

IDEA *and* ACT

Our First Motto

Imagination
Determination
Education
Application

The first letters of these four words, when read vertically, spell the word **IDEA**. We have a big idea to put forward in this small book.

Our Second Motto

Activation
Consolidation
Transformation

The first letters of these three words spell the acronym **ACT**. We believe we have a good act to follow in this book.

Both of these two words consist of seven letters, all ending in *-ion*. Taken together, we call them **THE SEVEN -IONS**. This is why the title of this little book is **IDEA *and* ACT**.

What we are looking for in our volunteer work in support of the UN's **17 Sustainable Development Goals** is the combined innerness and depth of new and exciting ideas, and the combined energy and hope that result from well-thought-through, worthwhile acts.

UNESCO's
17 Sustainable Development Goals

-  No Poverty
-  Zero Hunger
-  Good Health and Well-being
-  Quality Education
-  Gender Equality
-  Clean Water and Sanitation
-  Affordable and Clean Energy
-  Decent Work and Economic Growth
-  Industry, Innovation and Infrastructure
-  Reduce Inequalities
-  Sustainable Cities and Communities
-  Responsible Consumption and Production
-  Climate Change
-  Life Below Water
-  Life on Land
-  Peace, Justice and Strong Institutions
-  Partnership for the Goals

IDEA *and* ACT

A Selection of Articles from the
2017 Online Quarterly Newsletters of
the Friends of UNESCO Hong Kong

Edited by

RICHARD BERENGARTEN
CATHERINE NG and
SHIRLEY YUNG LEUNG



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*Is there any other formula we could use above
for a book published in Hong Kong?*

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Contents

Acknowledgements	viii
Abbreviations of Key Terms	ix
Introduction	1
The 17 Sustainable Goals: the Historical Background to this Book THE EDITORS	2
Editors' Foreword RICHARD BERENGARTEN, CATHERINE NG, and SHIRLEY LEUNG	5
Eradicating Poverty and Hunger	11
Eradicating Poverty and Income Inequality in the High-Tech Era (Part 1) ALFRED MAK	13
Eradicating Poverty and Income Inequality in the High-Tech Era (Part 2) ALFRED MAK	18
Information and Communication Technology in Reducing Poverty ROGER W. HARRIS	24
Joint Efforts to End Poverty by Transforming the City of Hong Kong SUSANNA MA	29
Human Starvation: An Irony of the Modern World ALFRED MAK	33
Protecting Our Environment	41
Isn't it time to rethink our sustainable future? ALFRED MAK	43

Forestry and agriculture in developing countries: is sustainability achievable in cost driven markets? SIMON-ALEXANDRE CHICOINE	47
Life below water KEITH MAN	53
Let's build a smarter, greener Hong Kong WINNIE TANG	57
Communion with Trees WINNIE TANG	63
IT in the Fight Against Climate Change WINNIE TANG	67

Energy, Industry and Power 71

Facts and Issues of Energy Production LOU SAI LEONG	73
Smart Grid Power Connections for Renewable Energy Development LOU SAI LEONG	79
Industrial Sustainability and Lightweighting BERNARD HON	86

Health and Well-Being 95

Implementing an 'opt-out' policy to increase the organ donation rate in Hong Kong? LAI YIN JOHN LEUNG	97
---	----

Gender Equality 101

Gender Equality: A Goal for All Genders ELIZABETH NYAMAYARO	103
--	-----

Education and Young People 107

The Creativity of our Young People WINNIE TANG	109
The 'Space-Exposed' Seed Nursery Project at CFFS TIK SHUN HO	114
The ESRI Young Scholars Award shows severe noise pollution in old districts of Hong Kong WINNIE TANG	118
A Humble Beginning: My ESD Experience HENRY LEUNG	123
'eClass': A New English Language Volunteer Portal for Hong Kong CATHERINE NG and SHIRLEY LEUNG	125

Sustainable Tourism 127

'Musts' in Touristic Development DAVID MAN	129
Sustainable Tourism in Switzerland CASEY LIU	131
The Global Geopark Network NELSON CHAN	135

Chinese Culture 141

Links between the '24 Solar Terms' and Astronomy CHI-MING SHUN	143
An Introduction to Chinese Vinegars TREVOR NG	149

Biographical Notes 153

Contributors and Editorial Team

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The editors also wish to thank the editorial advisors and assistants for the valuable work they have done and the advice they have given us in preparing this book. The names of authors and editors, with details about them, appear at the end of the book. Many others, too numerous to name, have also given their time, help, and support in the making of this book; and we thank them all.

All references to the Internet have been checked by the authors and reviewed by the editors between January and June 2018.

*Hong Kong and Cambridge
September 2018*

Abbreviations

AC	alternating current
AFCD	Hong Kong Agriculture, Fisheries and Conservation Department
AI	artificial intelligence
AM	additive manufacturing
AR	augmented reality
BCE	Before Christian Era
BCS	British Computer Society
BMI	body mass index
BPIF	British Printing Industries Federation
CAeM	Commission for Aeronautical Meteorology
CASTIC	China Adolescents Science and Technology Innovation Contest
CDF	Children's Defense Fund
CE	Christian Era
CFSS	Chinese Foundation Secondary School
CIC	Construction Industry Council (UK)
CIRP	The International Academy for Production Engineering
CITP	Certified Information Technology Professional
CITES	Convention on International Trade of Endangered Species
DC	direct current
DESA/DSD	See UN-DESA/DSD
DFMA	Design for Manufacture and Assembly
EMDC	emerging markets and developing countries
ENA	Energy Networks Association
ESPRC	Engineering and Physical Sciences Research Council (UK)
ESD	See HKESD
FAO	See UNFAO
FARC	Fuerzas Armadas Revolucionarias de Colombia (Spanish): Revolutionary Armed Forces of Columbia
FEA	finite element analysis
FRMetS	Fellow of the Royal Meteorological Society
GGN	Global Geopark Network

IDEA and ACT

GIS	geographic information system
GMP	Greening Master Plan (Government of Hong Kong)
HKCNP	Hong Kong Church Network for the Poor
HKESD	Hong Kong Education for Sustainable Development
HKSAR	Hong Kong Special Administrative Region
HKTDC	Hong Kong Trade Development Council
HKU	University of Hong Kong
HVAC	high voltage alternative current
HVDC	high voltage direct current
ICAO	UN International Civil Aviation Organization
ICT	information and communication technology
IET	Institution of Engineering and Technology, UK
IMF	International Monetary Fund
KPI	key performance indicator
kV	kilovolt (1000 volts)
LAO PDR	Lao People' Democratic Republic
LIDAR	Light Detection and Ranging
LSF	liquid state fermentation (see also SSF)
MiL	Map in Learning Program
MICE	meetings, incentives, conferences and exhibitions
MIT	Massachusetts Institute of Technology
NASA	National Aeronautics and Space Administration (USA)
NGO	non-governmental organization
NOAA	National Oceanic and Atmospheric Administration (USA)
NREL	National Renewable Energy Laboratory (USA)
PET	polyethylene terephthalate (plastic that can be recycled)
R&D	research and development
RAN	Rainforest Action Network.
RMetS	Royal Meteorological Society (UK)
RNE21	Renewable Energy Policy Network for the 21st Century
SAE	Society of Automotive Engineers (USA)
SCMP	South China Morning Post
SDG	Sustainable Development Goal (UN)
SCEPN	smart grid energy production network
SOAS	School of Oriental and African Studies (of London University)
STEM	science, technology, engineering, and mathematics
SSF	solid state fermentation (see also LSF)

Abbreviations

SWIID	Standardized World Income Inequality Database
TAP	Tree Adoption Program (hong Kong)
TEU	twenty-foot equivalent unit (for containers)
UA	University of Alberta
UN	United Nations
UNO	United Nations Organization
UN-DESA/DSD	United Nations Division for Sustainable Development
UNDP	United Nations Development Program
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO HKA	UNESCO Hong Kong Association (also known as UNESCO HK)
UNFAO	United Nations Food and Agriculture Organization
UNIMAS	Universiti Malaysia Sarawak
UNWTO	United Nations World Tourism Organization
VR	virtual reality
WBCSD	World Business Council for Sustainable Development
WEF	World Economic Forum
WISDP	World Institute of Sustainable Development Planners
WMO	World Meteorological Organization (UN)



'Sun on Water' by Yuk Kuen Chan

Introduction

The 17 Sustainable Development Goals: the Historical Background to this Book

On September 25, 2015, 193 member-states of the United Nations adopted a set of 17 Sustainable Development Goals (SDGs) as part of a new project: *Transforming our world: the 2030 Agenda for Sustainable Development*. The Goals and targets will stimulate action over the coming 15 years, in order to end poverty, achieve equality and protect our planet from climate change.

Leaders of all member countries have resolved to free the world from the tyranny of poverty and hunger; to fight inequalities within and among countries; to build peaceful, just and inclusive societies; and to protect human rights and gender equality, while protecting and ensuring the lasting of natural resources. They have also agreed to create conditions for sustainable economic growth that enable prosperity and decent work to be shared by all, taking into account different levels of national development and capacities.

The Agenda takes into account different national realities, capacities and levels of development. It has been accepted by all the countries and is applicable to all. The goals and targets are universal. They are integrated and indivisible, and they balance the three dimensions of sustainable development: economic, social and environmental.

The 17 Sustainable Development Goals are

- 

NO POVERTY
End poverty in all its forms everywhere.
- 

ZERO HUNGER
End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- 

GOOD HEALTH AND WELL-BEING
Ensure healthy lives and promote well-being for all at all ages.
- 

QUALITY EDUCATION
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- 

GENDER EQUALITY
Achieve gender equality and empower all women and girls.
- 

CLEAN WATER AND SANITATION
Ensure availability and sustainable management of water and sanitation for all.
- 

AFFORDABLE AND CLEAN ENERGY
Ensure access to affordable, reliable, sustainable and modern energy for all.
- 

DECENT WORK AND ECONOMIC GROWTH
Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- 

INDUSTRY, INNOVATION AND INFRASTRUCTURE
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- 

REDUCED INEQUALITIES
Reduce inequality within and among countries.

- 

SUSTAINABLE CITIES AND COMMUNITIES
Make cities and human settlements inclusive, safe, resilient and sustainable.
- 

RESPONSIBLE CONSUMPTION AND PRODUCTION
Ensure sustainable consumption and production patterns.
- 

CLIMATE ACTION
Take urgent action to combat climate change and its impacts.
- 

LIFE BELOW WATER
Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- 

LIFE ON LAND
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- 

PEACE, JUSTICE AND STRONG INSTITUTIONS
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- 

PARTNERSHIPS FOR THE GOALS
Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

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'Pathway 1' by Yuk Kuen Chan

RICHARD BERENGARTEN, CATHERINE NG
and SHIRLEY LEUNG

Editors' Foreword

Sustainable goals in a time of change

This book is published at a time of enormous change. It consists of a collection of articles that have been put together by the friends of the *UNESCO Hong Kong Association*, a group of people who have been working together voluntarily since November 2016 to advocate and interpret the United Nations' *17 Sustainable Development Goals* (SDGs).

These *17 Sustainable Development Goals* were first proposed by the UN in 2015 in order to motivate and activate new thinking and new action in the fifteen years until 2030. These universal, transformational, and inclusive targets were articulated to provide major development challenges for all of humanity. What was envisaged in 2015 was a new way of thinking and behaving: that is to say, nothing less than a new mindset and a new action-set for the entire world.

Our shared belief, as the authors and editors of this book, is that these goals are not only commendable and worthwhile but noble in their intentions and unavoidable in their implications. We believe that they need to be taught, learned, and understood as widely as possible across the globe. And we believe, furthermore, that we need to discover and invent ways of actually attaining them in practice – as realisable targets, achievable outcomes.

While the promise of these SDGs is high and the hope they offer breathtakingly exciting, failure to follow and implement them is so serious that it might well be catastrophic, not only for the human species but for all life on earth. So, to fulfil these goals, new patterns of action and behaviour need to be put into practice. And these need to belong not just to our political leaders and decision makers, but to all of us. That is why the SDGs need to affect us in the smallest details of our practical lives – for example, in the kinds of foods we eat, in the ways we dispose of our household waste, such as plastics, and in our attitudes towards 'others' and 'the other'.

'Others' and 'the other' mean not only our fellow humans, but our entire planet – including all the creatures of the biosphere, both zoological and botanical, the entire mineral world, the oceans, the land, and the atmosphere.

Keys to thinking and doing

Clearly, the keys to our thinking and doing – which, we believe, are also among the many keys to the meaning and practice of both working and loving – are to be found in maintaining our personal loyalties to our own personal visions, along with respect for and openness to the visions of others, while at the same time (and at all times) being attentive, in the smallest of details, to *quality*. And this means listening, looking, and learning.

More is said about the UN's *17 Sustainable Development Goals* in the statement that immediately precedes this Foreword; and its information is applied in detail throughout the book.

In harmony with these goals, our own emphasis on creativity and hope in thought, mind and deed is encapsulated in the book's title, *IDEA and ACT*. This title has been built on the foundation of our *SEVEN -IONS*, which are listed on the book's front cover and explained on its first page.

The aims and organisation of this book

The main aim of this selection of articles is to raise awareness of the importance of the UN's *17 Sustainable Development Goals*. Our hope is that it will appeal to people of all ages and all walks of life, in many countries. The book collects together more than twenty-five articles by scientists and experts in various fields. All the contributing authors are committed to working for positive change and have great resources of knowledge and experience that can help to inform and guide us – as well as our children and grandchildren.

Mentioning children reminds us that this book aims specially to attract and interest young people. The reason for this is clear: young people are our greatest agents for positive change, and our vital hope.

Apart from its introduction and concluding sections, the book is divided into eight main sections: 'Eradicating Poverty and Hunger', 'Protecting our Environment', 'Energy, Industry and Power', 'Health and Well-Being', 'Gender Equality', 'Education and Young People', 'Sustainability Tourism', and 'Chinese Culture'. Each one of these is equally important.

Most of the articles in the book have previously appeared online in the four quarterly online newsletters published online by the *Friends of UNESCO Hong Kong* in 2017, in its first year of operation, though at times in slightly different versions.

In addition to the articles, we are glad to include four kinds of pictorial image in this book. First, there are documentary photographs, diagrams and graphs, selected by the authors of the articles to clarify or illustrate particular topics and motifs. Second, we include some pointed and relevant colour-cartoons by the Indian illustrator, A. Sanjogeeta (pp. 10, 12, 42, 108, and 120). Third, we have chosen a pair of fine pictures by children who live in Hong Kong, Tsz Ching Chan, aged 10, and Man Hei Lam, aged 12, both of whom take up the magical theme of 'Life Below Water'

(pp. 54, 55). Finally, two adult artists appear in this volume. In the final chapter, which celebrates Chinese culture, the traditional image of the '24 Solar Terms' is delicately illuminated by Vicky Wong (p. 145). And last but not least, the distinguished Hong Kong painter, Yuk Kuen Chan, is represented by a selection of water-colours (pp. xii, 4, 40, 72, 96, 128, 140, 153, 161, and 165). While her delicate landscapes and images of plants clearly embody the ecological principles of this book, her skyscapes and seascapes give a perfect sense of the soul and spirit of Hong Kong: its dynamic energy, and its openness to the elements and the world.

Combining Local and International Strengths and Qualities

The book has all the strengths and qualities of specificity and particularity, of that deep and intimate knowledge of a place that only its inhabitants can genuinely possess and pass on to its future generations, their own children and grandchildren. Yet this is not to say that the book is limited by its rootedness in Hong Kong. For it is also international in all its perspectives. Such a spirit is itself entirely in keeping with the openness of Hong Kong, which is a busy, exciting, and innovative place, thanks to its long history and traditions as an international ocean port and hub of commerce and trade, and the inquisitive, hard-working, open and hospitable mentality of its citizens. The spirit of internationalism is enshrined in the contents of this book. For here will be found articles dealing with or incorporating references to issues affecting China (including, of course, Hong Kong), the Amazon, Borneo (including Sarawak), Cambodia, Columbia, France, Germany, Japan, Laos, Nigeria, Myanmar, Russia, Sarawak (Borneo), Switzerland, the UK, and the USA. In this same international spirit, some articles have been translated from Chinese and French, as well as being originally in English.

Transformative thinking and grounding in reality

Finally, since we believe in the ancient axiom that, both in the natural and elemental world and in human cognition, knowledge and behaviour, "the sum is always greater than its parts" – our hope is that by the very fact that these individual articles are gathered together in this book, the reader will appreciate that the vision underlying the *Sustainable Development Goals* is 'joined up'.

Being 'joined up' means that this vision is comprehensive, coherent, unitary, and all-inclusive. Which is to say: this vision is *holistic* – a term which applies to all the philosophies and belief systems that have underpinned the numerous phases and stages of ancient civilisation in China, over more than three millennia of continuous history.

Therefore, in emphasising the importance of joined-up or holistic thinking, not only are we reminded of the wisdom of the ancient Chinese classics, but we also celebrate the endless possibilities of life itself:

Peace is easily shattered.

Trouble is easily overcome before it starts.

The brittle is easily shattered.

The small is easily scattered.

Deal with it before it happens.

Set things in order before there is confusion.

A tree is great as a man's embrace springs from a small shoot;

A terrace nine stories high begins with a pile of earth;

A journey of a thousand miles starts under one's feet.

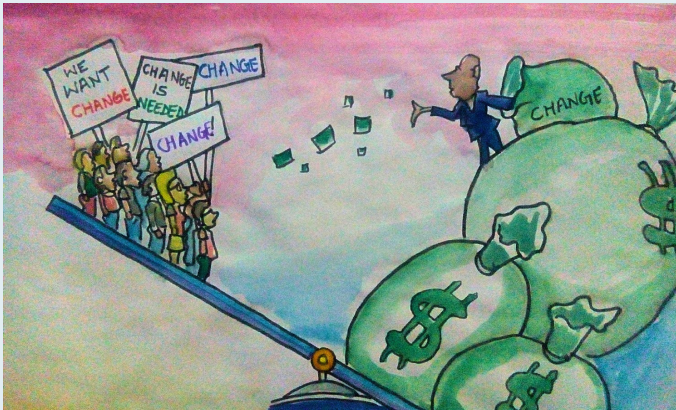
LAO TSU: *Tao Te Ching*

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'Change?' by A. Sanjogeeta

Eradicating Poverty and Hunger

Poverty is the worst form of violence.

MAHATMA GANDHI

The first Sustainable Development Goal aims to “end poverty in all its forms everywhere”. Its seven associated targets aim, among other things, to eradicate extreme poverty for all people everywhere, reduce at least by half the proportion of men, women and children of all ages living in poverty, and implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.

SUSTAINABLE DEVELOPMENT GOAL 1

It is time to rethink how we grow, share and consume our food.

If done right, agriculture, forestry and fisheries can provide nutritious food for all and generate decent incomes, while supporting people-centred rural development and protecting the environment.

Right now, our soils, freshwater, oceans, forests and biodiversity are being rapidly degraded. Climate change is putting even more pressure on the resources we depend on, increasing risks associated with disasters such as droughts and floods. Many rural women and men can no longer make ends meet on their land, forcing them to migrate to cities in search of opportunities.

A profound change of the global food and agriculture system is needed if we are to nourish today's 815 million hungry and the additional 2 billion people expected by 2050.

SUSTAINABLE DEVELOPMENT GOAL 2

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and <https://www.un.org/sustainabledevelopment/hunger/>

TIK SHUN HO

The 'Space-Exposed' Seed Nursery Project at CFSS



On the basis of a year's experience in its 'space-seed nursery', Beijing Dong Cheng District Municipal Education Commission has collaborated with the Hong Kong Institute of Education for Sustainable Development, by launching a project entitled 'Education for Sustainable Development and Biodiversity: The Space-Exposed Seed Nursery Program'.

The term 'space-seeds' means seeds that have been exposed to conditions in outer space. The first seeds were delivered to three institutions with contrasting climates, in Beijing, Hong Kong and Yunnan, in order to investigate how different climatic factors affect the growth of seedlings. Since the Chinese Foundation Secondary School (CFSS) is renowned as an 'exemplary school' in the UNESCO Project on Education for Sustainable Development in China (with more than 1000 species of plants on campus), the school was selected to represent Hong Kong to nurture the seedlings, in recognition of its dedication to promoting sustainability and biodiversity.

The 'Space-Exposed Nursery Committee' at CFSS now consists of fifty teachers and students who monitor the growth of the seedlings day by day. Supervised by senior students, all committee members record in detail how temperature, soil humidity, and other factors affect seedling growth, using sensors coupled to cloud technology. Besides the chance to learn outside the

school curriculum, the students themselves also 'cultivate' a sense of caring and responsibility. The school has successfully cultivated space-exposed cowpea plants from the third to the fifth generation over an intensive period, lasting six months.



Students carefully sowing cowpea space-seeds in the Space Seed Nursery Ground in the CFSS Environmental Trail



Students irrigating the cowpea space-seedlings on the rooftop at CFSS

A team from the school also represented Hong Kong at the Space Seed Conference in Tengchong in November 2015. This gave CFSS the chance to demonstrate how, through the Project, the school advocates biodiversity, sustainability and popular science, both on campus and in the wider community. Since then, the Space-Seed Exchange Program has been launched among the twenty-one partner schools belonging to the Aerospace Science Education Alliance, and CFSS has received another batch of space-seeds from the China Aerospace Science and Technology Corporation, which links with schools to foster aerospace education in China.



Students harvesting the cowpea space-seeds in the Biology Laboratory at CFSS

In the two years since 2015, the school has conducted a comparative study on the growth of space seeds and ordinary seeds, utilising various species. These include eggplant, tomato, red chili, and two species of cowpea. For red chili, although no obvious difference was found in length, the space-exposed specimens grew into spiral forms. For all the species investigated, the growth rate and harvesting rate of the space-seeds were twice as fast as for ordinary specimens. It is therefore thought that seeds undergo a certain degree of genetic mutation under the influence of weightlessness and direct exposure to cosmic rays in space. Furthermore, thanks to a concerted effort in promoting the project by CFSS, three other secondary schools and two primary schools have joined the Program.

In 2016, the CFSS Space-Exposed Nursery Committee took part in the 31st China Adolescents Science and Technology Innovation Contest (CASTIC). The theme was the 'Promotion of

Species Continuity' and the title was 'Green Gurus: Space-Exposed Seed Nursery Projects'. On that occasion, the school not only received high national honours in the 'Best Ten Students' Organised Activity Award', but also obtained first overall place in the 'Grand Award for the Best Students' Organised Activity Category'. CFSS hopes that China Aerospace Science and Technology Corporation will deliver more space-seeds to schools for academic studies, to echo the surge of Aerospace Science Education in China.

This article was first published in the *Friends of UNESCO Hong Kong Online Newsletter*, July 2017 (Issue 1/3). See: <http://friends.unesco.hk/en/2017jul/en/A7.html>

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Aging

Like wine, many types of vinegars can benefit from aging. Many processes happen concurrently during the aging process to improve the taste and sensory qualities of vinegar. Firstly, part of the water, alcohol and acetic acid evaporates, concentrating and sweetening the flavours. Secondly, fresh vinegar has a sharp flavour, and the aging process allows the chemical compounds created to mature and the flavours to mellow. Chinese vinegars can be aged from a few months (like rice vinegar) to decades (like aged sorghum vinegar). Traditional long-aged Chinese vinegars can be an excellent alternative to the better-known Italian *Aceto Balsamico Tradizionale* ("Traditional Balsamic Vinegar").

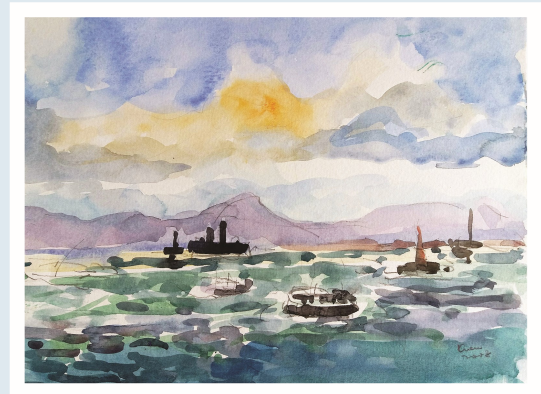
Next time, when you are presented with a bowl or bottle of vinegar, think of 'The Vinegar Tasters' (see below: 'Ancient philosophies'), appreciate the wonderful bouquet of flavours, and contemplate the wonders of natural fermentation.

This article was first published in the *Friends of UNESCO Hong Kong Online Newsletter*, July 2017 (Issue 1/3). See: <http://friends.unesco.hk/en/2017jul/en/A5.html>

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Biographical Notes



'Land and Sea' by Yuk Kuen Chan

The Contributors



NELSON CHAN graduated from Uppsala University, Sweden, with an MSc in Geophysics. He is currently working in the UNESCO Hong Kong Association. He was involved in organising the Peacemakers' Cultural Celebrations in 2017 and 2018, and in the Run for Peace Program in 2017. He is interested in science and physics.



YUK KUEN CHAN was born in Hong Kong. In 1987–89, she attended courses in Western Painting and Stone Carving at the Department of Extramural Studies, the University of Hong Kong. Her watercolour landscape paintings depict the tranquillity and harmony of the scene as well as her feelings towards it.



SIMON-ALEXANDRE CHICOINE was born in Montreal, Canada. His favourite playground as a child was the forest, situated right behind his house, where his pastimes included climbing trees, observing the life of insects, and bringing back different types of leaves to use as bookmarks. Having moved eighteen years ago to Hong Kong, his passion for nature has bloomed fully into the industry of sustainable agriculture and forestry in South East Asia, and the advocacy of green and socially responsible finance in Hong Kong. Simon has toured a series of schools in Hong Kong, delivering workshops aimed at primary and secondary students on environmental issues and animal rights. He is currently a member of the Rotary Club of Wanchai and very active with local schools' interact clubs.



Dr ROGER W. HARRIS has a PhD in Information Systems from the City University of Hong Kong. He is a systems analyst by training but has been advancing the use of Information and Communication Technologies (ICTs) for development since 1997. Mostly, this comprises setting up village-based community centres with computers and Internet, and then assisting the community to make use of the technology for promoting local development in the form of education, health, enterprise development, cultural activities, and agriculture. As a consultant, he provides services to Asian governments and aid agencies, including the United Nations, the World Bank, and the Asian Development Bank. His projects alleviate poverty by facilitating access to ICTs for under-served sections of society, and ensuring they are able to make good use of the technology according to their own development priorities and aspirations. He has worked on projects in: Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Mongolia, Nepal, Papua New Guinea, Philippines, Sri Lanka, Taiwan, Thailand, and Vietnam.



Prof. BERNARD HON is a world-renowned academic in the area of manufacturing systems and sustainable manufacturing. He has published over 130 scientific publications, and he has been actively involved with numerous national and international organisations on research assessment, fundamental and applied research, and education. He was the former Head of Department of Industrial Studies and holder of the Chair of Manufacturing Systems in the School of Engineering at the University of Liverpool, and he is a Fellow of the International Academy for Production Engineering (CIRP).



TIK SHUN HO is the Assistant Principal of The Chinese Foundation Secondary School (CFSS) in Hong Kong. He strives to make the school an effective platform to practise and promote sustainable development, to enable students to realise how human activities have impacted on the planet, and to adopt positive and sustainable behaviour from a young age.

The school has a team dedicated to promoting sustainable development on campus; and its sustainable development (green) policy has two main directions: environmental protection and the preservation of cultural heritage. With regard to the latter, sustainable development is integrated into subjects such as Humanities, Geography and Liberal Studies. As a member of the Sustainable Development School Award Program, the school received the 'Gold Award' in two consecutive years (2009–10 and 2010–12) from Hong Kong's Council for Sustainable Development. Besides, the school's UNESCO team educates students on the concept of intangible heritage. In September 2012, CFSS achieved the award for Education for Sustainable Development (ESD) Experimental Schools in China, presented by UNESCO China.



Dr LOU SAI LEONG is an expert analyst in providing nuclear measurement solutions in the fields of nuclear decommissioning and nuclear waste characterisation. She manages and executes several projects as well as promoting nuclear measurement services in Japan. She obtained her Bachelor's degree in Fundamental Physics at the Université de Paris-Sud in 2008, followed by her Master's degree in Nuclear Engineering at the Université de Pierre et Marie Curie in 2010. She then went on to specialise in nuclear physics and nuclear data measurement, and she obtained her PhD at the Université de Paris-Sud in 2013.



Dr HENRY LEUNG was born in Hong Kong and received his secondary education at St. Joseph's College. He obtained his undergraduate and medical degree from the University of Alberta (UA) and his residency training in psychiatry at the University of Western Ontario, Canada. He was appointed as the Assistant Dean, Specialty Medicine, at the Northern Ontario School of Medicine before his two-year sabbatical in Hong Kong in 2008. He is now a consulting psychiatrist with the Alberta Health Services, Canada. He is married to Karen, and his son, Jonathan, is an undergraduate student at UA. He is the Chairman of Smart Health & Wellness, a not-for-profit Christian ministry which focuses on education and health services to individuals living in Hong Kong.



Dr LAI YIN JOHN LEUNG is the Consultant Radiologist in-charge at the Evangel Hospital, Hong Kong. He graduated from the University of Hong Kong, where he earned his medical degree and was awarded the Mary Sun Scholarship, after which he qualified in radiology. As a specialist and senior radiologist, he is currently a faculty member of several professional societies, including the Hong Kong Society for Interventional Radiology, the Radiology Society of North America, and the Society of Interventional Radiology. He regularly delivers speeches on his specialist area of medicine, and in the last decade he has published twenty-five academic papers and given more than twenty speeches. Serving in a number of social organisations and non-governmental institutions, Dr Leung has also held posts such as the Senior Executive Officer of the Auxiliary Medical Service and member of the Advisory Board of the Syndrome Trust Fund. In addition, he has compiled materials for the teaching of Liberal Studies under the Senior Secondary Education Scheme.



CASEY LIU is the Chief Representative for Hong Kong and South China at *Switzerland Tourism*. She is passionate about travel and outdoor activities, including sky diving, scuba diving, skiing and tracking. In 1985, she converted her hobbies and interests into a career by running a joint travel agency. She has had more than 15 years' experience in escorting and directing European tours; and since January 1, 2000, when she joined Switzerland Tourism as Chief Representative for Hong Kong and South China, the main focus of her work has been on travel, especially to Switzerland, and promoting Switzerland as a destination of MICE (meetings, incentives, conferences and exhibitions).



Dr ALFRED MAK, is a teacher and a corrections professional. He served in the Hong Kong government for over twenty years before joining a large local non-profit anti-drug organisation, eventually retiring as its Executive Director. Since then, he has been an honorary lecturer/tutor for several local universities and tertiary institutions, where he has taught

organisational behaviour, public order, and criminal justice. Meanwhile, he has also dedicated himself to various voluntary tasks involving schools and NGOs.



SUSANNA MA is Executive Director of the Hong Kong Church Network for the Poor (HKCNP), a close network that supports various sectors to work together to improve the physical, emotional and spiritual well-being of poor people, with the ultimate goal of forming an inclusive and loving community and alleviating inter-generational poverty in Hong Kong. Susanna Ma can be contacted at info@hkcnp.org.hk and +852 36899810. See also online at: <http://www.go.asia/the-hong-kong-church-network-for-the-poor-hkcnp/>.



DAVID MAN is the eco-ethical guru for Hong Kong Discovery Limited and the ESD Program Advisor for the UNESCO HK Association. He is founder of Asia Travel Representation and Marketing (Asiareps), which plans new ideas for travelling routes and promotes agency service to the Overseas Tourism Board. In 1997, he also founded the Hong Kong Group for Promoting Environmental Awareness, and since then has served as its president. The Group's function is to promote tourism and awareness of environmental protection by means of seminars. He has hosted several competitions for students about planning the itinerary of a green trip. More than 3,000 secondary school students have taken part in these events and there have been ten prize-winners who, by visiting New Zealand and Queensland in Australia to experience Eco tours, have become ambassadors in promoting the concept of environmental protection.



Dr KEITH MAN is R&D Project Manager at Vicwood Prosperity Technology Ltd. He was awarded his PhD in Engineering Science at the University of Southampton in 2015. His research was in bio-inspired propulsion systems for Autonomous Underwater Vehicles (also known as 'robot submarine drones'). He currently works as a R&D project manager in Hong Kong for a company that finds and funds promising research.



Dr TREVOR NG is the third generation Managing Director of Pat-Chun, a well-known family business that produces sauces and condiments in Hong Kong. Trevor obtained his undergraduate degree from the University of Cambridge and was awarded a PhD in engineering from the Massachusetts Institute of Technology (MIT) for his work in non-linear fluid dynamics. Before joining Pat Chun, Trevor worked in the building industry and specialised in the design of environmental buildings. His projects included the CIC (Construction Industry Council) Zero Carbon Building in Kowloon Bay, the West Kowloon Cultural District Masterplan, and the South Beach Towers and Canopy in Singapore.



ELIZABETH NYAMAYARO is Senior Advisor to the Under-Secretary-General of UN Women, and the Head of the HeForShe Initiative. As a strong advocate for women's rights and economic empowerment, Ms. Nyamayaro has worked at the forefront of Africa's development agenda, in both public and private sectors, for more than a decade; and she previously held positions with UNAIDS, the World Health Organization, and the World Bank. Prior to her work for UN Women, she was Director of External Affairs and Policy for Africa and part of the Corporate Strategy Office at Merck. Born in Zimbabwe and by training a political scientist, Ms. Nyamayaro holds an MSc in Politics from the London School of Economics and Political Science. See also online at: https://en.wikipedia.org/wiki/Elizabeth_Nyamayaro.

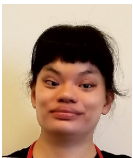


CHI-MING SHUN, JP, is Director of the Hong Kong Observatory and a Fellow of the Royal Meteorological Society (FRMetS). His additional work includes weather forecasting, seismology, time service, and numerical weather prediction. As a specialist in aeronautical meteorology, he led a team of researchers to develop the Light Detection and Ranging (LIDAR) Windshear Alerting System for Hong Kong International Airport. In the international arena, from 2003 to 2009, he served as Chair of the Asia/

Pacific regional group on aeronautical meteorology for the UN International Civil Aviation Organization (ICAO). Since 2010. He has also served as President of the Commission for Aeronautical Meteorology (CAEM) of the UN World Meteorological Organization (WMO).



Dr WINNIE TANG, JP, is an Honorary Professor in the Department of Computer Science at the University of Hong Kong (HKU). She is also one of the leading locally-bred IT entrepreneurs of Hong Kong, with over twenty years of experience in the Information and Communications Technology (ICT) industry. She is the Founder and Chairman of Esri China (Hong Kong) Limited, an international office of Esri which specialises in Geographic Information System (GIS) technology and is now among the top 50 software companies in the world. Over the years, through her services in both government and non-government organisations in Hong Kong, Dr. Tang has been active in advocating the use of technology and in sharing her views regarding the ICT industry, eHealth, environmental conservation, entrepreneurship, and smart city concepts. She is also Co-Founder of the eHealth Consortium. See online at: <https://smartcity.org.hk/index.php/aboutus/organizationstructure/bio-winnietang>.



VICKY WONG is a Hong Kong artist. Having been taught by different art teachers since childhood, she explores the potentials of many different expressive media, including Chinese ink, colour pencils, water colours, poster paints, collage, and modelling clay. As this wide variety of techniques suggests, her approach is inclusive and her vision open-minded and eclectic. With the guidance of her teachers, she has participated in the 2016 and 2018 Hong Kong 'Cross All Borders' Festival, which showcases new visual artists with disabilities. She also took part in the 2018 'Signs and Symbol' Exhibition at the Hong Kong Visual Arts Centre. Vicky Wong currently works part-time at the Nest Coffee Shop at St. John's Cathedral, Honk Kong. She is also an amateur pianist.

Editorial team



RICHARD BERENGARTEN (Co-editor) is a Bye-Fellow of Downing College, Cambridge, a Fellow of the English Association, a former Fellow of the Royal Literary Fund, and Poetry Editor of *Jewish Quarterly*. As an internationally known poet, he has written over 30 books. His writings have been translated into more than 100 languages. An expert on the English language and teaching methodologies, he has taught internationally, for the British Council, the Cambridgeshire College of Arts and Technology (now Anglia-Ruskin University), the University of Belgrade, and Notre Dame University (Indiana). He has lived in Italy, Greece, former Yugoslavia, and USA, and has worked extensively in Eastern Europe, Russia and China. His latest poetic work, *Changing* (2016), is a homage to the great Chinese classic, the *I Ching*. As a dedicated internationalist, he has received many literary prizes, the most recent of which is the Xu Zhimo Silver Willow Award for a European poet (Cambridge, 2017).



CATHERINE NG (Co-editor) was instrumental in enabling the UNESCO Hong Kong Association to set up the Friends of UNESCO HK e-Newsletter (<http://friends.unesco.org.hk>). Since January 2017, this quarterly online journal has invited academic and professional experts to publish articles about topics relevant to the UN's 17 Sustainable Development Goals. This book collects some of these articles from the first year of publication. Catherine Ng has an MBA, MSc, and Advanced Diploma in Business Studies from British universities. In 1976, she set up the Hong Kong-based clock manufacturing company Silcon Electronics Co. Ltd., with manufacturing plants in China. Under her directorship, in 1980s, Silcon won the HK Governor's Award's and was the first Hong Kong clock manufacturer to achieve ISO 9001 accreditation. A member of the BCS and of IET, and also a CITP, in the late 1990s Catherine Ng promoted usage of the Internet for the Hong Kong Watch Manufacturers' Association. Until her retirement she was external examining judge for the Systems Engineering Department at Hong Kong Polytechnic University.



SHIRLEY YUNG LEUNG (Co-editor) was raised in Hong Kong in a family of teachers and school principals. She attended English girls' schools before entering the University of Hong Kong. While studying, she worked part-time as an English teacher in a private secondary school. Planning to pursue a career in the civil service, she obtained her BA (Hons) degree in Political Science. After working as a panel chair at a secondary school, she was recruited to the Registrar General's Department as an Assistant Registrar. Following this appointment, her long career with the Hong Kong Government involved working in senior executive posts in various government departments. Sponsored to return to the University of Hong Kong to study Public Administration, she was awarded a Master's degree in Social Sciences in 1983. After leaving Hong Kong with her family for Australia in 1985, she returned soon afterwards to head the administration of Hong Kong NGOs. A seasoned administrator with a passion for teaching, she has been actively involved in volunteering work for Friends of UNESCO HK.



Dr DARWIN CHEN (Editorial Advisor) is currently President of the UNESCO Hong Kong Association. While serving as Director of Cultural Services of the Hong Kong Government in the 1970s and 1980s, he established several professional arts companies and museums. He subsequently served as Commissioner for Television and Entertainment Licensing, Deputy Secretary for Constitutional Affairs, Commissioner of Labour, and Director of Buildings and Lands. Formerly Chairman of the Hong Kong Arts Development Council, Dr. Chen serves on the board of many charitable organizations in Hong Kong and Mainland China, as well as international non-profit bodies. He is Senior Advisor to the School of Professional and Continuing Education of the University of Hong Kong and council member of the Centennial College. Awarded his Doctorate in Social Sciences (*honoris causa*) by the University of Hong Kong, he is also an Honorary Fellow of the Hong Kong Academy for Performing Arts, and of the Hong Kong University of Education, and Honorary University Fellow of the University of Hong Kong.



Prof. LEE NGOK JP (Editorial Advisor) is currently Vice-President of the UNESCO Hong Kong Association and President of the World Institute of Sustainable Development Planners (WISDP), a learned society and research institute which is a partner of UNESCO HK (see: http://www.wisdp.org.hk/president_message.htm). Professor Lee received his PhD from the School of Oriental and African Studies (SOAS), University of London. Since then, he has been awarded three honorary degrees by other British universities. His distinguished half-century career in academia has included both research and administrative positions at six tertiary institutions in Australia and Hong Kong. His wide-ranging research has focused on strategic studies, public policy, vocational education, and lifelong learning. In the last decade, Professor Lee has devoted himself to volunteer work at the UNESCO Hong Kong Association.

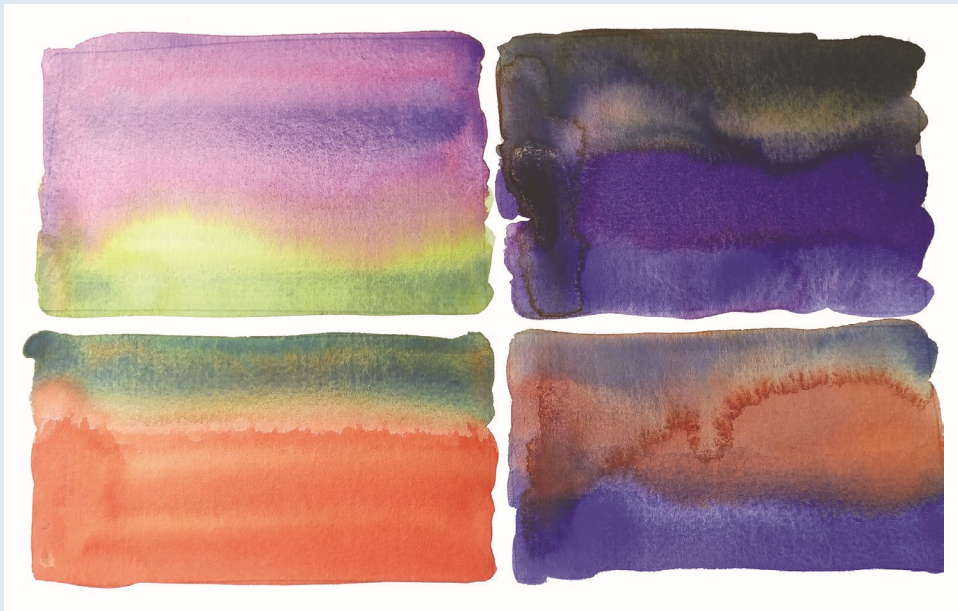


TIM LEUNG (Editorial Assistant) graduated from the Chinese University of Hong Kong with a bachelor's degree's in Social Sciences in 2016. He joined the UNESCO Hong Kong Association in its first year and since graduation has been involved in project coordination. Since January 1917, he has worked for the Friends of UNESCO HK's quarterly newsletter, and has been involved in planning and escorting for the overseas cultural and educational exchange Programs established by UNESCO HK.



DALE TOMLINSON (Designer) is an independent book designer and typographer with over thirty-five years' experience. He has worked for Penguin Books and Cambridge University Press, and has been a Research Assistant at Anglia Ruskin University and occasional visiting lecturer at Reading University's Department of Typography & Graphic Communication. His work has frequently been selected for the annual BPIF Book Design & Production awards, and he was also a prizewinner at the 39th Japan Book Publishers Association Best-Designed Books Exhibition in 2005. He is based in Cambridge.

IDEA *and* ACT



'Quaternity' by Yuk Kuen Chan