

CARITAS SINGAPORE ROUNDTABLE VI: HEAL OUR HOME

SPEAKERS



Ms Geraldine Clare Westwood

Head, Commission for Creation Justice of the Diocese of Penang

Ms Geraldine Clare Westwood, who holds an MBA, has been engaged for well over a decade in the areas of food, agriculture, food sovereignty, biosafety and climate change. She headed a regional campaign with a global NGO working on ecological agriculture, food sovereignty and the empowerment of small farming and indigenous communities in 16 countries in Asia. Ms Westwood then went on to become a Consultant on building community resilience to climate change in Asia with a German Catholic donor agency. Currently, she is the Head of the Commission for Creation Justice of the Diocese of Penang. She regularly conducts workshops on the global climate emergency, Laudato Si', creation justice and resilience. Ms Westwood is also a writer and researcher on food, agriculture, climate change and agriculture, and biosafety for several years with Third World Network, an international organisation working on equitable and ecological sustainable development.

Presentation Summary

The world is in a climate emergency! 2010 – 2019 has been the hottest decade on record with 2019 being the second hottest year at 1.1°C compared to pre-industrial times (1850-1990).

The polar ice caps are melting. Sea levels are rising. Small islands are disappearing. Ocean acidification is killing corals and reducing fish stocks. Crops are producing less. Climate disasters like droughts, heat waves, storms and floods are increasing in intensity and frequency.

The impacts of climate change are playing out—in real time—before us.

From 2008, an average of 21.5 million people have been displaced each year by climate hazards such as floods, storms, wildfires, and extreme temperatures. Climate change contributes to the deaths of more than 400,000 people a year and represents the biggest health crisis of the century.

Scientists confirm that climate change has been caused primarily by rising emissions of greenhouse gases (GHGs) which have grown to levels unprecedented in the last 800,000 years, mainly as a result of human activities such as burning fossil fuels (coal, oil, gas) for energy, deforestation, and industrial agriculture.

Dangerous climate change is already here and is set to get much worse. If greenhouse gas emissions continue at the current rate, we can hit 1.5°C of warming by 2030 with 14% of the global population exposed to severe heat waves. By 2050, 300 million people will be exposed to annual floods. Global temperatures can rise by over 4°C by 2100 if we continue with "business-as-usual".

This will be catastrophic for life on Earth.

Our children stand to inherit a dangerous and fearful world – one filled with surging sea levels; super floods, droughts, and hurricanes; killer heat waves; huge uninhabitable zones; mass displacement; worldwide starvation; poverty; disease; chaos; war; destruction; and traumatic death.

Can we avert a 4°C future? YES! But only if we act NOW!

These few years are the ONLY window we have to avoid global climate catastrophe.

Find out the facts at this Roundtable and what we can do to give our children and our Earth a fighting chance at a decent future.



Mr Joseph Teo

**Singapore's Chief Negotiator for Climate Change,
Ministry of Sustainability and the Environment**

Mr Joseph Teo was appointed Singapore's Chief Negotiator for Climate Change on 2 July 2018.

Prior to his secondment to the Ministry of Sustainability and the Environment, he held various overseas assignments in the Ministry of Foreign Affairs (MFA). He was Singapore's Deputy Permanent Representative to the United Nations in New York (2015-2018).

Mr Teo also held varied appointments at MFA Singapore, such as Deputy Director-General, Americas Directorate. He was also Singapore's Deputy Chief Negotiator for Climate Change from 2012-2014, when he helped to coordinate the work of the Inter-Ministry Negotiating Team on all issues relating to the international climate change negotiations.

Mr Teo has a Bachelor of Economics Degree (First Class) from Murdoch University, Perth, Australia, in 1992, and a Masters of Arts Degree from Stanford University, USA, in 2000.

He was awarded the Public Administration Medal (Bronze) in 2010 and the Long Service Medal in 2016.

Presentation Summary

Climate change poses an existential threat to Singapore and it will change life as we know it. It is a complex global challenge that we cannot solve alone. By planning ahead and taking collective action, we can mitigate and adapt to climate change, to make Singapore a vibrant and liveable home for our future generations.



Dr Tuti Mariana Lim

**Senior Lecturer, School of Civil and Environmental Engineering,
Nanyang Technological University**

Dr Tuti Lim received both her bachelor and PhD degrees in Chemical Engineering from the University of New South Wales, Australia. She has over 25 years of work experiences in industry and R&D activities in academia & national research institutes. She started her career at ExxonMobil Singapore as a technical engineer in 1997 and returned to academia and research in 2000. She is currently working as a senior lecturer at the School of Civil & Environmental Engineering at Nanyang Technological University. Some of her readings include Energy resources and air quality management. Tuti Lim is an active researcher in the areas of energy storage technologies, renewable resources and advanced oxidation processes for environmental abatement. She has published over 75 papers in scientific journals and 2 book chapters. Tuti has also recently started to do voluntary work at St Ignatius church through Hospitality and Green Movement Ministries.

Presentation Summary

Energy is essential to sustain life and support economic activities. Post industrial and scientific revolution, the demand for energy has increased substantially to accommodate the exponential growth in industrialization, urbanization and human population. It is anticipated that the demand for energy is expected to rise as developing countries have also started to increase their economic activities to improve their living standards. At present, the source of the energy is dominated by non-renewable fossil fuels and these fuels are also projected to continue to dominate the market over the next 20 years. Besides depleting at a faster rate, the use of fossil fuels also pose risk to human health and entail environmental degradation such as global warming and the corresponding climate change as these fuels are mostly used for combustion processes which result in the release of carbon dioxide, a major component of anthropogenic greenhouse gases.

Climate change can affect our health, agricultural productivity, forest biodiversity, water resources, coastal floodings, loss of habitat and species as well as extreme weather events. In Singapore, we will experience warmer weather, high rainfall rate and sea level rises as well as higher fluctuation in insect borne diseases such as dengue fever. As global climate change is a global issue, it requires the collaborative efforts from every nation such as Paris Agreement 2015, which aims to constrain the temperature increase to threshold of 2°C with respect to 1880 levels. Actions to address this climate change include adaptation and mitigation measures. With respect to the mitigation measures, since CO₂ represents ~80% of all GHG contribution, we need to target the sectors that can easily achieve CO₂ emission reduction through improving existing efficiency in energy use in all areas of economic activities. Other mitigation measures include developing technologies towards less or decarbonized economy and CO₂ capture and sequestration. To achieve these mitigation measures, collaborative efforts and integrated approaches are needed to link advanced technologies and their potential for emission reductions. Therefore, government, academia, industry and individuals need to work together to give sustainable solutions towards climate change due to CO₂ emissions. After all, our Earth belongs to all of us so everyone has the responsibility to safeguard our beloved home.



Ms Susan Tan

**Volunteer Leader for Environmental Protection Mission,
Buddhist Compassion Relief Tzu Chi Foundation Singapore**

Ms Susan Tan has been serving as a volunteer at Tzu Chi Foundation Singapore branch since 1996. She is heavily involved in major turns in the development of Tzu Chi's Environmental Protection Mission, from "Gurang Guni" style (1996 – Tzu Chi first recycling collection point) to today's Environmental Awareness culture. Her latest works include revamping Tzu Chi recycling centre into Eco Awareness education centre, serving to educate the public the right culture and mindset on Environmental Protection, as well as standardising all Tzu Chi operations towards promoting The Essence of Environmental Protection is Sustainability at Source with 5R lifestyle. Currently serving as Volunteer Leader of Environmental Protection, she is also working actively with external partners (government, NGO, companies, schools, recycling companies) to develop environmental awareness projects. Internally, she leads 38 recycling points and 1 eco awareness centre, which involves 1600 to 2000 volunteers monthly.

Presentation Summary

Despite global economic growth, the world is still facing a variety of challenges including climate emergency, hunger, poverty, environmental degradation, and now, a global disease pandemic that has exacerbated the suffering that humanity is experiencing.

Quoted from our Founder Dharma Master Cheng Yen: Everyone knows the root of the problem – man's relentless pursuit of profit and self-centred pursuit of earthly pleasures have continually raised the temperature of Earth's atmosphere, leading to extreme weather conditions. However, it is very hard for businesses to sacrifice profitability to reduce carbon emissions. The imbalance in the Four Elements of land, water, fire and wind arises from the imbalance in people's minds. With their deluded thinking and shortsighted seeking of instant gratification, it is as though people's minds are shrouded in a thick fog, lacking the vision to see far. By focusing only on short-term gains, we endanger the long-term survival of our human species. If mankind does not awaken to these hidden dangers, it will really be "too late" to save our Earth!

In 2014, our Founder began to call for a strengthening in environmental education, with the hope of instilling in the residents that recycling needs to start from the home. She also stresses that apart from recycling trash, what is even more important is a call to return to a simpler way of life and cultivate a harmonious state of mind – Sustainability at Source x Sustainable Lifestyle. Tzu Chi volunteers not only bring their own reusable utensils wherever they go, they also practise mindfulness in daily living that helps to reduce carbon emissions and adopt a vegetarian diet to protect life and the planet. From doing "physical recycling", they progress to a deeper practice of "spiritual recycling" (i.e. purification of the mind) at global, country and individual aspect.

Emcee and Moderator



Mr Wilson Ang

**Founding President, Environmental Challenge Organisation (Singapore),
General Manager, Association for Singapore Marine Industries**

Mr Wilson Ang has been participating in the local climate movement since 2005. He is the Founding President of Environmental Challenge Organisation (Singapore), a non-government youth environmental social enterprise that collaborates with other environmental and youth stakeholders to drive and support local and global environmental initiatives. From 2006 to 2015, ECO Singapore actively trains and mentors about 50 youth leaders, is involved in 30 youth-led initiatives, and works with 34 partners from people, public and private sectors. He has also led Singapore youth delegates to international climate negotiations. ECO Singapore has since been put on a hiatus to review on how it can contribute further to the Sustainability scene in Singapore. Besides his environmental efforts, he works as a General Manager at the Association of Singapore Marine Industries, where he actively helps transform the industry towards a new low carbon future through sustainability.