish an environment in which individuals with disabilities can work safely and happily.

**KEYWORDS** ︰ the disabled human resource database  the disabled employment
<table>
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<tr>
<th>Abstract Title</th>
<th>Demand Responsive Transit System, DRTS of Taitung County</th>
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<tr>
<td>Author</td>
<td>Huang, Chien-Ting; Chiang, Hui-Ching; Wang, Kuo-Cheng; Lai, Hsuan-Kai; Li, Chien-Ying</td>
</tr>
<tr>
<td>Co-authors</td>
<td></td>
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<tr>
<td>Organization</td>
<td>Taitung County Tourism Department, Taiwan</td>
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**Introduction** Taitung County has a mountainous terrain. According to the classification of the Executive Yuan, the low-range remote area within its borders accounts for 22.9% of the total population in the county; the high-range remote area accounts for 28.8% of the total population in the county; and the countywide bus coverage is 60.7%. However, the coverage rate in some areas is relatively low, such as Daren Township 18.1%, Yanping Township 21.9%, and Haiduan Township 33.0%. In order to cater to the travel and transportation needs in remote areas, protect the basic rights of the people, and reduce occurrences of traffic accidents, the Demand Responsive Transit System, DRTS, was created.

**Objective** Improve the public transportation time, space coverage and public transportation utilization and establish a business management model that will facilitate immediate application in other regions in the future.

**Methodology** Taxis are used in place of buses. Appointments one day in advance are accepted. After the operator has registered, passengers with similar riding time are matched to share a taxi. The number of taxi runs will be increased for every two passengers. For elderly and handicapped people with limited mobility, there are free pickups and drop-offs within one kilometer from the bus stop.

**Results** This project has been operating since March 29th, 2018. As of April 24th, 80 persons have been served. To improve Hongye Village, Yanping Township’s plight of bus service unavailability over the past decades, the house numbers within 300 meters from the bus stop were used to tally the public transportation space coverage rate. The overall space coverage service ratio of Yanping Township increased from 21.9% to 25.8%.

**Conclusion** The utilization of local resources and local taxis to provide transportation services to local people can reduce transport waste and save public sector subsidies. In addition, this project fully reflects the flexibility of vehicles, the flexibility of the number of runs and the flexibility of routes, which shall serve as a reference for other counties and cities.
The introduction
Taoyuan is a region characterized by its diverse ethnic groups. Accordingly, cultural policies have been formulated to provide equal rights to ethnic groups, build a friendly and livable city, and implement civil culture rights. Taoyuan’s population primarily comprises Hoklo people in the north and Hakka people in the south which, combined with the immigrant population, contribute to Taoyuan’s multi-ethnic society.

Objective(s)
In the face of a multicultural society, promoting Hokkien culture, multicultural coexistence and co-prosperity has become the most important issue of Taoyuan City.

Methodology
Because Hokkien culture contains both tangible and intangible cultural assets, and that the culture is gradually fading and increasingly modernized, various Hokkien culture-related promotional activities have been organized and the public has been encouraged to participate in training Hokkien culture artists. Through cultural empowerment, utilizing Taoyuan’s living environment as “schools,” increasing public participation, and allowing the public to use its own methods to tell the story of Taoyuan, Taoyuan showcased the innovativeness and vitality of Hokkien culture, effectively promoted and demonstrated its unique characteristics.

Results and discussion
By hosting traditional Hokkien folk custom and celebration events, Taoyuan City government utilize public and youth participation to discover, display and inherit its Hokkien culture. In addition, it will plan Hokkien folk art, traditional craft survey, revitalization projects as well as Taiwanese learning and promotion projects.

Conclusion
Through preservation and revitalization of traditional Hokkien arts, Taoyuan City government advocates profound implications of Hokkien culture. Therefore, Hokkien culture will be prosperous and highlighted. In addition, the city government hosts Hokkien culture exchange activities to learn the culture of other regions as well as its preservation and promotion experiences.
Abstract Title | Effect of the amendment of Regulation on alcohol-driving in Taiwan
---|---
Author | 
Co-authors | Kuo Hsien-Wen
Organization | Institute of Environmental and Occupational Health Sciences, National Yang-Ming University, Taiwan

**Introduction** Since traffic accidents caused by alcohol-driving in Taiwan were still high, resulting in tragedies of many families and social losses. In view of this, the government from 2013 has amended the laws and regulations to reduce the exhaled alcohol concentration (EAC) and increase the frequency of alcohol-driving and penalty.

**Objective** To elaborate the association between the effect of reducing alcohol-driving and amendments of regulation for alcohol driving in Taiwan.

**Methodology** According to the statistics registry of the police department, data from the inspection number of alcohol-driving and casualties caused by alcohol driving in six metropolitan area in Taiwan were analyzed. Trend analysis of 2007-2017 was assessed the effects after the amendments to the Penalty Ordinance of Road Traffic Management since 2013.

**Results and Discussion** Compared with 2007 to 2016, the injuries of alcohol-driving were notable by 73.6% in nation, 129.6% in New Taipei city, 100.3% in Taichung and 176.6% in Tainan. Among them, the violent rates (1/100,000) of
INTRODUCTION
Tainan will establish Taiwan’s first green energy science park, therefore the government must train more green-collar civil servants to promote a smart low-carbon city. **OBJECTIVE(S)**
Aim to make Civil Servants “think green” and “go green in the office”.

METHODOLOGY
Our key innovative strategies are as follows: (1) replacing face-to-face interviews with video interviews, (2) a 4-hour course on environmental education for employees, (3) paperless training, (4) replacing face-to-face classes with live online courses, (5) halving the number of faucets, (6) civil servants are encouraged to take the stairs instead of the elevator and are not allowed to use plastic bags in the office.

RESULTS AND DISCUSSION
By reducing 85,000 kg of carbon and saving $43,000 per year (transportation expenses, labor costs, mailing fees, paper printing, etc.), we can improve the sustainability of our city.

CONCLUSION
Because of significant benefits of the project, we won the “Excellent Performance Award” of the 2017 Central HR Innovation Award. Further, it attracted other cities to visit Tainan to learn from our successful experience and join us to create a sustainable city.

**KEYWORDS:** green-collar civil servants
Traffic Safety Strategies Aimed at Reducing Traffic Accidents

Pan, Ching-Hung; Chang, Kuo-Tung; Shih, Chin-Chih; Liu, Chung-Chih; Huang, Chien-Ting

Taitung County Police Bureau, Taiwan

Introduction This county tends to have a higher traffic accident rate due to the poor driving concepts and habits of its citizens. Therefore, improving people's driving awareness and the quality of traffic environment has become an important traffic issue for this county.

Objective Encourage the public to obey traffic safety rules as well as reduce the rate of traffic related accidents and deaths in this county.

Methods Take the multi-pronged approach. For hardware, investigate and improve major roads with high rates of traffic accidents. For publicity, implement group propaganda and household visits. For enforcement, strengthen violation crackdown supplemented with counseling efforts. Also control the accident rates from the source by encouraging people to participate in alcohol abstinence in order to reduce drunk driving and traffic accident rates.

Results and Discussion In 2017, Taitung issued 155,618 violation tickets. Among them, 18,539 were considered major violation cases, an increase of 4,514.5 cases compared to the average major violation cases from the two previous years. Moreover, a total of 142 traffic safety advocacy events have been held in 2017, an increase of 12 events compared to that of 2016. In 2017, Taitung had a total of 39 fatalities from traffic accidents, and 1 death as a result of drunk driving, a reduction of 7 people and 1 person, respectively, compared to that of 2016, and showed specific results.

Conclusion In addition to enforcing the 2E traffic policies by the public sector, encouraging the public to adopt the correct road use concepts and autonomously abide by the traffic safety rules is the most fundamental method for effectively reducing traffic accidents.
Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation
Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

<table>
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<tr>
<th>Abstract Title</th>
<th>Barangay Power is Healthy City Power!</th>
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<tr>
<td>Author</td>
<td>Dr Olga Z, Virtusio, Dr Ruben Ver</td>
</tr>
<tr>
<td>Organization</td>
<td>Parañaque City Health Office, Philippines</td>
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For a highly urbanized city like Paranaque, economic gains attracted the influx not just of big businesses but also of more people that take up space and resources as well as produce waste at a rate faster than its ecosystem can manage to contain. At its tipping point, health and sanitation problems emerge that adversely affect the very population it tries to sustain. With a highly centralized government, the local government units and barangays response to cope with rapid urbanization came at a slower pace. Hence, Paranaque City adopted the “BARANGAY POWER” initiative that provided a catalyst for proactive engagement of local barangay officials in addressing the rising problems of health and sanitation. Thru this initiative, all 16 barangays were given a set of indicators that served as its compass in ensuring an earth-friendly community. Using the City’s Special Programs Fund and spearheaded by the Mayor’s Spouses League, local barangay officials were enticed into the prospect of gaining both prestige and additional funding grant by committing to four criteria. Cleanliness of immediate vicinity and waterways by initiating clean up drives earned one barangay as the CLEANEST BARANGAY. While sustaining a functional urban garden could earn an award for the GREENEST BARANGAY. Strict compliance with the EO 26 or the total smoking ban can land a citation for being a SMOKE-FREE BARANGAY. And finally, as an outcome of general cleanliness, having no cases of dengue will earn a barangay a commendation for being DENGUE-FREE community. Judging was made thru the participation of several national government agencies like MMDA, Department of Agriculture, DENR, DOH and an NGO. By bridging barangay leaders, and the community, into positive and proactive solutions, healthy cities may continue to provide for its people like a well-balanced ecologic system.
Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>The Participatory Implementation Experience of Slow Food Community of Taitung</th>
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<tbody>
<tr>
<td>Author</td>
<td>Wu, Chih-Wei, Chiang, Hui-Ching; Li, Chih-Peng, Kuo, Li-Chin</td>
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<tr>
<td>Organization</td>
<td>Taitung County Tourism Department, Taiwan</td>
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**Introduction**

In line with the national policy, Taitung has promoted healthy dining concepts in order to develop local micro-industries. From 2012, the Taitung government began taking various actions, with encouraging households, farmers, and cooks to use local and seasonal ingredients to promote slow food as the core concept.

**Objective**

We hope to promote the local use of farm products, preserve the local food culture (60% local production, within 100 kilometers), and gradually reduce food miles in order to give local specialty foods more pipelines to present diverse cuisine.

**Methodology**

through three spindles: integration of slow food industry guidance, Taitung’s slow food organization empowerment, and slow food marketing promotion platform establishment; with the basic stores receiving guidance as the starting point, festive highlights and activities can be created. Slow food evaluations can also be published as the platform to communicate with consumers, while civil societies can be established for sustainable development.

**Results and Discussion**

More than five years have passed since the project implementation. So far, 83 stores have passed certification, boosting sales by NT$19.86 million and developing more than 200 local specialty cuisines. The total participants of related festivals also exceeded 110,000. Additionally, through community participation and platform linkage, Taitung’s food agriculture community has gradually taken form.

**Conclusion**

The participatory implementation process gradually shaped the community. In 2017, the private organization “Taitung County Table Restaurant” was officially established, gradually heading toward the next stage.
**Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation**

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>The Effectiveness of Community Healthy Living Program in Taipei</th>
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<tr>
<td>Author</td>
<td>Mao-Lin Wu, Hui-Lin Sun</td>
</tr>
<tr>
<td>Organization</td>
<td>Beitou Health Promotion Association, Taiwan</td>
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**OBJECTIVES**

The purpose of this research was to assess the effectiveness of Community Healthy Living program in Taipei.

**METHODOLOGY**

Using qualitative design, a purposeful sampling was used to include:

1. leaders in the community who joined this program over 2 years
2. leaders who never joined this program
3. people who have participated this program over 3 years to share their experiences about the health promotion activity in their community.

75 people were interviewed with recording. The transcribed were analyzed using content analysis. Using quantitative and random sampling study, 1250 people accepted the WHOQOL - Taiwan Survey.

**RESULTS and DISCUSSIONS**

Regardless leaders were participating this program or not, they had the same problems, ex. lack of workforce, space or participants. Leaders who participated in the project suggested they could be further empowered by working with experts and mutually exchanging experiences with other community leaders in meetings, which enhanced these leaders’ Self- efficacy and expanded resources. People who have participated this program shared their experiences and indicated this program had great impacts on their physical, psychosocial, and environmental health. Four themes were generated based on their stories:

1. Diverse activities create physical and emotional health.
2. Younger seniors work as happy volunteers.
3. My community is my home.
(4) Environmental friendly brings health to people and earth.
630 people accepted the WHOQOL -Taiwan Survey. The “Overall Quality of Life Evaluation” (M+SD= 3.71+.69) was significantly higher than the 620 non-participating citizens (M+SD= 3.34 +2.71), “Overall Health Assessment” (M+SD = 3.57 + .72), was also significantly higher than the non-participating citizens (M+SD = 3.21 + .78).

CONCLUSION
The project has not only effectively improved the community leaders to continue to motivate communities, changed participants’ health behaviors, but also improved the overall quality of life. Until now, these communities are still in progress.
Introduction
Taitung City, formerly known as Kitamachi during the Japanese Occupation Period, built more than 60 Japanese-style dormitories intended to accommodate school and agency staff, although there is currently only a dozen of them remaining. With the aging and migration of the urban population and the shifting of commercial centers, the old dormitories deteriorated at accelerated rates, becoming desolate in time.

Objective
Re-activate the community in order for the elderly to leave the house and share old relics and stories, retain ordinary people’s memories and knowledge, and enhance community participation and people’s physical and mental health during the transition between the present and renovation completion.

Methodology
Light up relationships among people, space and nature through space restoration activities. With the art intervention in streets and spaces, a neighborly spirit and relationship can be established. Through living festivals at old streets and lanes, multi-media perturbation is introduced to arouse local residents’ imagination of life. The present and the past can be reinterpreted through comprehensive visits to locals and collections of Kitamachi literature. Results and Discussion With the old houses as the venues, a series of art workshops, puppet theaters, art creation venue and community activation activities were conducted, 30 sessions in total. The perturbation for up to two years shaped 40-42 dormitories into the “old living room of Kitamachi”, serving as the venue for community residents to continue
dialogues and drawing residents and Kitamachi old dormitories close. Through constant dialogues, the residents were led to jointly take part in the future imagination and planning of the old dormitories in Kitamachi, while “Kitamachi old houses” and “Tales of the lanes and alleys” were published.

**Conclusion**
The preservation and renovation of historical buildings aroused a wave of nostalgia for the old streets, lanes and alleys, which contributed to the elderly’s social participation and physical and mental health, thereby reproducing the prosperity of Kitamachi.
### Abstract Title
Easing Global Warming from Low-Carbon Diet

### Author
Meng-Chi Shih, Ji-Hua Li

### Organization
Public Health Bureau, Tainan City Government

## INTRODUCTION
Global warming is one of the most important issues. Reducing carbon footprint would ease the effect of global warming. "Food" plays an important role in generating greenhouse gases, to reach the goal of creating low-carbon diet accessible environment, we not only make policy, but citizens should implement low-carbon diet spontaneously.

## OBJECTIVE(S)
To build low-carbon diet friendly city

## METHODOLOGY
A. Build low-carbon public policy: Establishing low-carbon autonomy, and collaborate with all sectors of government as well as independent organizations to enhance low-carbon education.


C. Strengthening community action of low-carbon: Integrating information of low-carbon diet in every activity, as well as promote low-carbon meals to participants.

D. Developing personal skills of implementing low-carbon diet: Training volunteer to promote low-carbon diet, and enhance caterers' low-carbon knowledge and abilities by lectures.

E. Re-orienting low-carbon services: By combining different Community resources, keeping promoting low-carbon diet.
RESULTS AND DISCUSSION
Through establishing citizens’ knowledge, attitude and increasing accessibility of low-carbon diet, 1,885,923 people participate meat free day, as well as reduce 1,471mt of carbon emission.

CONCLUSION
Low-carbon diet is a new attitude to life, we will keep promoting low-carbon diet, and let more people join low-carbon life style.

KEYWORDS: low-carbon diet
**Abstract Title**

An Application of Urban HEART to Examine Health Inequality at the City Level in Taiwan

**Author**

Susan C. Hu, Wan-Yi Lin, Candice Huang, Nuan-Ching Huang

**Organization**

National Cheng Kung University, taiwan

Health inequality in different areas is an important issue in public health research. However, very few studies have focused on the health disparity at the city/county level. This study aims to use WHO Urban Health Equity Assessment and Response Tool (Urban HEART) to identify health inequality across 23 cities/counties in Taiwan.

Thirty-three compatible indicators of Urban HEART between 2010 and 2015 were chosen from Taiwan Age-Friendly Environment Dataset. The dataset was built up by the author’s group during 2014-2017, which collected related data from 24 open data systems and 12 national surveys among governments, containing four categories (Health, Environment, Society, and Production), 30 dimensions, 235 sub-dimensions, and 7145 indicators. To identify health inequality at city-county level, 33 selected indicators were calculated as RR and its 95% CI to evaluate the differences and changes in each city and county between 2010 and 2015. The formula of $RR = \frac{\text{the indicator data of the city or county}}{\text{the average of the nation}}$ and the 95% CI of $\ln(\text{RR}) \pm 1.96 \sqrt{\frac{1}{a} + \frac{1}{b}}$. If the 95% CI does not involve 1, it means significant difference.

The results showed that health inequality indeed exist between 9 cities and 14 counties. However, the overall situation is on improving between 2010 and 2015. Notably, among the 33 selected indicators, most indicators in 9 urbanized cities are better than the national average, whereas other 14 less urbanized counties are worse than the national average. According to this analysis, each city or county can easily find out their weakness dimensions and indicators. The determinants of those indicators were also suggested to examine in further and to develop related policies to improve the health inequality between cities and counties.
Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

Abstract Title
Healthy Cities and how to communicate the SDGs to the citizens and get community participation

Author
Kuo Hsien-Wen, Yuan, Lu-Fang; Liu, Hsueh-Hsia; Lee, Wen-Chieh; Chang, Hsin-Wen

Organization
Shilin District Health Center, Taipei City

Introduction
A healthy community should be one where its residents take initiatives in participating and discovering health-related issues within the community.

Objective
To combine resources from over 30 sectors, to provide diverse services, cultural & healthy leisure and to promote the residents’ health.

Methods
To assist the community setting up “Health Stations”; to plan health-promoting events catering to community needs; to promote balanced diets; to organize cancer-prevention seminars; to enhance residents’ cancer-prevention awareness and ability for action; to recruit local volunteers to watch out for the weak and the elderly.

Results & Discussion
By end of 2017, there were 80 bases in Shilin District for all varieties of events having served an accumulation of 32,015 people. A calculated 80% of the participating public are willing to carry on with the daily intake of at least 3 portions of vegetables and more than 2 portions of fruit. Cancer-prevention advocacy has reached 290,324 people with a cancer screening rate growing by 13.13% for the recent 3 years. Volunteers have served 3,271 people by providing meals delivery service, accompanying hospital trips and paying them visits.

Conclusion
We have implemented the down-top operation model by rooting the healthy city concepts in the community and have repeatedly won the honor of being credited as an outstanding community with healthy-living solutions.
**Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation**

<table>
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<tr>
<th>Abstract Title</th>
<th>Dengue Fever Prevention Driven by Volunteers from Private Sector and Information Technology</th>
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<tr>
<td>Author</td>
<td>Huang, Chi-Hsuan, Huang, Chien-Ting; Chung, Ming-Hsia; Hsin, Chin-Hsiang</td>
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<tr>
<td>Organization</td>
<td>Public Health Bureau, Taitung County, Taiwan</td>
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**Introduction** Taiwan's hot and rainy climate is ideal for dengue fever mosquito vector breeding, while overseas migration cases have increased year by year. In order to reduce the incidence of outbreaks, this county strengthens environmental hygiene through the involvement of volunteers and communities, supplemented by the geographic information system, thereby achieving the effect of dengue fever control.

**Objective** Enhance dengue fever prevention efficiency through the strength of the private sector and interdepartmental cooperation, the involvement of volunteers and communities in dengue fever control, and the assistance of information technology in decision-making.

**Methodology** An anti-mosquito volunteer team was set up in the village to assist in prevention and control work. Additionally, through interdepartmental integration, the prevention and control work was included as a township/community health building indicator. At the same time, Taitung County Social Economic Database and other geographic information systems presented the disease vector monitoring in graphics, which served as a prevention and decision-making aid.

**Results and Discussion** From 2016 to 2017, no local case was reported, and the villages with the mosquito vector density of below Level 2 reached 98%. The villages reaching Level 3 were required to eliminate the mosquito breeding sources within one week and complete the review.

**Conclusion** Through the volunteer team that deeply dedicated in the village.
communities and implemented prevention and control, the mosquito vector density was decreased. In addition, the combined used of the geographic information contributed to the enhanced decision-making efficiency. Taitung’s mosquito vector density was placed under control, and incidents of migration cases turning into a local epidemic were prevented.
Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

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<tr>
<th>Abstract Title</th>
<th>Financial Institutions and The Police Against Fraud to Safeguard Life Long Savings-Financial Institutions and The Police Cooperating Against Fraud to Safeguard Elderly Pensions</th>
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<tr>
<td>Author</td>
<td>Chung Jui-Chih</td>
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<tr>
<td>Organization</td>
<td>Taitung County Police Bureau, Taiwan</td>
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</table>

**Introduction** Due to the frequent occurrences of fraud cases in Taiwan, especially fraudsters pretending to be prosecutors or police officers with the intent of stealing money from elders, and making elders who lost their life savings suicidal. In view of this, the police have strengthened cooperation with financial institutions, implementing the “over-the-counter questioning and notification” mechanism, in the hope of reducing fraud cases and safeguarding people’s property.

**Objective** Cooperate with financial institutions within the jurisdiction to reduce incidences of fraud.

**Methodology** Have the police work and sign agreements with financial institutions regarding the implementation of the “over-the-counter questioning and notification” mechanism, through which financial institutions can notify the police of suspected fraud cases and the police can dispatch police officers to the financial institutions to investigate the cases and stop the crimes in time, thereby reducing occurrences of fraud.

**Results and Discussion** In 2017, financial institutions that successfully intervened over-the-counter remittance and those failing to do so amounted to NT$8,173,633 and NT$3.96 million respectively. Successful interventions reached 206.4%. In 2017, the successful over-the-counter remittance stopping cases vs. cases of failed stopping were 12 cases and 8 cases respectively, accounting for the successful stoppage rate of 150%.

**Conclusion** The implementation of the “over-the-counter questioning and notification” mechanism, in addition to reducing the public’s susceptibility to scams, also advocated anti-fraud knowledge, thus indicating substantial results in reducing elderly fraud.
The introduction
“Treasuring words and paper” is a Hakka virtue. In the past, papers (containing written words) to be discarded must be collected in a bunch and sent to sen-ji pavilions to be incinerated. The ashes were considered “holy traces” and subsequently casted into the sea during the “three offering” ceremony; this activity was called “sending away holy traces.”
Today, participants of the ceremony are mostly young and old adults, and the younger generation is mostly unfamiliar with this custom. To prevent this tradition from becoming extinct, the tradition, along with Taoyuan’s six sen-ji pavilions, must be promoted.

Objective(s)
To preserve Hakka’s “sending away holy traces” culture, increase public participation in folklore activities, and protect traditional cultural assets.

Methodology
Hold the “sending away holy traces” ceremony every year, where the ceremony begins with the “three offering” ceremony, followed by casting ashes into a river and a “god send-off” ceremony. In addition, in 2016, Taoyuan hosted a “treasuring words and paper” calligraphy contest, a ceremony master training workshop, and a “visit the six sen-ji pavilion” event.

Results and discussion
Since the number of participants for the calligraphy competition were few while
the other events were many in 2016, we cancelled the calligraphy competition and held four seminars in campus in 2017, attracting 660 students participated. The second annual ceremony master training workshop trained 10 ceremony masters and officials. The “sending away holy traces” ceremony drew approximately 300 participants; visits to the six sen-ji pavilions were increased to three times, attracting 178 participants.

**Conclusion**
All activities were well received in 2017 and will continue this year; the number of campus seminars will be increased to five. Taoyuan will continue to promote and perfect the workshops, “sending away holy traces” ceremony, and visits to the six sen-ji pavilions to draw more participants.
Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

<table>
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<tr>
<th>Abstract Title</th>
<th>Evidence-based Study on Connecting Communities-based Health Promotion toward Healthy City of Taipei</th>
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<tr>
<td>Author</td>
<td>Cheng, Yi-Chia, Ruan, Ru-Yan, Lin, Liu-Yin, Chia-Hui Hou, Hsiao-Chin Jen</td>
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<td>Organization</td>
<td>Department of Health, Taipei City Government, Taiwan</td>
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**The introduction** With the rapid demographic changes, aging society, declining birthrates, and long life span of the citizens become prevalent, it is urgent task for the government to create a healthy living environment and to enhance public health literacy. The WHO has indicated that smoking, drinking, lack of physical activities and unhealthy diets are risk factors for noninfectious diseases. In order to encourage Taipei residents' to have good habits for healthy diets and regular exercises, the government has promoted the “Community-based Health Promotion” program since 1999. It has enlighten community residents and NGOs to take action on community health issues of their own. **Objective(s)** Through community-based health promotion efforts, we hope to empower community residents, to improve their life styles, enhance their health literacy, and exam the effectiveness of this program. **Methodology** By following the guideline of WHO, we established a committee for health promotion and counseling, employed asset based community development method to accumulate our co-operated resources, adopted the Ottawa Charter as our strategies, and reorient preventive health campaigns. In addition, we designed the “Community Healthy Life Questionnaire” to analyze the impacts of all 12 districts in Taipei about the program. **Results and discussion** This study investigated all 58 communities and 1,875 items for resources check-up. According to the results of the questionnaire, more than 90% of citizens believe that participating in program would be helpful for health, and beneficial for self-care concepts. Moreover, 97.7% of citizens have stated that they would pay more attention to their own health, keep regular exercises and healthy diets, and have recognized that these habits would bring solid benefits to their lives. **Conclusion** In addition to promoting sustainable health living of individual community, renewing our health literacy and reshaping our supporting environment also could be crucial to achieving sustainable healthy city of Taipei.
<table>
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<tr>
<th>Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation</th>
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<tr>
<td><strong>Abstract Title</strong></td>
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<tr>
<td><strong>Author</strong></td>
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<td><strong>Organization</strong></td>
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**Introduction** Taitung boasts rich natural resources, nature, and cultural humanities, but its tourism development is limited by traffic. Due to the long-term formalization of activities and pyrotechnics, the overall tourism image remains unknown. The government has actively utilized geographical and climatic advantages to host hot air balloon festival, Taiwan open of surfing and triathlon events, which have brought about dramatic changes to Taitung.

**Objective** Shape Taitung into an international sports tourism city through special events that attract people and boost business opportunities.

**Methodology** Three major sports tourism events are held: Taiwan International Balloon Festival, Taiwan Open of Surfing, Challenge Taiwan and IRONMAN 70.3 Taiwan International Triathlon Competition.

**Results and Discussion** Ever since the holding of hot-air ballooning events in Taiwan seven years ago, the output of tourism economic has already surpassed NT$8.72 billion, attracting 4.36 million visitors. In 2018, Taiwan joined the Asian Hot Air Balloon League, thus establishing its international status. Taiwan Open of Surfing, from ASP and WSL Asia, World Tour sites, to the World Longboard Championships, have made Taitung the first choice for surfing in autumn and winter in Asia. Challenge Taiwan and IRONMAN 70.3 Taiwan attracted nearly 10,000 participants and won the top three honors of “WILL ATTEND NEXT YEAR” at over 100 IRONMAN global events in 2016 and 2017.

**Conclusion** The three major sports events have generated the tourism economic
output of more than $10 billion, attracting millions of tourists. Taitung has been active in the international tourism stage. In 2016, it was elected by the “Lonely Planet” as one of the top ten tourist attractions in Asia; in 2018, it was elected by Booking.com as the “2018 Top 10 New Tourism Cities”.

Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

**Abstract Title**

Promoting Experience Sharing by Encouraging Participation in Public Affairs of Elderly People

**Author**

Huang, Yi-Ting

**Organization**

Taitung County Civil Affairs Department, Taiwan

**Introduction**

Elderly people are stereotyped by senility, fragility, illness, and poverty in the traditional society. Aging policies often emphasize elderly care, while many elderly people are still healthy.

**Objective**

Create an aging-friendly environment for elderly people through inter-ministerial cooperation and resource investments in local groups to encourage elderly people to participate in public affairs.

**Methodology**

Improve facilities of community activity centers; invite elderly people to neighborhood planning assemblies to share experience, and organize elderly socialization activities with social groups to improve interpersonal interaction and maintain mental and physical health for elderly people.

**Results and discussion**

About 88% communities in Taitung have a community center serving as the community office, the place for community assemblies, and the venue harvest rituals. We strive funds from the Ministry of the Interior to subsidize local offices to improve community center facilities. The amount of subsidy between 2011 and 2017 was NT$31.89 million. The percentage of community heads aged over 65 between 2016 and 2018 was 12.24%, 14.97%, and 17% respectively. For example, community head Huang, Kang-Jung aged over 65 earns citizen recognition for his active participation in local affairs and agricultural promotion, thus winning the Distinguished Community Head of 2017.

**Conclusion**

Promoting active aging in the aging era is an immediate issue. By encouraging elderly people to participate in public affairs and share experience, and raising the percentage of elderly community heads can help build a livable ageing society.
# Healthy Cities and How to Communicate the SDGs to the Citizens and Get Community Participation

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>The Youth Stir Up Sustainable Movements for The Community</th>
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<tbody>
<tr>
<td>Author</td>
<td>Wei-Tzu (Rita) Yen, Chwen-Hui Tu, Lawa Pusin, Ching-Chiang Ho, Yun-Ying Chang.</td>
</tr>
<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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</table>

## The introduction
The average age of the Taoyuan City population is 38.6. In order to promote city sustainability, youth development is the most characteristic innovative element of Taoyuan City Government.

## Objective(s)
In response to the UN’s “2030 Sustainable Development Goals” and regarded as a policy for the current international collaboration.

## Methodology
From 2015 to 2017, Taoyuan City’s Department of Youth Affairs has assisted 47 youth movement teams in the participation of social and public affairs, thereby strengthening their local identification and overall competitiveness, forming a force to change the society.

## Results and discussion
The “Youth Sustainable Development Movement Project” forwarded by the Department of Youth Affairs has listed 17 sustainable development goals as the proposal emphases. The project tries to delve into the unique public issues with forward-looking implications in different districts, guide the rich creativity of the youth and convert it into 47 creative action plans, ranging from community field studies, training of young tour guides, developing characteristic maps, community outreach, modifying community care centers, initiating environment protection trends to field investigation that integrates VR technology, in order to make Taoyuan a happy city with sustainable potential.

## Conclusion
The Department of Youth Affairs encourages youth teams to submit their proposals by means of competitive grants, so that community issues are explored and
solutions undertaken. The youth teams work with their global partners towards sustainable development by reaching out to the community through service implementation. The youth broaden their vision, enhance their social care, and develop creativity through the project, while the community benefits from the energy and participation of the youth teams. It is an act of reciprocity where the youth change the community, and the community creating new talents.
**Abstract Title**
Promotion of Local Development Through Community Design

**Author**
Hsing-Chuan Chiang, Ming-Hsun Yu, Shu-Chin Lo

**Organization**
International Development and Planning Department, Taitung County Government, Taiwan

**Introduction**
Taiwan, like Japan, is faced with the problems of an ageing population and the outflow of young people, especially in rural areas. We have learned from Japan’s examples of regional revitalization (i.e. the restoration of the local economy), combined with the concepts of community design, which allow the local residents to participate autonomously in boosting local development in order to revive the local economy.

**Objective**
Residents are the focus of local development, where the concepts of community design are provided, local issues are deliberated, and the proposal of solutions are actively engaged in. Instead of waiting passively for government assistance grants, community members take the initiative to make local development sustainable.

**Methodology**
To introduce concepts of design thinking, to train the local residents, and to create changes that residents are able to actually feel. In addition, to gain an understanding of problems and propose solutions through the ideas of community design, and the promotion of local development by the public and private sectors, from awareness to action, community to society, and life to industry.

**Results and Discussion**
Taitung Design Center was established, a Japanese consultant has been hired, two community design workshops and one final conference have been held. In addition, 20 seed students have been trained. Students continue their learning methods, study their unique tribal cultural codes, draw walking maps, actively hold their own workshops, introduce more people to traditional culture and communities, and stimulate the energy of local development.

**Conclusion**
The public sector has applied design thinking and formulated proposals close to local needs to solve the problems. Residents have applied community design and have autonomously participated in local development. The collaboration between the public and private sectors have achieved the goals of sustainable local development, industry innovation and economic revitalization.
Poster
Healthy Cities for Partnership
Healthy Cities for Partnership

<table>
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<tr>
<th>Abstract Title</th>
<th>Achieved Improvement of Oral Health of Students in Seongdong-Gu After Implementation of The Who Health-Promoting School For 14 Years</th>
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<tbody>
<tr>
<td>Author</td>
<td>Kyoung hee Kim, Yun Sun Choi</td>
</tr>
<tr>
<td>Organization</td>
<td>Seongdong-gu community health center, Republic of Korea</td>
</tr>
</tbody>
</table>

**Introduction**

After Seongdong-gu identified oral health as the most urgent need for the students, the district installed toothbrushing facilities at all schools within, for the first time in Korea. Along with these, community, school staffs, and students shared one goal and cooperated to implement better lifestyle that improves oral health, by establishing WHO Health Promoting School (HPS).

**Purpose and Objective**

To improve oral health of students in Seongdong-gu by building environment that foster their daily toothbrushing habit after lunch meal, with measurable objectives of reducing prevalence rate in teeth caries and enhancing toothbrushing rate after lunch.

**Methods**

HPS were established on 2005 to reduce student’s dental problem via prevention policy. The physical environment, toothbrushing facilities, were installed on two schools as a pilot project, then on all forty-two schools (primary, junior-high, high schools) in the district (2011~2012). A committee was formed to give consultation to school and to deliberate support for students from low income families. 47 private dental clinics provided service to 4th grade primary schoolers and to Community Child Center. Further, community-originated cooperation for oral health joined. 178 of community dental hygienists volunteered to be ‘Oral health keeper’, and 135 of parents, called ‘Teaching-Moms’, educated students individually with adequate toothbrushing. Finally, students were empowered to raise their oral health indices.
Results and Discussion

Actual improvements of student’s oral health were assessed and analyzed (age 6 and 12). Prevalence rate in teeth caries reduced from 48.6% to 12.8%, and toothbrushing rate after lunch increased from 32.8% to 48.9% (since 2013 to 2017). And the guidelines developed from Seungdong-gu were applied to entire city, Seoul.

Conclusion

The oral health of students in Seoungdong-gu was improved after reinforcing oral health environments and community partnership.
Healthy Cities for Partnership

Abstract Title
Creative Partnership between Public Health Office and Academia

Author
Haekyoung Lee, Soon Park, Jayoung Chung, Hye Jung Hong, Dong Ok Lee

Co-authors
-

Organization
Kookmin University, Seoul, Korea

Collaboration with Kookmin University

Shoemaking Skills
3D Design Printing Innovation Center
Institute of Physical Dynamics and Bio-Engineering
Empowering Local Economy & Culturing (Public Office)

Public Space Design
College of Design Space Design Major
Porcelain and Crafts Design Major

Business Management
Start-up and Innovation Network
College of Business Administration
Building up Cooperative Research Education Community Center (Academia)

Kookmin Univ. LINC+ (Leaders in Industry-university Cooperation)

Shoe Design
College of Design Fashion Design Major
Industry Product Design Major

Public Relations
School of Communication Theatre and Film Major

Collaboration with Kookmin University

Policies
Finance Infrastructure

Innovation
Networks

Transforming
Residents

Innovation
Implementation
(Artists)
1. Background
- It is the responsibility of local governments to improve the health of the residents as well as the environment of the city.
- Local governments can achieve ‘Health for All’ through the Health in All Policies (HiAP), which stresses the priority of the residents’ health when establishing all policies.

2. Purpose
- It intends to provide an integrated and systematic approach to citizens’ health through unification of policies regarding health in municipal administration.
- Also, it aims to establish a sustainable healthy city by reflecting consideration of residents’ health in the multi-sector policy making process.

3. Method
- Identification and promotion of health policy in all 49 divisions in Siheung-si every year from 2015 to 2018
- Monitoring and advisory support for continuous and substantial project execution by matching with the master planner
- Regular education and workshops for strengthening employees’ capability to promote the healthy city project and cooperation among divisions
- Development of a guideline on activity-conscious healthy city project to support tasks related to healthy cities
- Evaluation and incentives to increase interest of division directors and encourage employee participation

4. Results and discussion
- The proportion of health projects, budget, and related organizations in the
municipal administration were increased.
- Cooperation system for promotion of healthy city was established.
- The beneficiaries of the healthy city project were exposed and expanded.

- The foundation of healthy city was established by securing promotional sustainability and effectiveness of the health policy.

[Conclusion] The main role of the local governments is to pursue efforts for the improvement of residents’ quality of life through their health in accordance with the characteristics of local governments. To this end, if the foundation for cooperative policies reflects the health concept and the activity-conscious healthy city guideline is applied, it will be possible to realize a sustainable healthy city.
## Abstract Title

An Understanding of Healthy City Project through Diagnosis of Local Government Organization and Sustainable Role of Health Center: Holistic Health Approach to Case of Hongseong County

## Author

Moosung Cho

## Organization

Korea University, Republic of Korea

### I. Introduction

9 among 11 qualities of Healthy city are closely related to local government organization except health center. Only two qualities of it including 10th and 11th qualities that represent public health service and high health status belong to area of Health Center. So, Health Center has dilemma in performing healthy city project based on the above qualities. Intersectoral cooperation between local government organization and health department is necessary. Healthy city development needs stronger intersectoral cooperation. Public administration focuses on public service to improve of quality of life. WHOQOL Instrument is based on physical, psychological, social, and environmental domains which mean holistic concept. Every sector of local government perform its task to improve quality of life as holistic health. Health in all policies is an important approach to improve quality of civic life.

In this context the purpose of this study focuses on understanding of healthy city project through diagnosis of local government organization and role of Health Center to improve intersectoral cooperation and to analyze case of Hongseong County in Korea.

### Objectives

- To analyze and classify task of local government departments including health center based on holistic health dimension through study of case of Hongseong County
- To develop strategies for an intersectoral cooperation between local government departments and health center through study of case of Hongseong
Methods
Literature survey for logical construction for this study and Case study for understanding object of research have been conducted.

Results
All tasks of local government organizations are classified into mental health project, physical health project, social health project, and environmental health project based on dimensions of holistic health. In particular this analysis showed that departments of history & culture, social welfare, economy, environment have performed mental health project, social health project, and environmental health project as well as health center has performed physical health project.

Discussion and Conclusion
Healthy City is city that strives for holistic health as quality of civic life (Cho, 2012). Every local government organization including health center is performing holistic health project as healthy city project. It is important that every department of local government perceive the fact that it is performing healthy city project for the intersectoral cooperation and the application of Health in all policies (HiAP)

Key words
Holistic health, diagnosis of organization, intersectoral cooperation,
INTRODUCTION
The soil and sediment contamination by dioxin, mercury, and pentachlorophenol at Anshun Plant of China Petrochemical Development Corporation (CPDC) has been confirmed after the investigation. The issue of environmental pollution of Anshun Plant has also been aware and made it became an internationally famous pollution site.

OBJECTIVE(S)
In view of its moral responsibilities, the Tainan City Government (TCG) proactively seeking the funding for related humanitarian care and established a care team to invite residents to participate in related meetings. Through the cooperation of the inter-departmental units, the government is trying to pursue the greatest welfare for the people.

METHODOLOGY
During the remediation of soil contamination, various innovative measures were established, such as the establishment of exclusive clinics for the site, disclosure of information on the website, residents' participation in meetings, etc., and the TCG also published papers to international journals to demonstrate the results of remediation and supervision, and to conduct technical exchanges.

RESULTS AND DISCUSSION
The TCG has conducted more than 200 related meetings since 2009 and residents were invited to participate. By conducting these meetings, we can assure the process is open and transparent, understand the progress of remediation and accomplished the purposes of supervising. To implement the source control of “food safety”, the fences and notice boards are installed around the site. We also take the measures of daily inspect and punishment of
illegal fishermen. We publish papers to local and international journals to promote technological exchanges and enhance international visibility.

CONCLUSION
After the remediation is completed, in addition to assisting in stigmatization, it also cooperates with the master planning of the "Taijiang National Park" to develop special local eco-tourism, providing a good place for recreation, and achieved the aim of improving the local economy and sustainable cycle.

KEYWORDS: CPDC  Dioxin
INTRODUCTION

Nowadays, fraud groups have perfected their tactics for deception. They also have clear responsibilities and division, such as professional computerization, enterpriseization, and organization. The effectiveness of team work has been maximized. As a result, fraudulent cases have been rampant in various ways at domestic and abroad.

OBJECTIVE(S)

In order to effectively reduce the incidence of fraud, and Enhance citizen anti-fraud awareness, create a safe city without fraud!

METHODOLOGY

In order to strengthen the promotion and investigation of fraudulent cases, through the inter-departmental and multi-sectoral cooperation, we use “Five Integrations” to solve cross-institutional problems at one time. The Five Integrations include the integration and cooperation of “Intra-organizational Horizontality and Verticality”, “Inter-organizational horizontality”. "Inter-organizational Verticality", "NGO," and "Cross-Domain".

RESULTS AND DISCUSSION

With the joint efforts of the "Five Integrations" inter-agency, the numbers of hot spots withdrawals have decreased, and the number of drivers seized has gradually increased.

The results of the crackdown on fraudulent crimes have already been basically established.

CONCLUSION

The crime trend is no longer confined to a single county or municipal district. Jointly
investigation, intelligence coordinating, pooling resources and working together are required to create a healthy city. “Let’s fight against fraud and build a livable home together”.

**KEYWORDS**: Anti-fraud, Five Integrations, Fraud Prevention Arrested cash mule, Financial institutions (convenience store, township) anti-fraud mobile devices line partners
Healthy Cities for Partnership

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Integrated Visual Screening and Treatment Service in Nantou County, Taiwan R.O.C.</th>
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<tr>
<td>Author</td>
<td>Chao-Lang Huang, Hung-En Liao</td>
</tr>
<tr>
<td>Organization</td>
<td>Nantou County Government, Taiwan</td>
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**The Introduction** 16.74% of population in Nantou County of Taiwan are elderly and there are no practicing clinics in 66.41% of villages. The elderly often suffer from poor eyesight, resulting in poor quality of life and inconvenient health seeking. **Objectives** To eliminate health inequalities, improve access to medical services, and establish a referral system for visual screening. **Methodology** The Public Health Bureau initially opened up eye clinics in 6 townships in Year 2016, formed a partnership with Nantou County Optometrists Association to provide 6 times of community-based visual screenings, and build subsequent referral mechanism in Year 2017 to make sure the accessible and continuous quality services. **Results and discussion** A total of 467 people participated in integrated health screening activities. Among them, 227 (48.61%) were suspected of having eye diseases and were referred to the Eye Clinic of the Health Center for further treatment by specialists. In view of the shortage of medical resources, Different sectors have formed partnership to increase investment in personnel and equipment, and addressed effectively health inequality issue. **Conclusion** This model of integrated visual screening and treatment service in Nantou County of Taiwan has shown successful partnership is one of the keys to healthy city.
Healthy Cities for Partnership

<table>
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<tr>
<th>Abstract Title</th>
<th>To Make A Safer Tainan</th>
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<tr>
<td>Author</td>
<td>Ching-Hsiang Chen, Chen Jung Chen</td>
</tr>
<tr>
<td>Organization</td>
<td>Disaster Management Division, Tainan City Government Fire Bureau, Taiwan</td>
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INTRODUCTION
Flooding, and earthquake are the major forms of disaster in Tainan. In order to make a safe city, the city government should to integrate and assign recourse of institutes and organizations, such as military, NGOs, industries and communities. An independent office, which is namely “Office of Disaster Management Tainan City Government (ODMTCG)”, plays a crucial role in the effort of disaster prevention.

OBJECTIVES
With the changes in the environment and occurrence of compound disasters such as Typhoon Morakot in 2009, ODMTCG promotes Disaster Prevention and Protection Project to boost the rescue capabilities and reduce the casualties and losses since 2011.

METHODOLOGY
It can be divide into six sections, include with “The collection and revise of historical disasters”, “The review and revise of disaster prevention organization and system”, “The integration and assignment of resource and requirement”, “A regional plan of disaster prevention for Tainan city”, “The establishment and promotion of disaster resistant community”, and “Promotion of NGOs partnership”.

RESULTS AND DISCUSSION
With the partnerships of intersectoral actions among ODMTCG, the military, and NGOs, the rescue period of the devastating earthquake on Feb. 6, 2016 was successfully shortened. Moreover, with the partnerships of pre-deploy assigned swiftwater rescue teams and NGOs, zero death toll during typhoon and flooding seasons is maintained since 2011.
CONCLUSION
With the enhanced partnerships among Tainan City Government, NGOs, and local businesses, integration of disaster prevention database, and the establishment of complete mechanism, Tainan City Government has received high distinction award for six consecutive years. By these achievements and contributions, the policy of “Safe Tainan” is implemented successful and the citizen can have satisfying work and life in the Tainan city.

KEYWORDS: ODMTCG, Disaster Prevention and Protection Project
INTRODUCTION

「A man gives hopes is an angel、A man help people is an Buddha」. Firefighters need to be able to maximize their disaster relief capabilities under perfect logistics. How to give is the greatest difficulty.

OBJECTIVE(S)

Integrate Water trucks information (water, position, equipment), fire hydrant, Fire building plan, Firefighter'licenses, and Radio information to provide firefighters with the most immediate rescue information.

METHODOLOGY

Set up multiple sets of electronic management systems to merge information for peacetime preparation and disasters.

RESULTS AND DISCUSSION

From 103 to 105 years, it gradually completed the construction of subsystems, water and vehicle systems in 103 years, equipment and licenses systems in 104 years, and assisted rescue of information management systems in 105 years, greatly improving disaster relief efficiency, shortening attendance time, and improving firefighting safety.

CONCLUSION

The Cloud system can provide firefighters in the disaster area in time with necessary information and Commander to improve the ability to coordinate forces and command and dispatch.

KEYWORDS: Firefighter system
### Healthy Cities for Partnership

<table>
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<tr>
<th>Abstract Title</th>
<th>Creating Dynamic Lifestyle Based on Community</th>
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<tr>
<td>Author</td>
<td>Tai Hsu-Chih, Ying-Ting Tseng, Hu-Jane Chu, Chen-Fei Lo</td>
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<tr>
<td>Organization</td>
<td>Department of Exercise and Health Promotion, Chinese Culture University, Taiwan</td>
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**Introduction** Statistics from the Health Bureau in 2015 showed that the ten major causes of death among residents in Song Shan District of Taipei City were eight related to chronic diseases and obesity, accounting for 66.28%. This may be highly related to the occupations and lifestyles primarily require sitting for long hours and stillness. According to the WHO’s statistics, insufficient activity is the 4th leading risk factors for global mortality. Therefore, promoting dynamic living in the community and creating a healthy personal lifestyle with a supportive environment is a critical issue in the community. **Objective** Use health education and supportive exercise environment to create a healthy exercise lifestyle. **Methodology** From 2015 to 2017, the government encourages the resident to participate physical fitness measurement through cloud technologies, and uses the National Health Go manual to provide individual education, let people empower their health. Then use the Taiwan Activity Questionnaire (IPAQ) and physical fitness testing to evaluate their health status. At the same time, conduct survey to assess the prevalence rate of exercise and satisfaction. **Results and discussion** IPAQ result shows significant increase (p value=0.03) with those who exercise having better physical fitness; physical fitness shows significant improvement (N:182) through 30 second sitting/standing and 2 minutes of stepping; public exercise prevalence rate increased from 80.7% in 2015 to 87.7% in 2017; satisfaction of participating residents achieved 97%. **Conclusion** In this study, the main feedback of policy including provide community health services through different fields. To construct 35 healthy walking trails, establishing a friendly, convenient and supportive environment to promote public health towards an exercise lifestyle.
### Healthy Cities for Partnership

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<th>Abstract Title</th>
<th>Local Production for Local Consumption – Bamboo Wind Chime Certified Restaurant</th>
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<tr>
<td>Author</td>
<td>Wei-Chih Chen, Chiou-Mei Liou, Shih-Chang Su</td>
</tr>
<tr>
<td>Organization</td>
<td>International Economic Development Department, Hsinchu County Government, Taiwan</td>
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In order to produce fresh, safe and environmentally-recyclable agricultural products, Hsinchu County adopts the means of “local production for local consumption”, which not only narrows the distance between producers and consumers, but also shortens the mileage of food delivery and reduces the carbon emissions from transportation tools. In this way, consumers get fresher, low-carbon foods. Thus, Hsinchu County Government promoted the restaurant label of “Bamboo Wind Chime”, urged restaurants to focus on procurement through relevant activities and marketing of local food materials. After assessment, restaurants that actively use the food materials produced locally may put the label of “Bamboo Wind Chime” at the door, providing reference for consumers to choose restaurants, and boosting the development of "Hsinchu Good Products". At present, Zhubei Guangming Shopping District in Hsinchu County is a demonstration area. It has succeeded in enhancing the cooperation between restaurant owners and farmers who produce non-toxic vegetables. Also, it held multiple happy and delicious food reunions. In the future, business development associations will safeguard and assess mechanism and boost the development of food materials produced locally.
Healthy Cities for Partnership

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<tr>
<th>Abstract Title</th>
<th>Promoting Social Participation of New Residents</th>
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<tr>
<td>Author</td>
<td>Li, Chun-Lun, Huang Shu-Mei</td>
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<tr>
<td>Organization</td>
<td>Taitung County Civil Affairs Department, Taiwan</td>
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**Introduction** In this county, nearly half of the new resident households’ monthly income is below the standard; funds for services to new residents have been allotted every year.

**Objective** Due to the county’s vast area, inconvenient transportation and other factors, the ratio of new residents’ utilization of relevant resources is relatively low. This project has overturned practices over the years in order to increase the ratio of new residents’ participation in various activities.

**Methodology** The APP set up by this county was used to assist in publicity. To strengthen family support, family members were also invited to participate in the activities. Translators, staff, lecturers and caregivers were given the opportunity to engage in part-time work. Additionally, meals, souvenirs, transportation were also provided for the activities to increase incentives. Finally, counseling was provided to establish non-profit organizations, thereby strengthening peer group support.

**Results and Discussion** Most new residents did not participate in the 2015 and 2016 Migrants’ Day events, except the staff performing on stage and booth staff. Following the implementation of the improvement measures, up to 800 new residents participated in 2017. The county’s annual funding increased by 16%, and the amount distributed to each new resident increased by NT$432. The number of new residents attending the life adaptation guidance class following the measure implementation increased by 65%. The volunteering new resident and translation talent training programs increased by 155% after the measure implementation.

**Conclusion** Following the measure implementation, the number of participants increased significantly.
Healthy Cities for Partnership

<table>
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<tr>
<th>Abstract Title</th>
<th>Obesity Prevention Federation in the Daan District</th>
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<tr>
<td>Author</td>
<td>Tai Hsu-Chih, Chung Ching-Yun, Yu Cheng-Lee, Chen Chiu-Fang, Ou Chia-Ling</td>
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<tr>
<td>Organization</td>
<td>Department of Exercise and Health Promotion, Chinese Culture University, Taiwan</td>
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</table>

**The Introduction** The WHO has announced a target of zero obesity growth and a 10% reduction in the rate of physical inactivity by year 2025. According to statistics, the ratio of overweight adults and of obesity in Da’An District has increased from 36.5% in 2010 to 28.7% in 2017. **Objective(s)** Therefore, combining with the sharing of resources in various fields, we can jointly promote the prevention and treatment of obesity so as to improve people's consciousness to its prevention, control and action. Eventually, we expect to reduce the obesity rate in Da'An District. **Methodology** In terms of strategy, a personal, environmental and coordinative approach shall be devised to link up the community, schools, workplaces and hospitals to form a front line for obesity prevention and treatment, starting with dietary and physical activities to predominantly increase public awareness to obesity prevention and treatment. **Results and discussion** Publicizing the results, a total 225 units from the community, schools, workplaces and hospitals participated in the activity and the weight loss was 5,524 kilograms in 2017. The participation rate of obese people with BMI ≥ 27 increased from 24.9% in 2016 to 60.2%. **Conclusion** Through interdisciplinary resource integration, linking different groups of people in different fields to promote obesity prevention, establish a healthy lifestyle and achieve public health, fairness and move towards the United Nations’ sustainable development goals of a 1/3 reduction in the number of premature deaths from non-communicable diseases (NCDs).
Abstract Title
“Good Products in Hsinchu – Healthy and Enjoyable Presents in Hsinchu County”

Author
Wei-Chih Chen, Shih-Chang Su, Yu-Huan Lu

Organization
International Economic Development Department, Hsinchu County Government, Taiwan

In recent years, people’s health awareness has gradually risen. Therefore, regardless of “foods” or “products” (such as handicrafts, skin care products for external use, etc.), “healthy”, “organic” and “non-toxic” features are appeals of modern people. In this regard, Hsinchu County plans to show “Hsinchu Good Product, Good Presents in the County” with the aim of ensuring “healthy foods and safe products”. The selected manufacturer of “Hsinchu Good Product, Good Presents in the County” must have a legally established certification document issued by the government, and the “good products” must be in line with the relevant national ordinances. At present, there are at least 100 stores and more than 150 products collected in the catalogue of “Hsinchu Good Product, Good Presents in the County”. It also collaborated with the Health Bureau to advocate food hygiene and safety, and to deepen people’s impressions through radio and Facebook long-term propaganda. It hoped to achieve 100,000 audiences and 1000 Facebook subscribers. In the future, efforts will be made to participate in domestic and overseas exhibitions, sales and other activities. It is expected that more than 50,000 people will participate in these events, which will be conducive to promote local specialties on the land in Hsinchu County.
<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Constructing an Urban Agriculture Development Model Based on the Cooperation among the Industry, Government, Academia and People—Example of Taipei City</th>
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<tbody>
<tr>
<td>Author</td>
<td>Hai, Chen, Lin, Chung-Chieh, Lu, Chiou-Hung, Lee, Yen-Ju</td>
</tr>
<tr>
<td>Organization</td>
<td>Department of Economic Development, Taipei City Government, Taiwan</td>
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**The introduction** Taipei City is a densely populated and consumer-oriented city. **Objective(s)** to create an agricultural space in the city, promote food and agricultural education to all ages, and develop related industries. **Methodology** The Department of Economic Development of Taipei City Government has been promoting urban agriculture since 2015 by combining the Taoyuan District Agricultural Research and Extension Station, the Department of Plant Pathology and Microbiology of the Taiwan University and the Taipei Farmers’ Association network, and by introducing agricultural professionals to enter the community gardens to carry out plantation counseling and provide designated-location plant SOS clinic service. **Results and discussion** On plantation counseling, a total of approximately 27,000 people were served. In addition, Taipei Community Garden Center were established together with NGO groups such as community empowerment groups and greening promotion groups which serves as the one-stop window for citizen. On project subsidy and implementation, we assistant 82 communities or companies in setting up community gardens in several aspects such as horticultural therapy, activation of senior citizens, and food and agricultural education in primary and secondary schools. We are also actively developing relevant industries, negotiating with the gardening landscape association and industry participants, and establishing sales and demonstration centers for urban agriculture and green roofing materials. A total of NT$4.3 million worth of production value has been generated. Furthermore, community supported agriculture (CSA) is promoted and developed through guided agricultural tours in the suburb agricultural area. **Conclusion** We hope to establish a close partnership, integrate various professional organizations, and match the needs of communities and institutions proposed from the bottom up, so that agriculture can be developed in the urban space and then affect urban people’s agricultural consumption behavior.
Healthy Cities for Partnership

<table>
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<tr>
<th>Abstract Title</th>
<th>Promote Community Participation and Elderly Welfare Services: Love the Elderly and Live Vigorously in Joy</th>
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<tbody>
<tr>
<td>Author</td>
<td>Chun-Cheng Chen, Mei-Hua Chao</td>
</tr>
<tr>
<td>Organization</td>
<td>Tainan City Government Bureau of Social Affairs, Taiwan</td>
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INTRODUCTION
In face of the global trend of aging population, people value the quality of elderly life more than ever. Tainan city encourages the elderly’s social participation via welfare service programs of community participation.

OBJECTIVE(S)
We aim to work with all bureaus of Tainan City Government to provide the elderly with more diversified resources of community participation activities.

METHODOLOGY
We encourage the elderly to participate in community affairs and serve people with their unique wisdom and experience by strategies of promoting elderly community participation, fostering talent through various ways, and strengthening the power of community through professional mentoring. Furthermore, to motivate the elderly to participate in social affairs, Tainan city cultivates the mentoring ability of district offices and collaboratively promotes benefit services with different sections.

RESULTS AND DISCUSSION
With Tainan City’s continuous efforts since 2005, the number of participants for 2017 has reached 19,102. By means of showing care for the elderly, enhancing the elderly’s social participation, we’ve allowed people in need to receive immediate and convenient services in close proximity. Besides, this also helps people understand the goal of sustainable development and have motivation to attend to community affairs.

CONCLUSION
By promoting communitilized welfare services through social participation programs, Tainan has become an elderly-friendly city, allowing active aging and peaceful local life, which realizes the vision of big Tainan city.

KEYWORDS: Community participation, welfare communitilization
Healthy Cities for Partnership

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<th>Abstract Title</th>
<th>Cross-Domain Emergency Aid Collaborations</th>
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<tbody>
<tr>
<td>Author</td>
<td>Chih-Yuan Lin, Pei-Li Chung</td>
</tr>
<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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</table>

The introduction
With rapid population growth and changes in social structures, accompanied by the citizens’ increasing demand for emergency services, the number of emergency dispatches has been rising at an alarming rate. Balancing the staff’s workloads and improving emergency aid quality have always been important issues of the Fire Department of Taoyuan City.

Objective(s)
Developing partnerships with other government agencies, the academia, businesses, NGOs, and the community and engaging in information/resource sharing on an equal footing and mutually beneficial basis to vertically and horizontally integrate multiple systems and create a win-win situation.

Methodology
“**To improve first-aid quality and promote well-being of the patients**” is established as the first priority, and the 5W+1H divergent thinking (why, what, where, when, who, and how) is adopted, assisted with considerations of “how much” costs are invested and what “effect” is expected to facilitate the rectification of cross-domain collaboration plans where different parties complement each other.

Results and discussion
In 2017 and 2018, the Fire Department of Taoyuan City has signed Memoranda of Cooperation with the Medical Affairs Bureau of MND and the Tao Yuan General Hospital of MOHW respectively. Under this existing framework, the Department engages in mutual learning, collaborative research and development, integration of pre- and post-hospitalization critical care. In the future, this model will be extended to other government agencies, the academia, corporations, NGOs, and the community.
Conclusion

“Cohesion creates strength; unity realizes hope.” We expect to establish cross-domain partnerships with multiple entities and maintain good interaction via appropriate management means in order to sustain collaborations.
**Abstract**

**Healthy Cities for Partnership**

<table>
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<tr>
<th>Abstract Title</th>
<th>Healthy Cities for “Partnerships”</th>
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<tr>
<td>Author</td>
<td>Song, Lih-Yau, Yuan, Lu-Fang; Liu, Hsueh-Hsia; Ye, Ruo-Fen</td>
</tr>
<tr>
<td>Organization</td>
<td>Architecture Department, National Taipei University of Technology, Taiwan</td>
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**Introduction** In 2014, the smoking rate in Shilin District is 11.0% higher than that of Taipei City: 8.7%, and lower than the national 16.4%. Tobacco use is the world’s top preventable death. We hope to partner with the community to create supportive environments and integrate families, communities, schools, workplaces and volunteers as combined resources to build a networks-supported smoke-free city. **Objective(s)** To promote smoke-free workplaces via “volunteers adoption” and to lower smoking rates. **Method** 1. To set up a smoking prevention team to convene regularly for strategy brainstorming; 2. To recruit local anti-smoking volunteers to target specific places for smoke-free advocacy; 3. To link the 37 newly added partner organizations e.g., school clubs, workplaces, hospitals and neighborhood volunteers to build a smoking prevention network, to commit to smoke-free promulgation via such strategies as diverse interactive promotional games, quit-smoking consultation referrals and inspections and to lower risks of non-infectious diseases. **Results & Discussion** In 2017 the adults smoking rate was 9.4% reduced by 1.6% compared to that of 2014; the number of smoke-free places grew three-folds; places targeted by neighborhood volunteers for smoke-free advocacy grew 19-folds. **Conclusion** The down-top smoke prevention network consisting of community partners and volunteers has achieved excellent results and is the district’s most successful case in public health education to date.
Poster
Healthy Cities for People
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>Age-friendly environment to promote mobility of the older population in Taiwan: are we meeting their needs?</th>
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<tbody>
<tr>
<td>Author</td>
<td>Shiann-Far Kung, Yung-Chi Yen, Cordia Chu, Nuan-Ching Huang</td>
</tr>
<tr>
<td>Organization</td>
<td>Department of Urban Planning, College of Planning &amp; Design, National Cheng Kung University, Taiwan</td>
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Walking is the most frequently and easy way of physical activity among the older adults. In order to promote walking and physical activity for the older adults, friendly and supportive environment for mobility need to be constructed. Taiwan became an aging Society in 1993, and is projected to become an aged society and super-aged society in 2018 and 2026 respectively. Negative population growth will occur in 2021 at the earliest and in 2025 at the latest. Nearly 12% of older adults are disability.

The three-year project “The effect of the traffic transportation system of built environment to the active ageing of the elderly” designed a questionnaire contained demographic, activities types and frequency, related travel modes, transportation categories, health status and quality of life. A telephone survey was used to collect these information of the older adults aged 65 years and above in 2017. “Ottawa Charter for Health Promotion” was used to prioritize main issues and the determinants including structure, environmental, culture, individual, and health services according to the information of this survey. Then, action means of Ottawa Charter was used as the structure for policies and strategies suggestion.

A total of 1591 sample were recruited in this analysis. Results showed that main transportation modes are “walking”, “ride a motorcycle”, “drive a car” and “Take bus”. High satisfaction on of walking environment could reduce the accident and enhance the health-related quality of life among the older adults. Priority Issues included: (1) Difference of health status and disability among the older adults. (2) Barrier free environment for walking, wheelchair. (3) Utilization of public transportation. Policies and strategies among “Healthy Policy”, “Supportive Environment”, “Community Action”, “Individual Skills” and “Re-orient Health Services” were proposed and recommended.
The percentage of Taiwanese elderly with dementia out of all of the elderly is 7.94%, and they mostly rely on home care and their family caregivers. **Objective(s)** This study focuses on impact of the non-medicine occupational group program for dementia elderly and their caregivers in community. **Methodology** The program was conducted for two hours each time, once a week and twelve weeks in total. Course contents included non-medicine physical activity related to daily life, cherishing the past, sensory stimulation, and groups activities...etc. The program therapist designed courses based on the levels of the participants’ behaviors and included daily life activities in order to let program easier and adjust to daily life. The main caregivers filled out the scales dementia behaviors and cognition related to daily lives before and after the program. **Results and discussion** The results were shown that after the program, dementia elderly showed a significant improvement (p<.05) in following behaviors and symptoms: mental behavioral symptoms, physical function, the daily life activities, delusion, roaming and actions of restlessness, inappropriate behavior and sleep. **Conclusion** Family members state that, the activities which program occupational therapist leveled out from easier to difficult, blend in daily life activities at home, raised the dementia elderly more willing to join in the activities. Family caregivers leaned how to teach or lead the dementia elderly to behave daily life. Meanwhile, joining the therapy program also causes improvements on delaying deterioration on cognition and daily activities, decrease the frequencies in occurrence of mental problem behaviors. Finally, the dementia elderly were even asked by their doctor to reduce his or her medicine intake.
# The Introduction

The amount of people living with dementia is increasing rapidly, indicating the urgency of building dementia-friendly communities. The Museum of Modern Art (MoMA) in New York had developed the project “Meet Me at MoMA”, inviting people living with dementia to visit MoMA to enhance the extent of social engagement of them. **Objective(s)** We wanted to integrate museums with other resources, creating the museum-centered dementia-friendly community, with social engagement aspect for our major evaluation. **Methodology** Two main strategies were used in 3 museums located in our community. First, we collaborated with museums and invited people living with dementia to see the exhibitions, reminding them of their long-term memory. By using clay, cardboard and other materials for art, they created compelling visual content of the most impressive scene of their memory. Though displaying their works and explaining the underlying stories, the public recognized the past and ongoing contributions of them to the community. Second, we provided staff training for workers and volunteers of museums, shops and clinics, helping the personnel be aware of the needs of people living with dementia and tailor their services to support people living with dementia and care partners. With these 2 main strategies, a variety of organizations around the museum became dementia-friendly, forming the museum-centered caring network. **Results and discussion** 46 people living with dementia and care partners attended museum activities. There were 176 employees and volunteers completing the training courses. In addition to the museums, we recruited 25 shops and clinics around the museums to become dementia-friendly organizations. The average increment of social engagement index is 4.06 (110.2%, n=46). **Conclusion** There are plenty of museums worldwide. Our success model can implement in other areas of the world, creating a better environment for people living with dementia and care partners.
The Introduction Social participation has been discovered to be an important factor that influences the mental health of seniors. Since board games are revealed to be an efficient method for mental improvement, the Board Game Health Improving Project was initiated in 2016, providing seniors with health promotional service through accessibility and integration. **Objective(s)** Improve the connection between common industry, government, academic field, and civil resources. Improve social participation and relationship among seniors and rejuvenate local elders. **Methodology** (1) Invite board game clubs in colleges to train senior volunteers, and assist communities in promoting board game activity. (2) Host summer camps of board games and Rummikub contests with the help of local government offices, improving social participation and interaction between generations. (3) An Elders using Board Games Survey will be developed by academics, evaluating the health contribution of board games to elders. **Results and discussion** There were 24% of the boroughs creating board game communities for elders. Of the elderly participants, 92.84% rated the program as satisfactory, while 82.4% of elders were willing to participate in board game activities. Change of mentality and emotion is the most prominent factor influencing elders, while human interaction takes second place. **Conclusion** Social participation of elders can be promoted through board games. In addition to improved physical and mental health, it also improves brain activity and satisfies human interaction needs.
# Healthy Cities for People

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Network of Easiness and Happiness in Tiossen</th>
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<tr>
<td>Author</td>
<td>Feng-yu Wang, Wan-ting Chan, Wanching Ho, Mei-ru Chuang, Yao-mao Chang</td>
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<tr>
<td>Organization</td>
<td>Chiayi City Health Bureau, Taiwan</td>
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In order to fulfill comprehensive psychological health, the present city, according to the 4 world psychological health action plans for 2013 ~ 2020 as presented by WHO, stresses that the government must strengthen psychological health policies, execute psychological promotion and disease prevention strategies, provide a comprehensive, integrated and responsive service network on basis of communities. Enhance the psychological health of the city residents and construct Chiayi City into a healthy city of easiness and happiness. 

Method is as follows: 1. The government develops strategies and establishes public policies for psychological health. 2. Integrate psychological health service resources. 3. Develop a psychological promotion plan according to local groups and areas. Develop the psychological policies of the present city according to 3-section and 5-stage prevention and strengthen environmental protection and sufficient civilian rights. The psychological health resources are rich in the present city. A psychological health promotion and propelling network is to be formed in combination with the medical personnel and local NGOs. Carry out psychological health promotion activities according to different age levels, different groups and areas. Conduct GDS-15 melancholy screening and general survey to those aged above 65 in the present city. Provide care or referral to those determined as perplexity of midlevel and above. Provide psychological consultation service in combination with psychological physicians. Become a factor protecting new residents and translate psychological health promotion resources based on their native languages intimately and incorporate the same in studying courses. The psychological health promotion network must integrate the three major sectors of medical, governmental units and private department. Non-public departments can fulfill independently and other bodies are needed to provide financial aids and power. Through constant personnel training, a psychological health environment of the present city will be constructed jointly.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>The “Healthy Happy Families” Subsidy Program</th>
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<tr>
<td>Author</td>
<td>Wen-Yen Wang, Po-Wen Su, Kuo-Ning Lin, Chieh-Ying Yeh, Ying-Chun Chen</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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The introduction
Birth rates in Taiwan have been trending downward since 2003. In 2014, the birth rate in Taoyuan City fell below the national average (8.46‰ in Taoyuan City, 8.99‰ national average). In 2015, Taoyuan City implemented a “Healthy Happy Families” subsidy program to provide post-wedding, pre-pregnancy medical exams, as well as subsidies for amniocentesis, in vitro fertilization, and Traditional Chinese Medicine (TCM) fertility and perinatal treatments.

Objective(s)
Taoyuan City has implemented a multi-prong approach targeting the medical needs at various stages of parenthood planning, cultivating a healthy next generation by encouraging married adults of childbearing potential to increase the birth rate.

Methodology
Decrease the financial burden of Taoyuan City residents associated with pregnancy and birth by providing pre-pregnancy medical exams and subsidizing amniocentesis, in vitro fertilization, and TCM fertility and perinatal treatments.

Results and discussion
From 2015 to 2017, this program provided pre-pregnancy medical exams to 2,360 male and 2,450 female residents; subsidies for 9,305 amniocentesis; subsidies for 1,828 instances of in vitro fertilizations, 525 of which resulted in successful pregnancies; subsidies for 664 TCM fertility treatments and 213 TCM perinatal treatments. The combination of childbearing-related services provided by Taoyuan City has corresponded with an increase of the crude birth rate in 2017 to 10.77‰, an increase of 27% from the rate of 8.46‰ in 2014.

Conclusion
Taoyuan City’s “Healthy Happy Families” Subsidy Program brings together the city’s childbearing-related policies to provide and facilitate both TCM and western medical care for expectant mothers, making Taoyuan a childbirth-friendly city.
Thumbs Up for Being Excellent in Integrated Health Screening!

Hsiu-tsai Lin, Hsing-yen Li, Mei-ru Chuang, Yao-mao Chang

Chiayi City Health Bureau, Taiwan

City residents who have lived for over 30 years in Chiayi have received integrated health screening to find various chronic diseases and cancers as early as possible. From 2007 to 2014, it was handled in the form of community programs. The total number of screens up by 5% annually. To break through bottlenecks, a change to hospital integrated health screening was made in 2015. Based on the four advantages of accessibility, availability, affordability, and acceptability, a cross-department cooperation mechanism was planned to promote health screening from bottom to top. The community-type screening was upgraded to hospital-type integrated health screening to serve city residents and achieve the goal of early detection and early treatment. Method is as follows: 1. Initiate health screening in hospitals. 2. The mayor calls on people going to health examinations together. 3. Provide a transport service. 4. Provide subsequent care and treatment in case of anything abnormal being found during screening. After changing to hospital integrated health screening, the number of people receiving screening has reached new highs year after year. In addition, the satisfaction of city residents has increased year after year. In 2017, the average satisfaction reached 95.2%. In 2018, the number of hospitals providing this service increased to six. Under the strategy of early disease detection through screening, healthcare to all people is implemented. Integrated hospital-based health screening maintains the smoothness and convenience of community screening with better equipment and environments, and it also changes the established impression of city residents on medical attention in hospitals. The residents have found that a hospital is a good place to find and invest in for health. In addition, this method also provides detection for city residents who have no symptoms but may be diseased. This has raised the consciousness of city residents relying on screening for early diagnosis and treatment.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Establishing a Convenient Network for Colorectal Cancer Screening in Communities</th>
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<tr>
<td>Author</td>
<td>Yi-Bin Fan, Mei-Ling Lin, Chen-Fei Lo, Hu-Jane Chu</td>
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<tr>
<td>Organization</td>
<td>Technical Service Division Taiwan Forestry Research Institute, Taiwan</td>
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**Introduction** Colorectal cancer ranks second in Taipei City and Song Shan District in the 10 leading causes of death (2015). Previous studies have been proven that early screening and can be detected early and the mortality of colorectal cancer can be reduced by 44%. Therefore, it is direction of active efforts for Song Shan District to establish partnership between hospitals and community with expanding locations to provide screening service. **Objective** To create a comprehensive and convenient screening service network in the community to detect early-stage precancerous lesions and follow up early treatment to reduce cancer mortality. **Methodology** 1. Combining with hospitals and pharmacies to provide residents between the ages of 50 to 75 with immunochemical fecal occult blood test (IFOBT) once every 2 years for free. 2. Use a web-based database to obtain lists of target groups for notification via phone call, message, or e-post for screenings; provide mail or delivery services of test kits to homes. 3. To make potential population obtain the screening service, we expand locations in communities, workplace, hypermarkets, department stores, and post offices. 4. Counsel hospitals to provide post referral services for positive cases. 5. Encourage the public to accept screenings using incentives and Taipei Card. **Results and discussion** 1. Counseled 4 hospitals, 25 clinics, and 1 pharmacy to offer direct or referral to screening services; organized 184 screening events in communities. 2. In 2017 a total of 12,527 residents underwent colorectal cancer screening; 2-year coverage rate was 40.20%, higher than Taipei City’s 37.38%. There were 618 positive cases with a tracking rate of 85.80%, higher than Taipei City’s 81.69%. Through verified diagnosis, there were 244 patients with polyps, 25 patients with colorectal cancer, and 269 patients with precancerous lesion. **Conclusion** It exactly reduces incidence rate and mortality of colorectal cancer through the model of mobilizing communities to construct convenient networks that providing accessible and convenient screening service to the residents.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Improving Women’s Health Through Women’s Cancer Screening</th>
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<tr>
<td>Author</td>
<td>Shao-Han Liang, Wen-Yen Wang, Li-Chuan Chen, Kuo-Ning Lin, Chieh-Ying Yeh</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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**The introduction**

Cervical and breast cancers are among the top ten cancer diagnoses in women in Taoyuan. To minimize the impact of these cancers on women’s health by improving early detection and treatment, Taoyuan City has implemented a women’s cancer screening program. Since 1995, women age 30+ have been encouraged to have annual pap smears, and since 2004, women ages 45-69 have been encouraged to have mammograms one time every two years.

**Objective(s)**

Taoyuan City has implemented a long-term, multi-prong approach to increase routine screening for women’s cancers and thereby decrease related mortality.

**Methodology**

Taoyuan City has deployed mobile screening units to neighborhoods to increase screening accessibility. Invitations sent to eligible residents are tracked and screening-related data is managed centrally. **Results and discussion**

The screening rate in Taoyuan City has surpassed the national average. In 2017, the rate of pap smears was 56.59% (national average 55.15%), an increase of 2.33% from 2016; the rate of mammograms was 42.40% (national average 39.80%), an increase of 3.19% from 2016.

**Conclusion**

This long-term and multi-pronged screening program, implemented in Taoyuan City, has corresponded with a decrease in the cervical cancer standardized incidence ratio (SIR) from 30.6 cases per 100,000 people in 1998 to 10.5 per 100,000 in 2014, and the related standardized mortality ratio (SMR) from 11.5 per 100,000 to 3.6 per 100,000. The breast cancer SMR has fallen in the last three years from 12.9 per 100,000 to 11.2 per 100,000. The screening program has proven effective, and will hopefully continue to increase screening coverage.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Emergency Rescue for Ohca (Out of Hospital Cardiac Arrest) In Hsinchu County</th>
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<tr>
<td>Author</td>
<td>Fu-Yu Sun, Yu-Lin Shem, Tung-Hsiu Hung, Tsui-Hua Tai, Shu-Man Wu</td>
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<tr>
<td>Organization</td>
<td>Fire Bureau, Hsinchu County Government, Taiwan</td>
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According to the static summarization by the Fire Department of Hsinchu County, the average time ambulances take to arrive at the scene is around 7-8 minutes. However, the human brains will suffer irreversible damages after cerebral hypoxia for 4-6 minutes then brain death if the time is over 10 minutes. Therefore, the Fire Department of Hsinchu County not only tries to reduce the average response time, but also improves the ability to start the emergency rescue as soon as the public’s report is received. These efforts are aimed to make full use of the six-minute to save life, thus increasing the success rate of OHCA patients’ emergency rescue. To enhance the success rate of OHCA, the Fire Department cooperated with hospitals to develop an OHCA registration and management system to track the after-healing condition of OHAC. In addition, in order to start the rescue as soon as the public’s report is received, the Fire Department actively promotes the CPR learning for all citizens and set up AED in public places so that 10% of the citizens in the county can study CPR+AED every year. Furthermore, the member of the Fire Department dispatchers actively guide citizens to implement CPR on the phone, so that the DACPR rate can reach to more than 60% and the success rate of OHCA patients rescue can be improved to more than 6%. The Hsinchu County has a population of more than 540,000, and everyone’s life is precious and every family should be happy! The safety of each citizen in Hsinchu County depends on the local government, the public and even every citizen’s efforts. Let’s work together to guide our safety and build Hsinchu County into a safe, happy and livable city.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Strengthen Children's Preventive Care and Protect Children's Health and Future</th>
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<tr>
<td>Author</td>
<td>Yu-fen Kao, Hsueh-Lan Li, Meng-Hui Lin, Hsiu-Lian Lin Shier-Chieg Huang</td>
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<tr>
<td>Organization</td>
<td>Department of Health, Taiwan</td>
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**The introduction**  Children's health is an important indicator of national competitiveness. Therefore, Taipei city government promotes child health care policies to reduce infant and child deaths and help children grow healthily and has also established a health care network to protect children's health. **Objective(s)** To provide child health services and medical care resources, to offer health screening according to the growth stage, to conduct early treatment by early detection, and to reduce developmental delay or illness. **Methodology** Through the "Child Health Care Service Package", newborns were screened for critical congenital heart disease, hearing and congenital metabolic disorders; preschool children were provided with physical examinations, fluoride coating on teeth, and vaccination. We also establish the “Child Development Image Screening Interactive Website,” to track and refer abnormal cases and set up an early-care resources network. Medical aids for children under the age of 6 were provided in collaboration with the government, medical institutions, kindergartens and parents. **Results and discussion** Total births in 2016 averaged 1.31 per woman of child-bearing age. In 2017, the community-based integrated screening service for preschool children screened a total of 59,765 children; the caries rate was 48.06%; the abnormal vision rate was 14.61%, and the abnormal hearing rate was 1.08%. Among them, the caries rate decreased by 1.16% compared with 2016. **Conclusion** Through integrated strategy, including children's health, education, daily life, and well-being’s perspectives, we have demonstrated a package of comprehensive health care services to promote the foundation of children's growth.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Design of Maternal and Child Health Policy─Care-Free Pregnancy Wish</th>
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<tr>
<td>Author</td>
<td>Hsueh-Lan Lin, Hsiu-Lian Lin, Meng-Hui Lin, Shier-Chieg Huang, Hung-En Liao</td>
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<tr>
<td>Organization</td>
<td>Department of Health, Taiwan</td>
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The introduction The total fertility rates of highly urbanized Taipei City (0.94‰) were lower than national average (1.03‰) and most worldwide cities before 2010. Having children in late life, economic drain for raising children, and unfriendly breastfeeding environment may explained parts of statistics. Objective(s) A “Have a Care-free Pregnancy” policy and supporting measures have been introduced through the partnerships across different departments and sectors from 2011, to increase the fertility rate. Methodology The policy was implemented through three major programs: "newborn and health care subsidies," "comprehensive infant and child care services," and "creation of a maternal and child friendly environment", including childbirth subsidies, subsidies for pre-pregnancy health examinations and prenatal genetic screening; screening tests for hearing, heart disease and metabolic disorders were available for newborns and subsequent available health care services for children. In addition, supporting health care services and network, including child allowances, child' tuition subsidies, design of pregnancy badges, and provision of lactation rooms at the workplace, have been made available to every phase of children and women. Results and discussion The total fertility rate of Taipei City has increased from 1.2‰ in 2011 to 1.31‰ in 2016, continuously higher than the national average of 1.17‰. The “Have a Care-free Pregnancy” policy have effectively reduced parts of the economic burden on raising children. In 2016, satisfaction on overall baby-friendly environment in Taipei City was 71.7%, higher than national average of 65.2%. Meanwhile, the exclusive breastfeeding rate for infants under 6 months of age in Taipei City was 47.5%, higher than national average of 44.8% and the 2005-2012 global average of 38%. Conclusion Taipei City has demonstrated an example of constructing a “Willing to procreate, able to nurture” supportive network to build a maternal and child healthy city.
**Abstract Title**

Innovative Use of Copay System and Information-Based Operations to Promote Vaccine Subsidy Policy

**Author**

Liao Hsiu-Yuan, Huang Shier-Chieg, Chen Shao-Ching, Wu Yi-Hua, Chen Chia-Jou

**Organization**

Department of Health, Taiwan

**The introduction**

Rotavirus infection is one of the most common causes of severe diarrhea in children worldwide, which increase the cost of home care. The provision of a close access to vaccination is the most effective preventive measure.

**Objective(s)**

The copay system and a graded subsidy model are used to make the government and users share the responsibility for preventive care, to achieve medical equality and reduce the government's financial burden.

**Methodology**

The Health Department is used as the integration platform for alliances with hospitals, health service centers, civil affairs units, post-natal nursing homes and tourism and communication bureaus for joint promotion and propaganda of packaged child-welfare services. The combination with the child medical subsidy policy makes a successful breakthrough in the vaccine tax system issue to increase the willingness of hospitals to sign the contract, and integrates the system databases of the central government and other bureaus and offices.

**Results and discussion**

The child vaccination service plan can reduce the frequency and burden of child care and allow the public to enjoy double subsidies for vaccines and medical expenses, to resolve the fairness issue on the selection of vaccine brands for subsidy. E-services for public convenience such as the eligibility for various types of subsidies, vaccination records and text messages for vaccination reminders are established, and creative marketing methods are implemented.

**Conclusion**

Through cross-field cooperation, the administrative operations of agencies are simplified and the burden of the subsidy recipient is reduced. The vaccine subsidy policy is propagated and published during festival periods to increase the participating children's injection rate.
Health Cities for People

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Elderly Vaccination for Healthy Aging</th>
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<tbody>
<tr>
<td>Author</td>
<td>Hui-Chin Yen, Wen-Yen Wang, Li-Chuan Chen, Kuo-Ning Lin, Shiao-Chun Chen</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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</table>

The introduction
Pneumonia is the third leading cause of death in Taiwan in 2016. The primary infectious agent of the disease is *Streptococcus pneumoniae*. In severe cases, it can cause Invasive Pneumococcal Disease (IPD). Among them, individuals over 65 years old are at high risk of infection. From 2008 to 2012, the annual IPD diagnosis rate in Taoyuan City was 3.21 per 100,000 individuals.

Objective(s)
In order to protect elderly residents of Taoyuan against pneumonia, Taoyuan City has been providing elderly residents over the age of 65 with free *Streptococcus pneumoniae* vaccination services since 2013.

Methodology
The implementation method is as follows: (1) Convenient Vaccination: Free vaccination services are provided all-year-round at all affiliated district health centers and hospitals/clinics to improve the public's willingness to be inoculated. (2) Diversified Promotion: Flyers, posters, broadcasts, press conferences, and other promotional means help strengthen the public's health awareness. (3) Cloud Query: Integration with the citizen card cloud query system enables the citizens to check their vaccination records and health service application progresses.

Results and discussion
From 2013 to 2017, Taoyuan City had administered a total of 42,405 pneumococcal vaccines, and 37.68% of the residents over 65 years old were inoculated. The IPD diagnosis rate of the city had decreased from 2.54 to 1.34 per 100,000 individuals from 2014 to 2017, showing a decrease rate of 50.37%.

Conclusion
Since the vaccination promotion plan was initiated in 2013, the IPD diagnosis rate in Taoyuan City has shown a yearly decrement, indicating its effectiveness in...
protecting the health of elderly residents. In the future, cross-domain promotion of public health awareness and vaccination promotion will continue to be implemented to provide better health care for the elderly.
Healthy Cities for People

<table>
<thead>
<tr>
<th>Abstract Title</th>
<th>Healthcare Utilization of Seniors Above 65 In Taoyuan City</th>
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<tbody>
<tr>
<td>Author</td>
<td>Hui-Chin Yen, Wen-Yen Wang, Li-Chuan Chen, Shiang-Yun Huang, Chuan-Sheng Chiu</td>
</tr>
<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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</table>

**The introduction**

Elderly people (over 65 years of age) account for 10.89% of Taoyuan City’s population. The convenient access to healthcare is of great importance for them. Furthermore, Taoyuan City has an expansive territory with large discrepancies in healthcare resources between different districts. Planning for integrated healthcare services is necessary. **Objective(s)**

By studying the current situation of senior citizens’ healthcare utilization and integrating the results into the overall healthcare planning, it is expected that healthcare resources can be evenly distributed and healthcare accessibility can be improved.

**Methodology**

The hospitalization, insurance, and one-million sampling data from 2009 to 2013 in the “National Health Insurance Database” were analyzed for senior population by geographical distribution and categories of outpatient, emergency, and hospitalization.

**Results and discussion**

54% of elderly (range 20%-71%) tend to search outpatient medical care at local medical institutions while 50% of elderly resided in coastline Guanyin District prefer to seek medical attendance in nearby Zhongli and Xinwu. There are 4 hospitals in Taoyuan District providing 24-hour emergency services. Among the 6 districts without 24-hour emergency services, 56% of elderly in 5 districts (Luzhu, Dayuan, Bade, Daxi, Fuxing) mainly referred to Taoyuan District. 54% of hospitalization were in Taoyuan and Guishan Districts. Only 3% in neighbor Taipei City and New Taipei City. It is proposed to put “accessibility to medical treatment” an important development goal in the future, to improve the referral system and the traffic.
dynamics, to strengthen the participation of elders in communities, and to collaborate public and private sectors.

Conclusion

Elderly prefer seeking medical services locally. It is considered to enhance classified medical through systematically management, increase the capacity of home care services, improve traffic lines, and facilitate information and communication tools in the future, thus to promote effective distribution of medical resources.
Abstract

Exercise Prescription and Frailty Intervention Program of New Taipei City

Author

Chi-Hung, Lin, Hui-Ping, Lin, Yu-Ting, Tseng

Organization

Commissioner of Department of Health, Taiwan

Introduction: In 2016, New Taipei City's elderly health check-up program introduced frailty assessments and exercise intervention, with 43% of "prefrailty" responding as normal and 90% of "frailty" improving to reach prefrailty or normal levels. However, 10-57% of frail elderly showed no immediate improvement after exercise intervention. In view of this, in 2017, individualized exercise prescriptions were included to New Taipei City’s elderly health check-up program, and related personnel training was developed and standardized training modules were established in the hope of enhancing exercise intervention effectiveness. Objective: The establishment of Exercise is Medicine (EIM) Taiwan personnel training and standardized training modules through EIM Taiwan, in the hope of enhancing exercise intervention effectiveness for individuals assessed as prefraility or frailty in New Taipei City's elderly frailty assessments. Methodology: 1. Planning of exercise intervention options and training courses. 2. EIM training for physicians and allied health professionals. Results and discussion: In March 14, 2017, Eric Liluan Chu, the mayor of New Taipei City cosigned a Memorandum of Cooperation (MOU) with EIM Global. After signing the MOU, totalling 195 physicians and 344 professional personnel trained. Through these EIM-certified physicians, individualized exercise prescriptions were given to elderly assessed as prefraility or frailty, with exercise plans then implemented through the guidance of allied health professionals. Conclusion: In addition to continuing to implement exercise intervention for pre-frail and frail elderly, our program aims to establish an EIM Taiwan training guidance handbook. This training material includes content from the recent ACSM's Guidelines for Exercise Testing and Prescription, 10th edition (2018) and EIM Singapore’s Exercise Prescription Guide, while including localized sports modules developed by New Taipei City in order to offer various safe and effective exercise planning materials. Through these actions, it is expected to enhance exercise intervention effectiveness and reverse frailty in New Taipei City.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>Activation of Idle Real Estate and Increase of Elderly Care Facilities</th>
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<tr>
<td>Author</td>
<td>Chang, Che-Hsi</td>
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<tr>
<td>Organization</td>
<td>Taitung County Land Administration Department, Taiwan</td>
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Introduction The premises occupying an area of nine hectares and originally intended to accommodate injured and handicapped soldiers during the war became idle and caused public order concerns after the veterans scattered about and were cut down. Statistics show that the elderly population accounts for 15% of the total county population. Since the county is becoming an aging society, and that the county has no care facilities for the elderly, this venue can be used as a long-term care area in order to increase elderly care facilities.

Objective Provide guidance to companies to change land status change of idle real estate through development permit procedures and build elderly care areas, making Taitung a LOHAS city for the elderly.

Methodology Introduce excellent companies to establish cooperation mechanisms. Through soil and water conservation, environmental impact assessment and strategies, and solutions proposed to resolve related environmental sensitivity and existing building problems, as well as committee reviews and the issue of development permits to change land status to build elderly care areas.

Results and Discussion Provide a nine-hectare elderly care service area containing care homes, nursing homes, and other facilities, which are expected to attract 800 persons at home and abroad to the area to live a retired life.

Conclusion Plan and provide a 3,500-ping care service area, promote the Long-term Care 2.0 Policy, set an example for senior care, increase the employment rate, train 100-150 long-term caregivers to join the workforce, and enhance the average quality and service standard of this county’s elderly warfare institutions.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>The effects of 10-week small-ball training and 8-week detraining for prevent fall related factors on elderly</th>
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<tr>
<td>Author</td>
<td>Chao, Tzuyuan-Stessa, Han, Kao-Chiang; Wu, Sze-Hua; Xu, Hao-Yu; Kuo, Hsiu-Chen</td>
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<tr>
<td>Organization</td>
<td>National Cheng Kung University, Taiwan</td>
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**The Introduction** There are 17.28% of elderly in Zhongshan District, and the fall was the main cause of disability. Therefore, Zhongshan District has listed the prevention of elderly falls as one of the topics of a healthy city. **Objective(s)** This study is to investigate the effects of 10-week small-ball training and 8-week detraining for prevent fall-related factors on elderly. **Methodology** We recruited 31 elderly people above 65 years old. The exercise group (n=16) participated the small-ball exercise for 10 weeks, and the control group (n=15) maintained ordinary lifestyle. The small ball training program was taught by the instructor. All subjects underwent three times functional fitness test, it is before and after the intervention period, and after detraining. Two-way repeated measures ANOVA was used to analysis the result. **Results and discussion** 10-week small-ball exercise increased the elderly's dynamic balance, agility, muscle strength and motility by 19.60%、16.54%、37.17%、13.52% and after 8-week detraining, the muscle strength and agility maintained the effects of training. **Conclusion** It means that elderly must undergo long-term exercise programs to maintain good function fitness, improve their independent living ability, and achieve better quality of life.
**Introduction** Elderlies that live alone are prone to feeling loneliness due to old age, slow movement and reduced opportunities for social participation. In 2015, the elderlies living in solitude in Taipei’s Shilin District and with depression tendencies accounted for 22.22% of the population, higher than the population of total elderlies in Taiwan. To build a “Cross-sector carers alliance network for solo living elderlies” and to develop diverse community care plans will shift focus of services to the community and boost social participation. **Objective** To lower the solo-living elderlies with depression to under 10%. **Methods** To integrate resources and build cross-department collaboration platforms and mechanism; to train service personnel for solo-living elderlies; to provide at-home medical treatment integrated with customized care services; to link various departments and organize social participation & mobility programs suitable for elderlies, including yearend hot-pot dinner parties, fall-prevention workshops titled, “Tumble Away, Grandpas & Grannies!”, and food sampling for elderlies in Shilin. **Results & Discussion** In 2017, depression tendency in elderlies was 3.95%, a decline by 18.27% compared with Year 2015. Functional fall-prevention fitness workshops as a variable have achieve favorable and distinct results with positive before-and-after measurements on cardio-pulmonary function (t = -3.48, p = .002). **Conclusion** The cross-sector collaborative care model can effectively reduce depression in elderlies that live alone.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>Creating A Better Livable Environment – Age-Friendly Field Accreditation Program of Nantou County, Taiwan, R.O.C.</th>
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<tr>
<td>Author</td>
<td>Chao-Lang Huang, Yung-Hsien Cho, Hung-En Liao</td>
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<tr>
<td>Organization</td>
<td>Nantou County Government, Taiwan</td>
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[Introduction] Nantou’s aged population has been reached 16.70% by March, Year 2018, therefore, it is imperative to enhance age-friendly environments. On the daily livings of the elderly, pharmacies, restaurants, hotels, financial institutions, and convenience stores are places most visited through elderly’s survey. Therefore, Nantou County Government prioritize those fields by implementing a age-friendly field accreditation program to meet the elderly’s needs. [Objectives] The goal is to create a better livable environment through establishing age-friendly field standards, coaching, and certification. [Method] By employing focus group method, we invited different stakeholders to develop necessary and optional age-friendly indicators for each field, including physical environment and software process. For instance, we reached agreement on accessible physical environment standards, comprising 15 pharmacies indicators, 23 restaurants indicators, 48 hotels indicators, 8 financial institutions indicators, and 31 convenience stores indicators. During the accreditation period, a written audit, followed by on-site evaluation, coaching, and a re-evaluation were implemented to accredit qualified private sectors. Additionally, occasional mystery guest audits and regular Public Official reviews were adopted to assure service quality. [Results] There has been 38 pharmacies, 7 restaurants, 10 hotels, 10 financial institutions, and 38 convenience stores certified by Year 2017, with 100.0% coverage rate of all townships. [Discussion and Conclusion] When we formulated the age-friendly field standards, not only different business characters and elderly utilization needs were considered, but also culture background and language origin. For example, most in-home seniors were cared by hired foreign workers or immigrants in Nantou County, therefore, certified age-friendly community pharmacy would provide the medicine bags with multilingual printings and image interpretation to ensure drug safety. By campaigning the age-friendly field accreditation program, we would encourage more stores to participate, developing into age-friendly shopping street, and eventually, enhance self-perceived happiness of people to achieve the vision of aging in the community.

Keywords: Age-Friendly, Barrier Free Environment, Accreditation, Community-based Health Promotion, Accessibility
Abstract Title
Hardware and Software Enhancement: Providing Senior Residents with a Barrier Free Keelung City

Author
Yen-Ching, Liang, Yuan-Liang, Chang, Yi-Wei, Huang, Yi-Che, Chien, Chun-Yu Liao

Organization
Department of Exercise and Health Promotion, Chinese Culture University, Taipei, Taiwan

The introduction:
In response to the aging population in Taiwan, there is an urgent need to provide elder pedestrians with a barrier-free environment. In response to each kind of management process, central and local governments shall be in charge of formulating and implementing dedicated policies that contribute to a barrier-free environment.

Objective:
In order to achieve a barrier-free environment for senior pedestrians in Keelung City, a senior-friendly environment is created to allow better conveniences and reduce traffic injuries to the elderly.

Methodology:
Interdisciplinary cooperation mechanism was used in this project, A committee containing a wide array of functional agencies including public work department, transport & tourism department, industry development department, police department, and administrative department of Keelung City Government. They worked together to take various measures such as project coordination, overall environmental integration, hardware facilities & software policies, and education promotion.

Results and Discussion:
1. To create Barrier-Free Environment for Pedestrians: Barrier-free corridors were established to connect different facilities such as park and harbor, thus providing citizens a great space for leisure and entertainment.
2. To setup Friendly Market Environment: Internal parking facilities, elevators, barrier-free ramps, and barrier-free toilets were established within the market while external environment, pedestrian crossing, and traffic signals were further improved outside the market to provide pedestrians with a friendly market environment.

3. Senior residents were welcomed to participate in a traffic safety program to obtain the right concepts through relevant activities and website announcement.

Conclusion:

Under interdisciplinary cooperation, we see things from elder residents' perspective to provide them with a barrier-free, senior-friendly, and recreational environment of high quality.
Taoyuan City Remote Area (Fuxing District) Long-Term Care Requirement Survey

Te-Wen Lin, Wen-Yen Wang, Po-Wen Su, Hsing-Hui Lin, Nai-Tzu Liu

Taoyuan Healthy City Promotion Association, Taiwan

The introduction
Fuxing District is the only area in Taoyuan City designated for the indigenous people, mostly comprised of the Atayals. Due to the rapid aging of its disabled population, the district is in dire need of a long-term care system.

Objective(s)
To understand the situation, proportion, and long-term care requirements of the disable population in Fuxing District.

Methodology
The parent group of the survey is comprised of households registered and living in Fuxing District of Taoyuan City. The survey adopts a structured questionnaire approach for quantitative studies targeted at adults over 20 years of age to understand the situation, proportion, and long-term care requirements of the disabled population in Fuxing District. The survey further compares the longterm care services currently available to assess the district’s long-term care resources and the direction of future resource developments.

Results and discussion
The survey shows a disabled population of 23.7% among the residents of Fuxing District. The most-demanded type of long-term care services is homecare services (84.8%), followed by culinary services (80.3%); and the leastdemanded service type is small-scale multi-functional services (70.9%), followed by family caregiver support service centers (68.4%).

Conclusion
The survey compares the long-term care resources currently available with the actual demands of the residents of Fuxing District of Taoyuan City to assess if the provided services and model satisfy the demand, in order to improve upon the existing services for the users.
**Abstract Title**  
The Effectiveness of Intervened "LOHAS Fall Prevention Class" for Pre-frail Elderly in Taipei

**Author**  
Meng-Hui Lin, Yu-Fang Tung, Meng-Hui Lin, Yi-Hsin Che, Hsiu-Lian Lin, Shier-Chieg Huang

**Organization**  
Department of Health, Taiwan

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**The introduction** "Weakness" poses a great threat to the life function and quality of the elderly. **Objective(s)** To improve physical fitness in the early stage of pre-frailty through exercise and nutrition intervention to reduce disability and death.  

**Methodology** The elderly assessed as pre-frail by SOF were referred by the Health Service Center to the LOHAS Fall Prevention Classes held in 12 areas. The 10-week, 2-hour weekly multi-athletic exercise course, oral health care and nutrition course were intervened, accompanied by before and after fitness testing. **Results and discussion** A total of 2,725 participations were recorded. All participants progressed in the items such as BMI, sitting in a fixed position for 30 seconds, arm curling, 2-minute spot stepping, forward bending in a seated position, standing on one foot, and getting up and walking around 8 feet, which were statistically significant according to the sample t-test. **Conclusion** The empirical study confirms that the intervention course can improve the physical fitness of pre-frail elderly. Intervention services are suggested to continue.
Healthy Cities for People

Abstract Title
Health living for the elderly using an innovative model of age-friendly shopping mall

Author
Kuo Hsien-Wen, Lin Li-Ling; Chang Li-Ching; Huang Chen-Kuan; Wang Hsien-Li

Organization
Yang-Ming University, Taipei, Taiwan

Background: Over the past decade, the percentage of older adults above 65 years of age as part of the population of Nangang, Taipei City has grown from 10.6% to 13.6%, reflecting the rapid aging of the demographic structure. Among these older adults, the prevalence of chronic and dread diseases has risen to 84.8%. Previous surveys revealed that poor fitness, insufficient information, and lack of interest have all been adverse factors that prevent older adults from engaging in health-promoting activities.

Purpose: To establish an age-friendly shopping mall to be accessible for older adults and increase active and healthy aging by providing them with health-promoting activities and environment.

Method: A largest shopping mall in the district was selected for the representative “age-friendly shopping mall” study. Interdepartmental and cross-disciplinary collaborations were conducted to provide information and to encourage participation in community-based health-promoting activities.

Results: Satisfaction with age-friendly policies, resources, and support rose significantly (24.6%). Additionally, the number of older adults engaging in health-promoting activities rose by 26.2%. Moreover, 86.8% of older adults using community cloud-based information applications for health measurements considerably increased using the program. Compared with the previous year, the shopping mall’s revenue increased by 13% in 2017.

Conclusion: Empirical evidence from the creation of age-friendly shopping malls should be extended to other shopping malls, supermarkets, or even to other industries. It can increase the social participation of older adults, improving their physical, mental, and social wellbeing and helping them to achieve healthy aging.
Healthy Cities for People

Abstract Title
The elderly living alone health promoting lifestyles – A case study of Wanhua district Taipei city

Author
Chu Pei Chi

Organization
Wanhua District Health Service Center, Taiwan

Introduction: Understanding the living condition and lifestyle of minority elders for health promotion

The purpose of this study was to investigate the health-promoting lifestyle and related factors among independent-living elderly. 292 effective survey were collected from elderly people who live in Wanhua district in Taipei City. Several research tools were used in this study including demographic variables questionnaire, self-perceived health status scale and health-promoting lifestyle profile. The results are as following:

1. In the perspective of health-promoting lifestyle among those research targets, nutrition scored the highest then followed by spiritual growth, stress management, interpersonal relations, physical activity, and health responsibility. The lowest score falls into the category of health responsibility indicates that those elderly participants in this research have self-perceived health status of above average.

2. There is a positive correlation between self-perceived health status and health-promoting lifestyle among survey participants

3. The most prominent predictor variables are socio-demographic factors including age, marital status, financial status, number of children and self-perceived health status. This can be used to explain a 28.9% of the variation in the health-promoting lifestyle.

The result of this study suggests that healthcare and social service providers should offer various aspects of health-promoting resources to those dwelling elders based on the evaluation of their interpersonal needs in health, in order to improve their health and life quality.

Keywords: dwelling elderly people, health-promoting lifestyle, and self-perceived health status.
Seeing Vitality of Senior Citizens in Nantou—A Case Study of Community Golden Population Strategy Promoted by Nantou County Government

Hsiang-Chun Lin, Tsung-Chien Chen, Hung-En Liao

Cultural Affairs Bureau, Taiwan

Since 2013, Nantou County Government has attempted to promote “Community Golden Population Survey” through “Community building project” in compliance with administrative strategy of Ministry of Culture. The Project aims to encourage senior citizens to participate in art and cultural events in communities for enriching their lives, to increase their willingness of doing volunteer for contributing to society, and to reproduce the value of senior citizens’ human resources.

The Project was divided into four stages to achieve its execution goal: 1. “Planning stage—revising guidelines for recruitment,” 2. “Guidance stage—interdisciplinary resource exchange and guidance,” 3. “Survey stage—filling out the golden population survey form designed by Cultural Affairs Bureau;” 4. “Result application stage—usage and promotion of golden population database.”

Finally yet importantly, qualitative and quantitative analysis is carried out for the “Community Golden Population Form” through the interview method and questionnaire survey. Its quantitative result found that 286 senior citizens returned for the project each year on average, showing that the number of golden population engaged in the community building work drastically increased under the active guidance of the county government. The qualitative result showed that senior citizens claimed that participating in the Project brought positive influence to their lives. In the future, the county government will successively complete the operation and promotion of the “Golden Population Database” in hopes of developing a benign cooperation circular mechanism between senior citizens (golden population) and communities.
### The Promotion of Senior Citizens Learning in Taoyuan City Project

**Author**
Lie-Jhih Hsu, Pei-Chun Tung, Shao-Han Liang

**Organization**
Taoyuan Healthy City Promotion Association, Taiwan

#### The introduction

In the 13 administrative zones in Taoyuan, senior citizen learning centers are established respectively, offering senior citizens learning activities and courses. It helps them to become more active regardless of their age. Learning happily, they will forget their ages.

#### Objective(s)

1. Integrate diverse learning channels to satisfy diverse requirements in learning by senior citizens.
2. Promote living quality of senior citizens, it helps them promote their interrelations and maintains their sovereignty and dignity.
3. Establish a lifelong learning network to uphold their rights of lifelong learning, it aims to construct an age-friendly city.

#### Methodology

1. The centers, in ordinary time, plan courses suitable for senior citizens and actively establish diverse learning centers to construct an age-friendly learning environment.
2. Integrating the communities’ resources, learning centers are generally established to provide senior citizens learning centers for their convenient learning services.
3. Hold accomplishments presentation of senior citizens learning to promote exchange and learning among the centers.

#### Results and discussion

In 2017, Taoyuan had reached the goal of “one senior citizen learning center in one community” with the total of 13 senior citizens learning centers. Different courses were opened and more service points were opened to provide senior citizens to learn...
in the neighborhood so that they can learn happily and continue to participate in social life. **Conclusion**
To cope with the coming of the aging society in Taiwan, Taoyuan City is going to promote senior citizens learning and provide them with diverse channels of learning to construct an age-friendly society.
Healthy Cities for People

Abstract Title
Building A Healthy City Together

Author
Te-Wen Lin, Shih-Yuan Zeng

Organization
Taoyuan Healthy City Promotion Association, Taiwan

The introduction
With the change in population structure, Taiwan has become an aging society. Hence, encouraging seniors to participate in voluntary services has become a prominent trend to ensure their post-retirement social interaction. Volunteering not only keeps them physically and mentally fit, but also elevates their self-worth and helps pass down their valuable life experiences.

Objective(s)
Our department has already established a senior volunteer team with a view to encouraging enthusiastic seniors to join in voluntary services. By means of the team, the Department expects to integrate social resources, the conception of “sports for all” and the virtue of voluntary services.

Methodology
The senior volunteer team of the Department consists of 36 members, who help at the Department’s help desk, take shift duty at affiliated Sports and Recreation Center, offer activity support, etc. To recognize and commend our volunteers’ efforts, eligible volunteers are nominated every year for commendation according to the guidelines of the Ministry of Health and Welfare, Taoyuan City’s Department of Social Welfare, and Department of Sports. Awardee statistics in 2017 and 2018:

1. 2017 Volunteer Service Awards: 1 outstanding volunteer award, 1 silver award, and 4 bronze awards.
2. 2018 Volunteer Service Awards: 1 Songbo award, 2 contribution awards, 8 gold awards, 5 silver awards, 7 bronze awards, and 11 best spirit certificates.

Results and discussion
In addition, to enhance professional competence of our volunteers, fundamental, special and professional development (PD) training is offered every year, as well as
study visits, and yearend dinners. Statistics of the activities held in 2017 and 2018 as below:
1. Two special and PD training sessions in 2017.
2. Four fundamental, special, and PD training sessions in 2018.
3. Study visits to the Shihsanhang Museum of Archaeology, Fort San Domingo, and 2018 Taoyuan Agriculture Expo were held for volunteers in 2017 and 2018, with 60 participants in total.

**Conclusion**

Through the “Building a Healthy City Together” initiative, volunteers are expected to live a rich and meaningful senior life through their involvement in voluntary services.
Abstract Title | Easy Go: An All-Round Tax Service System for Senior Residents
Author | Yen-Ching Liang, Chiu-Hsia Ou, Su-Luan Chien, Jo-Yu Lin, Yih-Jin Hu
Organization | Department of Exercise and Health Promotion, Chinese Culture University, Taipei, Taiwan

The introduction:
Since many elder residents have problems with transportation due to their natural aging, it is especially inconvenient for them to go to an official counter and receive a tax service. Therefore, it is needed to provide elder residents with even more convenient and diversified taxation channels.

Objective:
In response to such problems as tax avoidance and tax payment that most senior residents concern about, we should create a perspective model to resolve their tax problems.

Methodology:
We have built a age-friendly service counter to provide senior residents with smart Zenbo tax paying services, tax avoidance packages, and tax examination services. It was also a unit that provides a single window for individual tax services. Additionally, "Keelung Evergreen Tax Service Website" and "Keelung Tax Service Online" were also established to provide an internet platform for online tax declaration and mobile tax payment. By providing interinstitutional tax examination action car and village head tax service station, we also visited the city community to provide TAX GO tax service.

Results and Discussion:
In 2017, we disclosed our overall performance tax services for senior, including 50,141 online tax declarations, 1,417 visits to Keelung Evergreen Tax Service Website, 14 home services and 59 cases resolved at village head tax service station.

Conclusion:
We will continually upgrade interinstitutional mechanisms, expand the service network for the elderly, and provide high-quality, comprehensive tax services for the elderly.
The Hsinchu County has a total population of 550,000 with about 190,000 households, where the population are coming from the southern Fujian, Hakka and aborigines, creating a diverse ethnic structure with unique cultural features. In 2014, Hsinchu County achieved the goal of “one township, one friendly city for the elderly”. Since then, it has been devoting itself to promoting the education for the elderly, hoping to encourage senior citizens to actively participate in learning activities through the implementation of service program for the elderly. At the same time, it encourages the senior citizens to impart what they have learned at the learning center to the students in their community or elementary and middle schools in the country. In addition, it promotes the marketing of the learning center for senior citizens so as to enhance people’s understanding of senior citizen's learning. Through various community bases, many school initiatives and learning centers, the expansion of the notion of innovation and service, the concept of intergenerational co-learning is deepened so as to achieve inter-departmental cooperation and the implementation of sustainable maintenance. The main axis of curriculum design is to serve for the elderly sharing learning, enabling the senior citizens, students and volunteers to improve their own life quality through the cultural understanding. Since 2016, the curriculum has been planned 29 times, with about a total of 1,280 participants. We hope to enhance the sense of gratitude of schoolchildren, strengthen the generational affection between grandparents and grandchildren and highlight the meaning of the education for the elderly under the guidance of life experience of the elderly. And, we will integrate the local resources near to learning centers to expand the field where senior citizen can serve so that they can apply what they have learned to the society.
In accordance with Health Promotion Administration, the Ministry of Health and Welfare, Taiwan answered the initiatives of “Active Aging” and “Elderly Friendly City” advocated by the World Health Organization in 2010 and was committed to creating Taiwan as a friendly society for aged people. This plan is launched by the Hsinchu County Government to respond to the aging society. Based on local resources and collaborating with professional teams, the government makes “Respect the elderly, Active aging and healthy aging” as the main points and strives to build a friendly aged-community. All the efforts are made to build a livable and healthy bamboo county and improve the quality of life of the elderly. The Hsinchu County Government selected three distinctive communities as the demonstration sites. First, surveys of community needs and resources are conducted to have a clear idea of the real needs of local elders and available resources. Then, combined with local development associations, the government establishes a partnership with the inter-departmental office of the Hsinchu County in local medical resources. The results of the fitness of the silver-haired groups show that there are statistically significant differences in some items, including “cardiopulmonary function”, “dynamic balance”, “lower leg muscle strength”, “upper Limb muscle strength”, “upper limb flexibility” and “Static Balance”. It indicates that the elders have significantly improved their physical fitness after a series of activities. The project puts an emphasis on understanding the needs of aged citizens and establishing cross-departmental cooperation mechanism to explore the future development of friendly elderly community in Hsinchu County. It also emphasizes its impacts on local communities and local elders then inspires other communities to join the efforts with friendly aged-community in Hsinchu County to create an elderly-friendly city.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>Construct Hands-On Training of Senior Service for Public Sector Employees</th>
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<tbody>
<tr>
<td>Author</td>
<td>Yu Yun Shen, Siou-yue Chen, Chieh-hung Cheng, Jui-hua Shih, Shu-li Cheng</td>
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<tr>
<td>Organization</td>
<td>Civil Service Development Institute, Tainan City Government, Taiwan</td>
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**INTRODUCTION**
In Tainan City, talent training for “Public Service for Senior Citizens” is deployed to solve problems including occupational competency gaps due to the increasing demand of senior service and poor service due to generational differences. Data management is then used to introduce policies or services that meet the needs of senior citizens.

**OBJECTIVE(S)**
(1) Improve the quality and quantity of senior service personnel
(2) Localization of senior service
(3) Enhance policy service with data management

**METHODOLOGY**
(1) Cross-boundary participation in training planning.
(2) Introduce job training, workshops, and VR experiences to help trainees develop empathy.
(3) Use big data as a bridge to connect government staff and students to collaborate on project development.

**RESULTS AND DISCUSSION**
(1) Train personnel to provide high-quality senior service
(2) Produce senior service programs based on local conditions
(3) Provide transportation service for senior citizens

**CONCLUSION**
The talent training of “Public Service for Senior Citizens” encourages public sectors to create a good blueprint for senior service, building a happy and livable city.

**KEYWORDS** public service for senior citizens, talent training, localization
## Abstract Title

Construction of Day Care Center Based Community Rehabilitation in Remote Towns

## Author

Chou, Shih-Hsuan, Wang, Ju-Chieh; Hsin, Chin-Hsiang; Liu, Feng-Chin; Huang, Chien-Ting

## Organization

Public Health Bureau, Taitung County, Taiwan

### Introduction

The total population of Taitung is 219,467 people. Among them, 34,250 people are aged above 65, and 17,267 people have physical or mental disabilities. The county’s average aging index is 130% (123% in 2017). The county has a long and narrow topography (176km), its hilly land takes up 93.8% of the county’s total area, and railways and buses are the main forms of transportation, making it a major challenge for rural people to seek medical resources.

### Objective

In 2016, the community rehabilitation model was first promoted. Through the day-care center venue as well as the involvement of physicians, caregivers and other staff, the accessibility of services to the public was enhanced, while boosting the local long-term care staff empowerment.

### Methodology

Provide transportation to community elders to the day-care center to receive services. Therapists impart rehabilitation techniques through the one-on-many approach.

### Results and Discussion

The number of people receiving community rehabilitation services increased from 75 persons in 2016 to 636 persons at the end of 2017. The 2017 questionnaire survey (78 effective questionnaires) shows the rates of the general public’s satisfaction towards the therapist’s rehabilitation technique instructions, services, and traffic convening are 91%, 88%, and 90% respectively.

### Conclusion

Through community rehabilitation, elders’ willingness to leave the house was enhanced, thus achieving community participation, reducing the risk of elders’ disability and dementia, reducing subsequent long-term care costs and input, and putting limited resources to proper use.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>The Study of Service Education Experience of The Senior Volunteers.</th>
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<tr>
<td>Author</td>
<td>Ching-Hsiang Chen, Hsiou-Ping Chen, Wan-Xin Xu</td>
</tr>
<tr>
<td>Organization</td>
<td>Tainan Education Bureau, Taiwan</td>
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</table>

**INTRODUCTION**

The purpose of this article is to explore educating service experiences of the senior volunteers. It has been very common for the elders taking care of young children. It exists a generation gap between young children and the seniors. The main purpose is to emphasize on the value of the seniors: the reservation of tradition, the interaction and mental health between generations, the build-up of self-confidence and the value of self-existence. In this way, it becomes a vital topic for children to learn how to concern and respect others.

**OBJECTIVE(S)**

To enrich and broaden the life experience is workful for the seniors to rebuild self-confidence. And getting social support, the seniors can be respected and rebuild self-recognition. By improving the interaction between the young children and the seniors, the seniors can lead a more positive and active life. It would be a good recycle from the young children and the seniors.

**METHODOLOGY**

The period of exploring: let the senior volunteers step out of the classroom and be the consultants for school-based and localized curriculum. The period of deepening: let the senior volunteers be strong supporters for school curriculum. The period of rebuild: the young children and the seniors involve in the community activities.

**RESULTS AND DISCUSSION**

The educating service volunteers improve the interaction and enhance self-confidence successfully. The seniors’ participation rate is raising.

**CONCLUSION**

To evoke the emphasis on the seniors’ needs. With the help of the educating service volunteers, the young children’s view have been broaden and enriched. The two generations have cooperate to create common wonderful memories and values of feeling love.

**KEYWORDS:** The senior volunteer  localized curriculum  volunteer service
### The Effectiveness of the Customized "Health Prescription" Intervention for Senior Citizens - Taking the Beitou District of Taipei City as an Example

**Abstract Title**

The Effectiveness of the Customized "Health Prescription" Intervention for Senior Citizens - Taking the Beitou District of Taipei City as an Example

**Author**

Chun-Liang Wu, Shu-Chen Hsu, Shu-Hua Hu, Chien-Lin Lai

**Organization**

Beitou District Health Center, Taipei City, Taiwan

**Introduction:** In response to the rapid aging phenomenon, this plan aims to provide group intervention courses of customized "Health Prescription" for senior citizens.

**Objective:** Using comprehensive assessments of physical fitness, reflective health assessments, scale of health-promoting lifestyle, and holistic aging scale, senior citizens’ overall health can be significantly promoted through the six fundamental aspects of lifestyles, namely, sports, nutrition, health responsibility, interpersonal relationships, stress coping, and self-realization.

**Methodology:** This study produced 31 valid samples with the research design including the single group, pre-test (T1), post-test (T2) and post-posttest (T3, 3 months after the course) that lasts for 6 months. Emphasis was placed on the eight weeks of intervention course (2 hours per week), and its effectiveness was also evaluated before and after the intervention.

**Results and discussion:** After administering the standardization of health-promoting lifestyle, the post-test of the six aspects and the aging attitude (the average of T2 and T3) showed a positive increase compared with that of the pre-test (T1). The variances found were as follows: Sports $\Delta 5.45\%$, Nutrition $\Delta 1.63\%$, Health Responsibility $\Delta 1.65\%$, Interpersonal relationship $\Delta 7.09\%$, Stress Coping $\Delta 4.64\%$, Self-realization $\Delta 3.45\%$, Aging Attitude $\Delta 2.81\%$, respectively. When using one-way ANOVA (repeat measure) to analyze the sample variances among the three groups, no difference was found within the group and a statistically significant difference between the groups ($p<0.001$) was present.

**Conclusion:** The study supports the claim that the implementation and follow-up of "health prescriptions" can effectively enhance the healthy lifestyle of the senior citizens, and its benefits continue even after three months of the courses.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>Growing Aging Society - From the Perspective of Elderly People</th>
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<tr>
<td>Author</td>
<td>Chun-Cheng Chen, Jeng-Yi Wang</td>
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<tr>
<td>Organization</td>
<td>Gueiren Land Office of Tainan city government, taiwan</td>
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**INTRODUCTION**

In order to responded the trend of aging population structure and improve citizens’ understanding of the land administration duty and function in the Gueiren Land Office of Tainan city government that provide localized age-friendly service and Integrated communication platform. This can be promoted by Gueiren Land Office cooperating with civil society in the community.

**OBJECTIVE(S)**

We aim to satisfy the needs of the land administration business for the 23,948 elders and their families. Therefore, we want to provide aged-friendly application form to assist our elderly people with age over 65 by coordinating Land Office in the area with Gueiren Land Office. Finally, our purpose is deliver age-respect and age-friendly multivariate services which are combined current public policies in our government.

**METHODOLOGY**

As it is indicated in the title, our methodology was conducted in two main methods. Firstly, use multiple media to increase participation rate in T-Bike riding - iron horse action. Secondly, customized public sector services in regards to senior citizens.

**RESULTS AND DISCUSSION**

This results demonstrate three things. Firstly, we initiate inter-sector cooperation and Integrated communication platform to promote an age-friendly activity by conducting one stop service system. Secondly, we initiate T-Bike for senior citizens to ensure citizens understand our policies and are enable to discuss in the media. Finally, we achieve Tainan city administrative policies, which are area integration and equality by perfecting interaction and effectiveness of inter-sector.
CONCLUSION

Gueiren Land Office try to satisfy the needs of senior citizens, try hard to break through the limitations of the current public service system by connecting government and private resources. This is important because we want to ensure healthy Cities for healthy lives and promote wellbeing at all ages.

KEYWORDS: Age-friendly, Local Government Affairs, EAP Staff Assistance Program, Public Bicycles
INTRODUCTION
As human’s physical functions gradually decline with age, the convenience and safety of mobility is particularly important for elderly people. Have been implemented include comprehensive examinations of the urban environment, promotion of elderly-friendly charity stores, establishment of community care stations, construction of accessible roads and streets, and provision of numerous elderly-friendly services. The objective of these measures is to provide elderly people a safe environment where they can enjoy outdoor activities and feel the warmth of people, satisfy their needs for outdoor mobility, and ultimately increase their willingness to go outdoors.

OBJECTIVE(S)
To encourage elderly people to go outdoors, improve their physical and mental health, and utilize the existing public transportations in Greater Tainan Area, planned a number of tour routes suitable for elderly people and designed a folding tour leaflet in a way that is friendly to the eyes of the elderly. Elderly people who are 65 of age or older and currently registered as a resident of the city are eligible for free bus rides. Through the free bus ride policy, the city government attempts to increase elderly people’s social participation and willingness to join outdoor activities.

METHODOLOGY
On the folding tour leaflet for elderly people, large fonts and navigation maps are used, the locations of toilets are specially marked, and an introduction to each scenic spot is provided along with the approximate time needed to walk to the spot and the information on nearby charity stores.
RESULTS AND DISCUSSION
For elderly people, Tainan City Government has planned six bus tour routes, and also released a book titled *Elderly People Enjoy Bus Tours*. So far, a total of 2,427 institutions, including 1,366 elderly-friendly charity stores, 379 care stations, and 682 community development associations, have joined this program. This program was awarded the 8th Age Friendly City – Elders-Respecting Award.

CONCLUSION
The bus tours in this program are self-guided tours. In self-guided tours, elderly people arrange tour time and destinations on their own. This can boost confidence and create a sense of achievement in them. It is hoped that elders share and exchange their experiences after each tour to encourage more elderly people to join them. The collaboration with elderly-friendly stores and care stations to provide services to elderly people has helped to diffuse an elders-respecting atmosphere in the society. This also promotes elderly people’s social participation, allowing them to feel the warmth and passion of the society.

KEYWORDS ︰ elderly people, bus tour
**Abstract Title**
Constructing a Frailty Preventative Care Network in Communities with a Focus on the Elderly

**Author**
Tai Hsu-Chih, Mei-Hui Chen, Chen-Fei Lo, Ru-Yu Huang, Chun-Rong Liu

**Organization**
Department of Exercise and Health Promotion, Chinese Culture University, Taiwan

**Introduction** In Songshan District of Taipei City, aged community, over 65 years old was about 17.07% of the population (2016). According to the survey of Health Promotion Administration Ministry of Health and Welfare, prevalence rate of frailty in the elderly is approximately 4.9% and 40% at the early stages of frailty; furthermore, falling is the 2nd major death causing by accident injury of the elderly in Taipei. Therefore, improving the preventative function of communities to prevent the risks of frailty and function loss due to ageing is a critical issue.

**Objective** The study identified the high risk groups for frailty through screening, and combined health promotion to maintain and strengthen intrinsic capacity in the elderly.

**Methodology** Since 2017, hospitals, elderly hubs in communities, community health screening activities, and case management have been combined to provide the elderly above 65 an approximate frailty evaluation (SOF). SOF > 1 point, provide health education and refer to activities of health Promotion; SOF ≥ 2 points, refer to long-term care systems or hospitals. Furthermore, providing individual health education through the exercise manual to allow autonomous health management. Finally, Organize fall prevention classes, conduct before and physical fitness tests and satisfaction surveys.

**Conclusion and Discussion** The results showed that 413 were found to be at the early stages of frailty (SOF > 1 point) (16.22%), 113 were found to be suffering from frailty (SOF ≥ 2 points) (4.44%). The results showed that physical fitness of 113 elderly pre-frailty who participate a 10-week fall prevention courses has significant improvement, and more than 90% satisfied with the courses. **Conclusion** Thus, Utilizing diverse methods to provide frailty assessment, referral, and health promotion activities through the establishment of an accessible community frailty prevention care network, delay loss of function, and extend the remaining lives of residents.
Healthy Cities for People

Abstract Title | Caring Elderly People-Friendly Tainan And Scavengers Project
Author | Yi Chen, Chia-Mo Chou
Organization | Environmental Protection Bureau of Tainan City Government, Taiwan

INTRODUCTION

Environmental Protection Bureau of Tainan City Government carrying out 「caring elderly people, friendly Tainan and scavengers」 project. We hope this project could creating friendly and safety recycling environment for elderly people.

OBJECTIVE(S)

Through this project, we want strengthen interaction between community and elderly people also making a comfortable safety recycling environment and promoting scavengers’s income and bring encouragement to them.

METHODOLOGY

We through five measures: “friendly purchase” “integrate community” “safety environment” “improve image” “recycle” also with government, enterprise and the public to achieve it together.

RESULTS AND DISCUSSION

Friendly purchase of 33 vulnerable scavengers in 13 districts of the city, a total of 31,853 kg of recyclables were acquired, it promoted their income. Be promote cases of matched to 124 people of the self-employed, every communities, apartment buildings, night markets of Tainan City and so on. To negotiate about the sponsorship of 32 enterprises, sponsored to insure 1 million personal accident insurance and negotiate with the recycling plants to give preferential selling price.

CONCLUSION

The government, folk enterprises and recycling plants jointly promote the efforts and improvements of the project and elderly scavengers, and achieved friendly environment for elderly people.

KEYWORDS: age-fridenly, elderly scavengers
INTRODUCTION
Elderly people in Baihe District account for 23.8% of the population. An effective measure must be enforced for the development of more sustainable, elderly-friendly facilities and services to encourage senior citizens to step out the confines of their homes.

OBJECTIVE(S)
A community interdine service - launched at the support of the public and private sectors - would inspire the elderly to participate in different activities and medical services, which would promote their health and improve the quality of their lifestyle.

METHODOLOGY
The District Office is in charge of a conscientious project planning process; the community would provide necessary venue and manpower accordingly. A weekday interdine service has been launched in combination with arts, health promotion activities and medical services to boost social participation of the elderly, which would help upgrade their lifestyle quality, and community services to fulfill our vision of “aging-in-place.”

RESULTS AND DISCUSSION
Since its launch, the number of participating communities in the interdine services has increased from two to 17, engaging over 200,000 diners. Voluntary regulars seen in routine community events have also exceeded 1,000. Following a facility makeover, the Baihe Activity Center has witnessed a boost in elderly interdiners’ appetite. It has also ensured a safe, comfortable activity space for senior citizens.

CONCLUSION
An intersectoral partnership between the public and private quarters can ensure a community support system for the elderly, therefore building up senior citizens’ self-esteem, sense of wellbeing, and thus delaying aging.

KEYWORDS: Aging-in-place, social participation, inter-sectoral partnership
Healthy Cities for People

Abstract Title

The Influence of Community Nutrition Education Course Intervention on the Dietary Behaviors of the Elderly - Taking Wanhua District of Taipei City as an Example

Author

Chen Yu-yi, Wang chiu-mei, Chen Yin-hsun, Wu Junliang

Organization

Wanhua District, Taipei, Taiwan

The introduction

In recent years, the proportion of the elderly population in Taipei City has increased year by year, and the proportion of the elderly population in Wanhua District has reached 15.33% in 101 years, which is the highest in Taipei City. Providing healthcare for elders within the jurisdiction is an imperative for the health units.

Objective

Design a curriculum model that promotes healthy eating for the elderly.

Methodology method

The center uses healthy kitchens and roof farm hardware equipment, and uses healthy vegetables grown on roof farms for 10 consecutive weeks (107/9/12-107/11/21) as a framework of "Mediterranean diet and national dietary guidelines." The nutrition education curriculum and the design of practical courses that enable elders to cook in healthy kitchens achieve the goal of “healthy ageing”.

Results and discussion results and discussions

Total of 29 seniors participated in the process, and the knowledge tests for the 10 lessons (mean score beforehand was 69.85 ± 10.3 and posttest was 88.33 ± 10.12); the Mediterranean diet scale (pre-test 27.71 ± 7.38, posttest average 35.43 ± 4.92) Significantly higher than the pretest; "Analysis of the results of the Simple Quality and Quantity Questionnaire for Simple Foods", where the percentage of the total
amount of the recommended amount achieved by the elders in the whole-root rhizomes and pea-fish-eggs is increasing.

Conclusion
The nutrition education curriculum model designed this time has improved the elderly's intake of whole grains and bean and fish eggs.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Factors Associated with Bicycling Environment on Quality of Life and Self-Rated Health in Case of Seoul Healthy City</th>
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<tr>
<td>Author</td>
<td>Eun Woo Nam, Ha Yun Kim, Hae Kwon Nam, Byeung Heon Yoo, Jae Won Lee</td>
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<tr>
<td>Organization</td>
<td>Healthy City Research Center, Institute of Health and Welfare, Yonsei University, Wonju, South Korea</td>
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**Introduction** In South Korea, the rate of daily bicycling was 8.3% in 2017, which is lower than other countries like Japan. The rates of obesity, heart disease, and related health problems increasing in the South Korea, health professionals, urban planners, and policy makers are looking for ways to increase physical activity by changing the urban form. Although walking is an attractive option for many reasons, bicycling offers many benefits and warrants further research. **Objective** This study examines the bicycle environment including facilities, physical environments, and disabilities for cycling and analyze the factors associated with bicycle environment on quality of life and self-rated health among citizens in Seoul. **Methodology** The subjects are citizens using bicycles in the three districts in Seoul. We conducted survey among 193 people from June 2 to 3, 2018. The Questionnaire consisted of bicycle environments, bicycle use and satisfaction, self-rated health, quality of life, and demographic characteristics. Data were analyzed using correlation analysis and multivariate regression models at 5% level of significance. **Results and discussion** First, the participants used an average of 9.1 days bicycles for one month. The purpose of using bicycle was leisure and hobby (57.4%), health care (20.2%). The self-rated health was 71.3 points on the average of 100 points scale, and the quality of life score was 6.7 points on the 10 point scale. Second, bicycling environments had a significant positive correlation with riding time, overall satisfaction, self-rated health, and quality of life. Third, multivariate regression analysis shows that bicycling environments was associated with self-rated health. Also, bicycling environments and self-rated health had a significant interaction effect on quality of life. **Conclusion** Improvement of the bicycle environments, including facilities, physical environments and disabilities may be an effective strategy for quality of life and self-rated health among citizens.

**Keywords**: bicycling, quality of life, subjective health, healthy cities, urban planning
Introduction: Environmental factors play an important role in influencing physical activity and sedentary behaviour of children. Physical activity improves the physical and mental health of children as well as their social wellbeing.

Objective:

The aim of this cross-sectional study was to determine how perceived environmental factors were associated with preschool-aged children’s physical activity and sedentary behaviour.

Methodology:

This study involved 227 children (4.0 to <7 years) from KEMAS preschools and their parents from peri-urban of Kuching and Samarahan Districts, Sarawak in 2017-2018. Socio-demographic profile, physical activity, sedentary behaviour and perceived environmental factors were obtained using interview-guided validated questionnaire. Nutritional status of the children was measured using anthropometric measurement. Data was analysed using IBM SPSS version 22.

Results:

The prevalence of physical active in this study was 46.3%, 50.7% were found to have high screen time and 40.5% with high quiet play. The prevalence of overweight and obesity was 18.1% (5.3% overweight and 12.8% obese). The top three environmental factors associated with physical inactivity were safety issue playing outdoor, usable footpaths and concern about crime issue in the area. Univariate analysis revealed that physically inactive was found higher among younger age
group, Bidayuh ethnicity, unemployed mother, father with tertiary education level and overweight and obese children.

Conclusion:

Environmental infrastructure should be considered as part of the strategies in promoting physical activity and reduction of sedentary behaviour among young children.
### Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>Healthy and Sporty Dancing to Fight Against Obesity</th>
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<tr>
<td>Author</td>
<td>Tung-Cheng Yin, Yu-Chen Chen, Tien-Wey Lin</td>
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<tr>
<td>Organization</td>
<td>Public Health Bureau, Hsinchu County Government, Taiwan</td>
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Obesity is one kind of modern civilization disease and also the origin of all kinds of illness. Through the special healthy exercise “Let’s Move Together”, the Hsinchu County government guided the people who lived Hsinchu County to practice the sport. Also, we actively promoted healthy lunch boxes and implemented health procurement. It integrated local culture and interdisciplinary cooperation and introduced local festivals in order to enhance accessibility of healthy life. By construction of health public policies, it established healthy community, hospitals, schools, workplace, etc. Through sports and foods, it developed the healthy environment to prevent the obesity. According to “five strategies of health promotion” of “Ottawa Charter”, it promoted obesity prevention project: (1) establishing the health public policy and constructing a promotion team; (2) constructing the supportive environment by media to enhance people’s sports intention and sports knowledge and capacity; (3) reinforcing the community action by various creative health activities and healthy food made with the assistance of dieticians during festivals to strengthen people’s participation; (4) developing individual skills by inviting chefs to develop healthy recipes for shops to promote featured healthy lunch boxes; (5) adjusting the service direction by collaborating conferences of different bureaus and offices to provide more complete healthy environment. According to result, percentages of BMI≥27 of residents above 18 years old in Hsinchu County reduced from 16.3% in 2015 to 15.6% in 2017. In addition, based on analysis on questionnaire on health procurement in 2016 and 2017, residents’ satisfaction with activity were 99.3% and 99.2%, cognitive rates of healthy lunch boxes were 92.4% and 93.9% and residents’ active selection of healthy food after participating in activity (change of behavior) were 95.6% and 99.6%. It reveals that residents’ cognition and selection competence of healthy food were reinforced.
The introduction In recent years, senior population in Taipei has rapidly increased. To encourage senior citizens to engage in senior-friendly sports, government should actively incorporate its resources into running a permanent operation effectively.

Objective(s) To get senior citizens to exercise, this research aims to discuss the results and experiences from Taipei City’s promoting strategies and processes of the senior sport coaching team which was formed by Taipei City as a part of senior-friendly sports program. This research also wishes to provide references for future policy making. Methodology Department of Sport, Taipei City Government set up a senior sport coaching team, with “caring, collaboration and accuracy” as its goals and “integration, proactiveness and broad acceptance” as its execution strategy, to bring energy to the elderly in Taipei City and provide high quality sport in each district.

Results and discussion In 2016 and 2017, 1006 sport coaching events were provided, 140 gyms were established, and services were provided to 25,634 people. 74.5% of participants continued to exercise regularly.

Conclusion 123 future coaches were cultivated in the program so that they would help coach the elderly in the future.
The healthy city Yangpyeong is preparing for the future through preventive policies.

Hwang, Jeonghwa

Health & Happiness Office, Yangpyeong-gun Health Center, Republic of Korea

The Yangpyeong district is implementing policies aimed toward advance preparations while looking toward the future by keeping health as its top priority.

Yangpyeong has created 7 city forests by using a forest that occupies 73% of the district and is pioneering a journey of replenishment by devising a ‘Health Tour’ that connects ‘health, relaxation, and tourism’ with a ‘Forest of Healing’ and ‘Resting Park’ by setting relaxation as their themes. Furthermore, Yangpyeong is turning itself into an eco-friendly city of the future by moving forward to reduce fine dust in business sites to keep the air clean, providing renewable energy, creating energy-independent towns, supplying electric cars along with the appropriate recharge infrastructures, and using consolidated management for its environmental pollutant emission plants.

The only ‘health welfare plaza’ in the nation is earning a good response by providing a health check service and intense exercises to people below the age of 65 who are suspected to have metabolic syndromes. The plaza is promoting mutual prosperity in the local tourism resources through the walking course included in the health tour. In addition, by expanding the fitness parks in each administrative district, citizens’ accessibility to exercise has been increased, and in the ‘U-health Zone’ the citizens can check their health themselves and have it sent to their smartphones.

The Yangpyeong district has expanded its dementia management services by constructing a new dementia care center. To facilitate elders’ participation, Yangpyeong is operating a project for the elderly, a choir composed of elderly people who live alone, and cooking classes for elder males.

Yangpyeong has invested substantial effort into the healthy lives of its citizens by being appointed as the first ‘Health Tour Special Area for Relaxation’. These preventive policies that prepare for the future will reduce the socio-economic costs that come from aging.
Chiayi is an aging city. The medical resources and park density are among the best in the nation. However, the rate of overweight city residents was the highest in Taiwan from 2008 to 2014. Therefore, it is hoped that this special project can assist the city residents to make healthier choices by integrating local resources. Changing people’s healthy life patterns and increasing energy continuously to reduce the prevailing adult obesity rate. This method supports the cross-unit integration of jobs, hospitals, schools, and communities, with enterprises, governments, schools, and people participating jointly. (1) Complete a healthy walk map for the city, create safe and convenient calorie burning markings on walkways, and designate the healthy walk month for city residents. (2) Create optical discs for grip ball aerobic sports, anti-drop exercises, and anti-aging exercise. (3) Promote 114 restaurants that provide healthy meals using turkey meat and healthy breakfasts around campuses, and add nutrition and calorie burning markings. This project aims to raise healthy sports and food accessibility, and availability, to improve the healthy life patterns of city residents. The adult obesity rate in the city was reduced from 41% in 2009 to 38% in 2015. In 2016, the adult healthy weight ranked second place in Taiwan. In 2017, both the sport engagement rate and daily consumption rate of five kinds of vegetables and fruits in the city ranked third place in Taiwan. Life patterns are the main cause of chronic metabolic diseases. Therefore, Chiayi has been calling on people to change their life patterns, with good achievements made repeatedly. We will continue to strive to practice life as “I am healthy, GO healthy” and implement the philosophy of health promotion city.
**Abstract Title**
High-Quality Manpower Reproduction

**Author**
Ching-Hsiang Chen, Hsin Chung Tu, Li Chieh Chen

**Organization**
Tainan City, Taiwan

**INTRODUCTION**

Family Education Center of Tainan City Government conducts the SWOT analysis of human resource management on the basis of the current environment and resources. And it integrates the abundant resources of volunteers and retired principals to assist the executives to promote the various programs for family education.

**OBJECTIVE(S)**

The study is aimed to effectively achieve the following goals - “to attract the family education–related talents input”, “to improve the performance of the Center” and “to assist the promotion of family education work.”

**METHODOLOGY**

With the appropriate management of the integration of human resources, we divide the talents into groups for training, and provide a perfect supervision and incentive system to achieve the goals.

**RESULTS AND DISCUSSION**

Volunteers and retired principals serve in the local communities and schools. The amount of service has raised from 30,000 to 100,000 people within the five years. Through the provision of systematic professional training in family education for external manpower, in-service training, supervision and incentives, they can enhance their personal professional abilities to provide citizens better quality of service. In this virtuous cycle, we can operate the family education–related work in Tainan City sustainably.

**CONCLUSION**

Tainan City Government uses the external high-quality manpower to assist the families in need to receive the suitable resources and lets Tainan become a truly livable city in people’s eyes.

**KEYWORDS**
Volunteers, retired principles, master principles, Family Education
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>The Development and Prospects of Taiwan Healthy Cities</th>
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<tr>
<td>Author</td>
<td>Te-Jen Hung</td>
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<tr>
<td>Organization</td>
<td>Taiwan Alliance for Healthy Cities, Taiwan</td>
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The introduction:

In accordance with WHO Healthy Cities movement in 1986, Taiwan Ministry of Health initiated community health promotion projects in 2000. In 2006, Taiwan Healthy Cities joined AFHC. Later in 2008, Taiwan Alliance for Healthy Cities (TAHC) was established. Today, there are 39 group members in TAHC (20 city-level, 19 region-level and nonprofits). TAHC has Research and Development Committee, Activity and Training Committee, Award Selection Committee and Global Liaison Committee.

Objective(s):

We want to find out the straits through different phases during the development of Taiwan Healthy Cities to set up the strategies of sustainable development of healthy cities.

Methodology:

Paper review and focus group interview of key persons in TAHC.

Results and discussion:

Taiwan Healthy Cities Alliance actively participate in the international society, including visiting health cities in other countries and attending AFHC. Ever since the 3rd global conference for AFHC, TAHC has sent 330 members to the conference,
gave 75 oral presentations, presented 154 posters and received 23 innovation awards.

In the past 18 years, Taiwan Health Cities has been through different phases, from exploration to growth, mature to stagnation. One of the biggest challenges we are facing now is how to prevent our members from losing their enthusiasm and the support from the city governments.

Conclusion:

Taiwan Healthy Cities will need to have more conversations with our international partners, gain more support from the government, cultivate better team-building skills, and to really show the value as healthy and livable cities as well as a part of the global healthy cities family.
Healthy Cities for People

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<tr>
<th>Abstract Title</th>
<th>Participatory Public Space Design strategies for Water Friendly Cities: Experiences in Bogor, Indonesia</th>
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<tr>
<td>Author</td>
<td>Raul Marino, Christoph Brodnick, Emily Payne, Harsha Fowdar, Ashley Wright, Hadi Arifin</td>
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<tr>
<td>Organization</td>
<td>Monash University (Australia) IPB (Indonesia) UI (Indonesia)</td>
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Rapid urbanization and car/motorcycle dependency in Indonesian cities are fuelling the demand for more and better designed public open space (Markosumo, 2014; Nasution & Zahrah, 2014; Setyowati et al, 2013). The walkability, use and appropriation of public spaces in Indonesia is one of the lowest in the world (Althoff et al, 2017), partly because of the lack of connected and enjoyable walking tracks and open spaces, and lack of a more sustainable urban design approach including water and vegetation that can interact as active agents for the filtering, cleaning and reduction of stormwater runoff and greywater into the main urban streams (Tanan & Darmoyono, 2017). This paper presents the experience of a participatory approach applying a Water Sensitive Design Framework (Choi and McIlrath, 2016) to the design of public open spaces in the city of Bogor in Indonesia, with focus in the active transformation of public space with Green Technology as a catalyst for community integration, environmental recovery and resilience to the recurrent floods affecting most Indonesian cities and other environmental stresses. The project will explore the current problems and potential of urban communities to be the agents of change in their areas. Alongside the community, it aims to build more water sensitive cities and neighbourhoods, using Visioning and Benchmarking strategies to understand local issues, potential for change and explore the actions needed to achieve the desired future in their communities.

**Key Words:** Water Sensitive Urban Design, Public Space Design, Participatory Design, Water Management
Chiayi performed a SWOT-TOWS analysis. It then constructed five “heart”-level propelling strategies in response, so as to orient services to let Chiayi become a smoke-free environment. To establish healthy and “good” homes that are free from smoking. The city governmental team provides top to bottom management in the manner of work division and cooperation and makes good transverse liaisons. On ordinary days, they establish a smoking-free environment and execute inspections and work bans together. With the development of information technology, Chiayi has adopted diversified smoking harm control information programs to meet the needs of the times and seek newness and change. However, traditional methods that remain acceptable to people should also be considered. Chiayi has trained medical personnel, made sufficient communication and information campaigns, encouraged medical personnel to provide consultations to city residents in their spare time, and taken other actions. There are 118 smoke-free locations in the city, and this density is the highest in the country. Inspection and guidance is reassuring. The city government makes joint inspections with the Police Bureau during summer vacations, and voluntary workers are put into use. Mechanisms for zoning and persuasion, etc. are in place to jointly maintain the smoke-free environment in Chiayi. In Chiayi, the mayor leads, with city residents participating. The two sides advance in parallel and endeavor to propel a smoke-free environment. By applying the “5-heart level” strategy, the group resources of public and private departments and non-governmental organizations, etc. are combined to jointly construct a smoke-free healthy environment. To achieve an ever-lasting smoke-free environment, the team of the city government divides work and cooperates to continue achieving excellent results. In addition to seeking funds from the central government, the city has also cooperated with local industries and associates to create sightseeing highlights and maintain an everlasting smoke-free environment.
Healthy Cities for People

Abstract Title | Clear Sky in Tainan: Protecting the Health of Citizens
---|---
Author | Ching-Fen Tsai, Mei-Kuei Chu
Organization | Environmental Protection Bureau of Tainan City Government, Taiwan

INTRODUCTION
PM$_{2.5}$ is extremely small and enters the human body easily with breath. Many studies have shown that PM$_{2.5}$ damages health, thus, our city proactively implements air pollution control to improve air quality and protect the health of citizens.

OBJECTIVE(S)
Number of days with the daily average concentration of PM$_{2.5}$ over 54 μg/m$^3$ in 2019 is 50% less than that in 2015.

METHODOLOGY
Tainan City Government collaborates with 18 bureaux to implement “Clean Sky – the Plan of Reducing and Controlling Particulate Matter”.

RESULTS AND DISCUSSION
(1) The City Government construction projects shall list in their budgets the environmental protection facilities, straw cover for bare soil and dust-proof screen. (2) Set up 14 clean air zones, and provide subsidy to either phase out old diesel vehicles or install filter on them. (3) Phase out 310,000 two-stroke motorbikes by providing subsidy. (4) Replace 64 industrial oil-fired boilers with natural gas. (5) Promote centralized burning of joss paper, and promote the idea of making donation to social welfare organizations instead of buying joss paper. (6) Education promotion: promoting air quality index plan.

CONCLUSION
Tainan City’s public and private sectors have worked together to reduce PM2.5 and helped the air quality to improve. The average annual concentration of PM2.5 has decreased from 29.3 μg/m3 in 2014 to 25μg/m3 in 2017, improving up to 14.7%.

KEYWORDS: PM2.5, clean air zone
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<td><strong>Abstract Title</strong></td>
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Jongno, as the center of Seoul, the capital city of Korea for the last 623 years after the establishment of the Joseon Dynasty, has been playing important roles as the heart of politics, economy, culture and administration. It has well preserved various historical and cultural assets including Gyeongbokgung and Changgyeonggung Palaces, Jongmyo Shrine, Sajikdqan Altar and Gwanghwamun Gate. Having a good harmony of tradition and modernity, it is always overcrowded with international and local visitors all year round.

At the same time behind the city’s spectacular side lies the dark side.: It has two slums in it. One of them is Donui-dong Jjokbangchon. Jjokbang-chon means a town where many slice rooms about the size of 2.5 to 4 square meters which the urban poor and marginalized live stand close together. Those rooms have no facilities for basic human needs: a kitchen or a restroom.

Placing its top priority on making all people in it healthy and happy, Jongno-gu has been promoting various policies and projects “to build it up as a human-centered, high-class city” for last eight years. As a part of that, Jongno-gu has propelled the project for improving living conditions in Donui-dong town and helping its residents support themselves since 2015.

This project has three main aims: making it a safe and comfortable town, offering its residents a human living space, and helping them to create their own sense of community and willingness to stand up for themselves. Jongno-gu setting up a master plan for the project in 2016, it has been implemented in cooperation with other sectors, such as the central government, civilian experts, private companies, and local residents, involved.
Jongno-gu carried out the plan to pay for 50 percent of the cost needed to have their houses repaired in order to ensure the weak and vulnerable a fundamental human living space. Also, It strived to improve the residential environment like as maintaining roads, making green resting places, cleaning out septic tanks, installing security cameras and lights. Sustainability of the effects of the project considered, it took measures to create work in the local community, such as, the project named “Mr. Hong, the town butler”, which is that some residents provided laundry services, cleaning backstreets, moving transport services for their neighbors. In addition, it ran learning and training programs for strengthening their capabilities and communicating each other. Public facility for the community will be completed this year to use it as the place which people living in the town learn, work together, and interact with each other.

Last 3 to 4 years’ efforts have gradually been making the city more healthier, equal in health and human-centered. Jongno-gu will continue to do the best to be a sustainable healthy city under the motto, “Slowly, but Properly, not just for the Product, but for the Arts.”
Abstract Title | Unimpeded Transportation—Promote Comprehensive Age-Friendly Traffic Environment in Taipei City
---|---
Author | Liao Hung-En, Chang Hua-Chen
Organization | Department of Healthcare Administration, Asia University, Taiwan

**The introduction** Taipei City continuously pursues to achieve the goals as the humanistic, sustainable and healthy city. **Objective(s)** In order to provide the unimpeded transportation for all citizens, Taipei City Government has planned the comprehensive, safe and flexible transportation vehicle services and the improved access-free facilities. **Methodology** There were 5 categories and 9 items of traffic services and facilities specially designed for the elderly citizens, including 117 Taipei MRT stations. Taipei MRT transported more than 739.99 million passengers in 2016, including 18,788,708 elder passengers. The transit stations were with age-friendly facilities and services, including buses (with step entrance, priority seats, bus stations and route maps, and service lights), taxis (senior compassion cabs, wheelchair accessible taxis) and Handicap Service buses. **Results and discussion** With diversified choices of transportation vehicles, there were various designs of transportations and route links, additional services of facilities, or improvements proposed of the free-access space for the elder to utilize independently. **Conclusion** It is hopefully to provide the traffic environment with dignity and safety for the elder, and the transportation convenience that attracts citizens to utilize, so that the elder can go everywhere without impediment.
INTRODUCTION
Motor vehicles which consume considerable fossil oil are one of the major air pollution sources. Compared to all modes of motor vehicles, bicycle is a perfect green mode with zero emission and zero energy consumption. Riding bike is also a good exercise and interesting leisure activity. Since bikes are green, slow, and safe, public sectors around the globe are keen to promote bikes to create an environment friendly transportation system.

OBJECTIVE(S)
Tainan City Government has built a public bike share system called T-Bike. The T-Bike system aims not only to reduce the ownership and utilization of private vehicles, but also to promote low carbon transportation mode.

METHODOLOGY
In the launching stage of T-Bike system, the government has applied different methodologies to encourage modal shift which is never an easy task. For marketing purpose, the system was characterized by brand, humanity, globalization, localization, and intelligence. Giving these functions, T-Bike was successfully positioned as energetic and Lohas touring for both commuting and leisure uses.

RESULTS AND DISCUSSION
The T-Bike service has extended from 10 stations, 280 bikes to 53 stations with 1520 bikes in about a year. Riding T-Bike has become a popular way of living in Taiwan.

Considerable GHG emission was reduced since T-Bike started service in 2016. It’s now a symbol of Green, health, low carbon, and environmental friendly.

CONCLUSION
T-Bike is a tailor-made bike share system especially designed for Tainan City. The system has met the historical footprint and current development of Tainan City. T-Bike has accumulated 220 thousand registered memberships with over 1 million rides. In current scale, the system has reduced 57 metric tons GHG emission per year. It is believed to be one of the most successful mode to travel in Tainan.

KEYWORDS: public bike share system, T-Bike, low carbon
In order to meet the demand for the elderly and the disabled, the city has installed bus dynamic LED displays in bus shelters and built bus-to-station voice broadcast devices and bus information blind braille boards for the first time in bus shelters. The voice broadcast or braille touch method provides a friendly waiting service for elderly and the disabled, in order to reduce anxiety when waiting, and thus increases the willingness to take public transportation. From the perspective of actual user needs, the improvement of waiting facilities for literacy and the establishment of barrier-free facilities, the bus-to-station voice broadcast device not only allows visually-impaired friends to clearly know which route the bus to the station is, but also to illiterate senior citizens. The bus information blind braille board can help visually-impaired friends understand the station’s bus routes and directionality, and reduce the chance of miscarriage.
Healthy Cities for People

<table>
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<tr>
<th>Abstract Title</th>
<th>A Loving, Barrier-Free City</th>
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<tbody>
<tr>
<td>Author</td>
<td>Shao-Han Liang, Chih-Nan Chiang, Chi-Ya Huang, Chih-Sheng Wang</td>
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<tr>
<td>Organization</td>
<td>Taoyuan Healthy City Promotion Association, Taiwan</td>
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The introduction
Due to insufficient width of road in Taoyuan city, previous road planning has mostly focused on improving vehicle traffic, which has negatively impacted the rights and interests of pedestrians.

Objective(s)
Since becoming a special municipality, Taoyuan has worked tirelessly to improve its road quality, create a barrier-free pedestrian environment, enhance the connection between cities and towns (through optimizing arterial roads), and protect the safety of all pedestrians.

Methodology
To develop a high-quality, people-oriented environment, we introduced the “Happy Pedestrians” project and formulated the “Taoyuan City Sidewalk Quality Improvement Plan,” in which all sidewalk-related issues were addressed and solved in a pragmatic manner to revolutionize Taoyuan’s sidewalks. In addition, we actively presented a veranda leveling plan to solve the problem of height differences in veranda floors encountered by major commercial districts. The goals were to increase the number of visitors, grow our economy, and elevate our competitiveness. Furthermore, to build a people-oriented urban environment, we launched the “Chang Gung Xinyi Station: Pingding A8 Transfer Station and Medical Park Enhancement Project” and “Zhongli Waterfront: Zhongli Art and Literature Commercial District Project” to create two “attractions” for the city.

Results and discussion
Taoyuan City Government formulated the “Construction Guidelines for Taoyuan City Sidewalks,” where sidewalk issues and their solutions are presented. Moreover, appropriate road profile is selected for improving sidewalks. Approximately NT$15 million has been budgeted for the aforementioned leveling plan, where leveling
operations have been completed quickly and efficiently to reduce the negative effects that they have on the environment. Today, 581 meters of veranda floors have been leveled.

**Conclusion**

Our efforts have been noted by the public, and we will continue to fulfill our vision of building “a loving, barrier-free city.”
Poster
Healthy Cities for the Planet
Disaster Preparedness and Recovery
Healthy Cities for the Planet Disaster Preparedness and Recovery

<table>
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<tr>
<th>Abstract Title</th>
<th>Establishing A Deep Safety Net of Disaster Preparedness in Luzhou City</th>
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<tr>
<td>Author</td>
<td>Hung Po-Wei, Chen Mei-Man, Lai Chun-Ta, Kuo Hsien-Wen</td>
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<td>Organization</td>
<td>Luzhou District Office, Taiwan</td>
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**Introduction** In Luzhou district, the potential for earthquakes, flooding, and fires has traditionally been high. It is necessary to formulate advance disaster prevention and response measures to demonstrate the city’s resilience. **Goal** To establish disaster mitigation and preparedness, response and recovery measures in Luzhou district in order to create a vision of city resilience. **Methods** Fishbone diagrams and SWOT analysis were utilized to indicate disaster-causing factors in order to draw up a proposal for disaster prevention countermeasures in the long-, short-, and immediate-term. Public and private resources have been combined in order to comprehensively enhance manpower, resources and capability. The No. 15 E-management system was generated in order to control all the immediate updates and information through the four stages of disaster management. **Results and Discussion** A system has been established for placing identification cards on sidewalk trees in order to receive immediate disaster updates via intelligent QR codes. Every village has formed patrol groups for inspecting and reporting. There are groups for guiding evacuations, and recover-and-assist teams to respond and provide disaster countermeasures. In this way, the city has become an autonomous disaster resistant community. In order to educate citizens and improve their disaster prevention concepts, a 39-item disaster SOP and 43 disaster prevention graphics have been created, as well as a fun board game to provide education through entertainment. Manpower resources have increased from 30 units to 326 units, and 13 disaster prevention exercises as well as 43 educational training activities have been conducted in order to improve disaster relief and prevention capabilities. **Conclusion** Luzhou District has significantly increased the people’s awareness of autonomous disaster prevention and relief, formed comprehensive disaster-prevention capabilities, and become a disaster prevention city for all its citizens.
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<th>Abstract Title</th>
<th>The Renovation Subsidy Program of Chiayi City</th>
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<tr>
<td>Author</td>
<td>Chen Kuan Chung</td>
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<tr>
<td>Organization</td>
<td>Cultural Affairs Bureau of Chiayi City, Taiwan</td>
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Since 2014, the Cultural Affairs Bureau of Chiayi City started “The Renovation Subsidy program of Chiayi City”. The applicants of program can choose from two different subsidies, house rental fee subsidy or renovation subsidy. The purpose of this series program is to help operators of the old house self-sustained and encourage operate with cultural creativity. Preserve potential historic relics or monuments by renovating old house and establish good cooperation relationship between local government and citizens. By using "Cross-sector cooperation", “Citizen Participation”, "Counseling Group", and “Public-Private Collaboration" policy strategies, the Cultural Affairs Bureau of Chiayi City keep creating healthier cultural environment for citizens, enriching tourism resources and improving cultural awareness of the citizens. The ultimate goal of this program is not to let old houses become burdens, but new landmarks of Chiayi City, becoming precious heritages of all Chiayi citizens.

Key words: Renovation, Subsidy program, Public-Private Collaboration
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<tr>
<th>Abstract Title</th>
<th>Strengthening Disaster Prevention and Rescue in Taitung For Sustainable Safety</th>
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<tr>
<td>Author</td>
<td>Huang, Yao-Te, Liao, Yu-Zhong; Lu, Tung-Fa; Kuan, Chien-Hsing; Huang, Chien-Ting</td>
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<tr>
<td>Organization</td>
<td>Fire Department, Taitung County Government, Taiwan</td>
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**Introduction** Issues including inconvenient transportation, population aging, and medical resources shortages mark the importance of disaster responsiveness to the Taitung County government.

**Objective** Reduce the impacts and damage caused by disasters and build a safe living environment.

**Methodology** We provide some methods to solve the problems, including
a) establishing a disaster prevention and rescue system by combining public sectors with private ones, b) establishing a disaster prevention and rescue office in government departments; c) building disaster-resilient communities; d) strengthening firefighting professional competencies; e) enriching the workforce and increasing the fire stations, equipment for firefighting and ambulances, and f) establishing various professional firefighting and rescue teams.

**Results and discussion** A total of 291 maps on various potential disasters were completed and 167 signs were set up to inform citizens of effective disaster evacuation and division of labor in disasters in 2011. The firefighting workforce has increased from 164 officers to 364 officers, and five fire stations and various professional firefighting and rescue teams have been established. The digital radio system was completed in 2015 to ensure flawless communication in rescues. During the 2014 Kaohsiung Gas Explosions, the 2016 Southern Taiwan Earthquake, and the 2018 Hualien Earthquake, our special rescue teams headed to the scene immediately and successfully recused eight victims. The success rate of OHCA rescue increased from 5% in 2011 to 27.56% in 2017.

**Conclusion** After promoting various disaster prevention and rescue programs, the fire department can successfully complete disaster preparedness and recovery in a surprisingly short time to turn Taitung into a safe and livable city as witnessed by various typhoon incidents.
Healthy Cities for the Planet Disaster Preparedness and Recovery

<table>
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<tr>
<th>Abstract Title</th>
<th>Seal: Essential for An Integrated Disaster Prevention and Rescue System</th>
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<tr>
<td>Author</td>
<td>Chiang, Hui-Ching; Lai, Hsuan-Kai; Li, Chien-Ying</td>
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<td>Organization</td>
<td>Taitung County Tourism Department, Taiwan</td>
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**Introduction**
Taitung has the longest coastline at 176km in Taiwan and two offshore islands, a north-south highway network totaling 170km, and vast air and sea space. A unified mechanism is required as their jurisdiction involves different departments. Due to the strong northeastern monsoon, the Kuroshio, and wriggling mountain paths, there are many disaster-prone areas facing potential severe sea, air, and land (SEAL) disasters.

**Objective**
Co-ordinate all units to head for disaster scenes in disasters; maintain post-disaster livelihood, health, medical, and social assistance services; build a system to unify responsibilities and authorities.

**Methodology**
Establish standard operating procedures (SOPs) specific to SEAL disasters for the rescue reference of all units; organize exercises and education/training activities for disaster prevention and rescue to enhance rescue capacity and responsiveness to different types of traffic accidents to protect citizen safety.

**Results and discussion**
Ranked No. 1 in group 4 at the Disaster Prevention and Rescue Business Evaluation by the Executive Yuan in 2017; arrange rescue exercises for sea and air disaster with the Coast Guard Administration (CGA), Taitung Airport, and Maritime Port Bureau to sharpen rescue skills and demonstrate rescue capacity.

**Conclusion**
After handling some vessel engine breakdown incidents, both CGA and the fire department have accumulated adequate rescue experience for the reference of other counties and cities.
## Abstract Title

Study on Disaster Prevention and Protection Strategies in Historic Districts - A Case Study of Hsinchu County

### Author

Fu-Yu Sun, I-Chen Chen, Chung-Chyi Chou, Ying-Hung Chuang

### Organization

Fire Bureau, Hsinchu County Government, Taiwan

As the social environment evolves over time, and with rising international awareness of heritage reuse and conservation, this study intends to provide a most applicable plan to construct community safety in traditional neighborhoods, and to reduce hazards of historical buildings from aging and its commercialization. This study carries out hazard assessment of historic blocks, including natural disaster risk, man-made disaster risk, and various risk parameters derived from the lack of management and maintenance. Through field investigations, this study provides an in-depth understanding of the interrelationship between the aging society and the safety of historic neighborhoods and draws up various solutions. It adopts diversified scientific methods to analyze the public safety issues and potential hazards of the old street shopping district, for example, data analysis of various hazard risks including infrared thermograph for old wire safety diagnosis, fire source use type investigation, wind disaster, flood and earthquake, etc.; it then introduces the disaster prevention and management to reduce the risk of man-made disasters, improve disaster rescue effectiveness, and ease the conflict between historical culture and technological disaster prevention, as well as the resistance of the elderly to new technologies. This study takes the historic district of Hsinchu County as an example to, after various hazard analyses, carry out daily management and maintenance guidance, install self-help disaster relief facilities, and provide disaster prevention volunteer coaching and education training. The results showed that integrating the autonomous disaster relief concept into the commercialized historical district could help quickly initiate the autonomous disaster prevention model, thereby enhancing the safety of people and cultural preservation in the event of a disaster.
INTRODUCTION
Many rural communities are located in vast mountains, seas and plains in Tainan City. The communities have various culture, agriculture and ecological resources. However, young people flow out of rural communities due to limited income. That brings about population ageing and decline of traditional culture.

OBJECTIVE(S)
The industry of rural communities can develop sustainably, and keep traditional culture to spread.

METHODOLOGY
First, Tainan City Government inventoried natural landscape, folk customs and industry of rural communities by site survey in 2013. Second, Tainan City Government found out the attractive character of each rural community to develop rural tourism and coached them to plan travel with their attractive character in 2014. Final, to make rural tourism close to rural life and local industry, the procedure was transformed to rural communities to execute further in 2015.

RESULTS AND DISCUSSION
Tainan City Government taught rural communities the mechanism of rural tourism and executed the training of guides. Rural communities were excited to discuss detail of tourism from passive to active. Rural communities also adjusted tourism through regional communication. Afterward, several rural communities produced some itineraries jointly. This policy has made rural communities to execute rural tourism themselves.

The rural tourism was initiated in 2014. At that time, Tainan City Government created 15 itineraries which attracted 492 people to participate. Nowadays, rural communities created 40 itineraries which attracted at least 5,000 people per year to
participate. Between 2014 and 2017, the average consumption amount increased from NTD 1,231 to NTD 1,276.

CONCLUSION
Rural communities execute rural tourism not only promote industry to develop but also increase the market of agricultural products. Rural tourism not only make more tourists know culture and industry of rural communities but also promote traditional culture to spread.

KEYWORDS ︰ rural rejuvenation, rural community, rural tourism, Tainan City
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**Introduction** On July 8, 2016, the level-17 strong winds of Typhoon Nepartak have caused devastating damage to the trees and plants in various parts of Taitung County. There is an urgent need for restoration planting and to accelerate the planting coverage.

**Objective** This carbon sequestration and afforestation project is executed to restore the greening of Taitung County by restoring and developing sustainable green forests. The project will double the efforts in replanting and maintaining plants for areas damaged by the typhoon.

**Methodology** Implement the county-wide afforestation and greening project and plan the afforestation, green landscaping, and conservation for all sub-regions via inventory, planning, and project management efforts. **Results and discussion**

According to the calculation method of the Energy Bureau of the Ministry of Economic Affairs, Taiwan's forests can absorb approximately 20.2 tons of carbon dioxide per hectare per year. This project is estimated to afforest 124.173 hectares and cultivate 335 thousand seedlings, which are roughly estimated to absorb 2508.2946 tons of carbon dioxide. **Conclusion** The project will increase the green coverage of Taitung County's green areas, parks, public spaces, and street trees upon completion, thereby enhancing the promotion and dissemination of the green spaces and forest resources, enhancing the quality of sightseeing recreation services, and continuing to deliver the value of green conservation. The economic benefits brought by the greening and afforestation efforts can benefit the Taitung community residents and are conducive to the sustainable development of the various tribes and communities for Taitung in the future.
Abstract Title | Tainan Low-Carbon Health City: Innovative Achievements of Self-Government Ordinance for A Low-Carbon City
---|---
Author | Mei-Kuei Chu, Yi Chen
Organization | Environmental Protection Bureau of Tainan City Government, Taiwan

**INTRODUCTION**

To effectively mitigate the impact of climate change, Tainan will be built into a low-carbon, livable city with local features. Tainan City announced the low-carbon city Self-Government Ordinance on December 22, 2012.

**OBJECTIVE(S)**

Tainan has to become a low-carbon, livable city with local characteristics to mitigate the impact of climate change effectively.

**METHODOLOGY**

Cross-sector collaboration mechanism
1. Low-carbon city management
2. Low-carbon environmental education practice
3. Low-carbon sustainable homeland certification and rating

Public participation mechanism
1. Citizen conference on climate change and adaptation
2. Public participation in the revision of Self-Government Ordinance
3. Low-carbon environmental education practice

**RESULTS AND DISCUSSION**

1. The city’s per capita greenhouse gas emissions decreased from 15.14 metric tons of CO2e/person in 2010 to 11.49 metric tons of CO2e/person in 2015, with reduction rate reaching 24%. Tainan has completed the 2001-2015 greenhouse gases inventory.
2. In accordance with Self-Government Ordinance, users with power usage contract capacity of 800 kilowatts or above, as designated by the City...
Government in a public announcement, shall select an appropriate location to install solar photovoltaic system to generate 10% of the contract capacity. Over the past eight years, we approved a total of 4650 applications with an installed capacity of over 445 megawatts, generating 576 million kilowatt hours of electricity annually. It represents a reduction of 300,000 tons of carbon.

CONCLUSION

With the formulation of Self-Government Ordinance for a Low-Carbon City, its legalization also enables the realization of environmental education. In the future, we will refer to the greenhouse gas reduction and management law to amend Self-Government Ordinance, making it more complete and allowing Tainan City to become a low-carbon city.

KEYWORDS: Self-Government Ordinance, Low-Carbon City, sustainable homeland
INTRODUCTION
How to maintain the quality of soil and groundwater to ensure the health and safety of the public has become a global concern. As the environmental protection agency, “Soil pollution management section” has been established since 2014, integrating illegal dumping and soil underwater prevention. Strictly supervising soil and groundwater pollution remediation. The site has been improved and management measures have been continuously refined.

OBJECTIVE(S)
The expected goal is to stop the pollution from the source—effectively, taking the environment as a sustainable starting point, to protect the soil and groundwater quality of the Tainan city. Making the city become more livable with a clean water and green sustainability.

METHODOLOGY
Our bureau insist the 4S concepts, including "Source prevention, Strict supervision, Sink monitoring and environmental Sustainability". And using technology tools to strengthen the management of sites.

RESULTS AND DISCUSSION
“Soil pollution management section” has been established since 2014. 47 pollution sites were deregulated, reducing the amount of polluted soil 162,526 kg; 45 illegal dumping sites deregulated, cleaning a total of 13 hectares of land. Removing 22,180 metric tons of waste and 456 barrels of drum waste. The results were highly praised in performance evaluation by the EPA over the years.

CONCLUSION
Environment, health and safety are issues closes to our life. We expect to control pollution from the source and avoid causing pollution problems that threatens the health and safety of citizens. achieving the goal of “better land, better water, whole new safe life in our loved Tainan”.

KEYWORDS: Soil, groundwater, health and safety, environment
Since the aging structure of Taiwan’s population forwards to elderly, the demand of diapers use and treatment is increasing year by year. However, diapers are the major source of wastes, where they are not easily to be degraded and are harmful to the environment. Because the discarded diapers are difficult to store and dispose, some elderly caring institutions, in order to extend the use of diapers, extend the change duration of diapers until the elderly cannot bear the discomfort. Many international researchers found the impact and damage of discarded diapers on the environment, but there is no effective solution has been proven for solving the problems. Therefore, this study hope to propose an innovated way to effectively treat and dispose the discarded diapers, and to establish a comfortable living environment for the elderly. Also, this study hopes to recycle the useful and valuable materials from the discarded diapers and lead these recyclable materials to be reuse for products. Polyethylene (PE), fluff fibers, pulp and polystyrene separated from discarded diapers are value-added materials and can be recycled. The proposal is for the collection and treatment of equipment in care institutions that meet the requirement of users. The equipment is automated and convenient for staff to operate. It is estimated that several hundred thousands of NTD can be saved per month on disposing waste. At the later stage, the public participation mechanism is adopted to encourage citizens to participate in the recycling used diapers. Creating friendly environment for the elderly is closely related to effectively solving the problem of the disposal of discarded diapers. Turning the wastes into resources can solve the problem of wastes accumulation. It can help preserve an intact and eco-friendly living environment. It also sets a good example for future generations, creating sustainable environment.
Abstract Title
Healthy Cities for the “planet”

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The Introduction
Caoshan Water Canal System nicked-named “Yangmingshan Sapphire Spring” built for drinking water source during the Japanese rule is Taiwan’s first systematically-preserved living historical monument. In echo with the International Year of Freshwater, the community residents initiated the hosting of Tianmu Water Canal Festival to advocate the protection of water resources.

Objective(s)
To galvanize the community into a consensus; to implement the cherishing of water resources; to resort to education for sustainable management.

Methods
To integrate Caoshan Eco-Cultural and Historical Alliance with over 20 public & private departments; to host Tianmu Water Canal Festival in the advent/wake of the annual International Year of Freshwater; to nurture student guides to remind people to preserve water resources and to include it in the local primary/secondary school curriculum.

Results & Discussion
Tianmu Water Canal Festival has been hosted for 16 consecutive years with participation of approximately 1,100 people from 2 secondary schools and 9 primary schools. There are more than 30 trained docents available to provide over 18 sessions of guided talks and serve over 1,500 people annually.

Conclusion
By way of street parade, guided tours and litter picking in the mountain, the Festival has become an important Shilin-specific civilian event that advocates concern for ecology while presenting Taipei as a healthy city.