

A MINDFUL RESPONSIBLE CONSUMPTION AND PRODUCTION LEADS TO SUSTAINABLE DEVELOPMENT

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ABSTRACT

Since the 19th century, the world has seen four consecutive years of highest global temperature in records. Extreme weather events which have considerably impacted our environment and socio-economic were ranked top risks in the 2019 Global Risk Report by World Economic Forum (WEF). Whilst there had been plenty of global platforms gathering world leaders on climate change issue, the continuous rise in temperature demonstrate that just policy implementation is insufficient. It is not only the responsibility of the government to take action, but also the collective efforts of all people to combat climate change.

Beginning from grassroots movements, the Tzu Chi Foundation has involved individuals, civil society, enterprises, and decision-makers to influence on a local, regional and international level. Tzu Chi's recycling model comply with the circular economy, transforming PET bottles into eco-products, and the income generated is used to fund the global charity mission and humanistic cultural mission which brings a positive spiritual circulation impact. As natural disasters increase yearly, Tzu Chi engages in disaster risk reduction and disaster recovery based on people's psychosocial needs and develop a sustainable livelihood. In short, Buddhist

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Tzu Chi Foundation founder Venerable Dharma Master's three resolutions: to purify minds of human beings, the harmonious societies, and the free the world from disasters is aligned with the 17 Sustainable Development Goals set by the United Nations, and promoting a mindful responsible consumption and production that leads to sustainable development.

1. CLIMATE CHANGE: AN UNDENIABLE THREAT PLUNDERING THE PLANET

Since 2013, there has been a startling rise in carbon dioxide levels in the atmosphere, normal safe level of CO₂ is 250-350 parts per million (ppm), now living in a world with carbon dioxide above 400 ppm has become the norm. In January 2019, the Mauna Loa Observatory documented its highest level readings of carbon dioxide an excess of 410.5 ppm (NASA, 2019). Carbon dioxide and other greenhouse gases (GHGs) such as Methane, Nitrous Oxide and Ozone act as an insulating blanket of the atmosphere that keeps the earth warm. About 97% of the climate scientists' consensus human activity increased the emission of GHGs into the atmosphere is responsible for global warming (Cook, et al., 2016).

Since the 19th century, the world has seen four consecutive years of highest global temperature in records. Extreme weather events which have considerably impacted our environment and socio-economic were ranked top risks in the 2019 Global Risk Report (World Economic Forum, 2019). It is expected to have a negative impact on the planet including rising sea levels, pressure on water and food, human health risks and disruption of biodiversity and ecosystem. (Henderson, et al., 2017)

World Health Organization (2018) published a fact sheet clearly describing the side effects of climate change on human health including:

- Basic living conditions: social and environmental elements of health – clean air, safe drinking water, sufficient food and secure shelter can be affected by climate change.
- Diseases: it is expected that climate change can cause approximately an additional 250,000 deaths between the years 2030 and 2050.

- Financial effect: disregarding the expenses in health determining sectors such as agriculture and water and sanitation, by 2030 the main expense to health is expected to be between US\$ 2-4 billion/year.
- The weak will suffer: without assistance to prepare and respond, most developing countries with poor health foundation will battle to survive.

2. THE BOTTOM-UP APPROACH IN COMBATING THE CLIMATE CHANGE

Mitigation and adaptation to climate change can be much more effective if activities by governmental and intergovernmental bodies go hand in hand with a lasting change of attitudes by the broader civil society. Non-Governmental Organizations such as Tzu Chi Foundation can play a key role by facilitating and enhancing this process.

This becomes clear by looking at the agreements on climate change that have been achieved so far. Up to now, governmental agreements to rein in climate change have unfortunately been limited to rather decentralized arrangements which are but loosely connected to each other. The Paris Agreement seems to have mitigated this difficulty but is still far from being the strong frame for action which would be necessary to tackle climate change.

The reasons why governments are relatively slow to take up to the challenge of climate change have been investigated multiple times: a consensus seems to have formed around the idea of the governments being trapped in a 'prisoner's dilemma' (Sterescu, 2018). For every individual government, it is rational to abandon or limit climate action and reap economic benefits. No enforcement mechanisms exist to avoid such defection. On the contrary, governments must cater to various interests, not all of whom may see climate policy as a priority.

As the threat of climate change threatens the livelihood of Earth's inhabitants, it is not only the responsibility of governments to take action but also the obligation of individuals, civil society, private sectors, and decision-makers to combat climate change. To support

and complement governments where government action alone may be insufficient, we need a broad-based movement rooted at the very basis of society. But the problem is this: Even if concern about climate change is widespread, the issue currently has little potential to mobilize large parts of society. This is because the process of climate change itself is amorphous, as are consequences. People fail to relate the abstract process to their daily lives and do not see weather-related natural catastrophes as results of climate change.

Climate change is unrelated to the individual identity of most people. While nationality, class and political affiliation have a powerful influence on individual self-conception and actions, climate change hardly does.

To overcome these hurdles, it is necessary to be active at the very basis of society. The aim should be to build up institutions for a sustained social effort to counter climate change. Just to have a common understanding is insufficient. To make a significant change in tackling the planet's climate change problem, there is a pressing need for consensus and decisive action.

For over half a century, Tzu Chi starts from grassroots movements by encouraging civil society to live in harmony with nature. Since 1990, Tzu Chi has been conducting programs in environmental protection in response to global climate change (Lee & Han, 2015). These have enabled it to build up an ideal recycling system. This system aims to enhance environmental protection and offer possibilities and facilities for civil communities to practice and implement a sustainable lifestyle.

With environmental protection at the heart of its operations, Tzu Chi relentlessly seeks new ways to reduce its carbon footprint. Although government action for mitigation and adaptation is crucial for our future, as a non-governmental entity, Tzu Chi's approach to climate change mitigation targets the individual, helping countries reach the Nationally Determined Contributions from the bottom-up. Through thorough education on carbon-reducing lifestyle changes and demonstrating the impact of individual action on the environment, Tzu Chi catalyzes collective climate action in the communities it serves, inspiring and empowering individuals to move from apathy to action.

3. RECYCLING VOLUNTEERS COMMITTED TO THE RESPONSIBLE CONSUMPTION

Actions speak louder than words, in 1990, Dharma Master Cheng Yen gave a speech calling the public “to do recycling with our clapping hands”. Since then, recycling volunteers have committed in 17 countries with 561 *Eco-Awareness Recycling Centers* and 10,267 *community recycling points* that managed by more than 106,299 volunteers daily regardless of age and educational level (Buddhist Tzu Chi Foundation, 2017). The recycling volunteers face the dirty trash with humbleness and bend down to care for our earth.

Tzu Chi’s *Eco-Awareness Recycling Centers* and *Recycling Points* are an ideal model to link up any community of residents with environmental protection. Located within easily reachable distance, the platform provides direct interactive relationships to influence locals and making behavior change. By engaging in recycling activities, everyone learns to separate recycling materials to help conserve resources. Additionally, it raises the awareness of participants about the importance of changing their own lifestyles with the aim of reducing and avoiding waste. Just imagine: each community is like a tree, every family is a branch and every individual is a leaf. Tzu Chi *Eco-Awareness Recycling Centers* are the tree trunks which transmit environmental awareness to mobilize people.

The production of plastics made from petroleum by-products reaching 8,300 million Metric tons (Mt) produced to date and in year 2015, only approximately 6,300 metric tons of plastic waste had been generated and only 9% had been recycled, 12% was incinerated causes air pollution and mostly 79% of plastics waste was found mismanaged which causes pollution to the landfills (Geyer, et al., 2017). Tzu Chi recognizes the often overlooked impact of plastics on climate change. The production of plastics, made from petroleum by-products, uses roughly 4 percent of global oil production and emits roughly 5 ounces of CO₂ for every 1 ounce produced. Each year, 46 billion tons of carbon dioxide are emitted from the production, transportation, and consumption of plastic water bottles alone. More than half a billion bottles are recycled through this program, reducing 34,000 tons of GHGs.

The goal 12 of Sustainable Development Goals (SDGs) set by the United Nations is to ensure sustainable consumption and production patterns. Tzu Chi not merely collecting trash and recycling, but align with the SDGs goal 12, which the processed bottles are transformed into textiles, woven into high-quality usable products for humanitarian aid and daily use, such as blankets, clothing, luggage, and office supplies. Since 2006, over 100 million blankets made from these textiles have been used in Tzu Chi's humanitarian response operations.

Recently, The United Nations Environment Programme (UNEP) recognises and affirms Tzu Chi's 30-year efforts in protecting the environment and accredited Tzu Chi with observer status on 9th January 2019 to allow the organisation to speak out on the topic of environmental protection at the general assembly. Currently, Tzu Chi is one of the 514 NGOs that have been accredited the status (UNEP, 2018). As a UNEP meeting observer, Tzu Chi's responsibilities and scope of work include the followings:

- Provide effective environmental protection plans and strategies from the perspective of an NGO and invite governments and NGOs to jointly work with the Foundation to implement environmental protection programmes.
- Bring up the implications of policies related to environmental protection and call on the United Nations to take effective actions that benefit the environment during the general assembly.

4. SUSTAINABLE DEVELOPMENT THROUGH THE CIRCULAR ECONOMY AND SPIRITUAL CIRCULATION

The motto of recycling volunteer in environmental protection is "Turn trash into gold, gold into love, and love into pure streams and flowing throughout the world." This concept encourages a mindful sustainable model which the infinite loop embrace the first circle of Circular Economy and the second circle of Spiritual Circulation as shown in Figure 1.

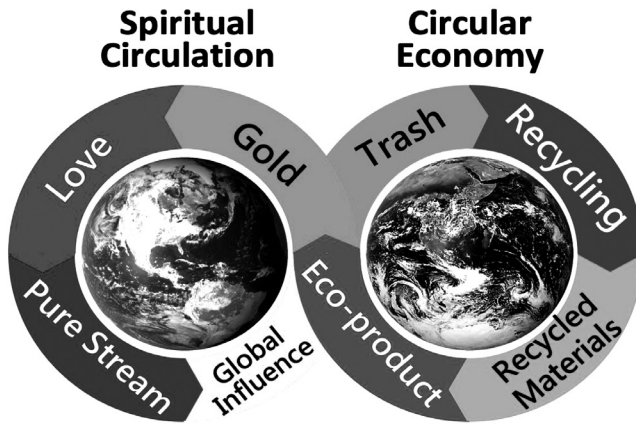


Figure 1: The Tzu Chi Responsible Consumption model of Circular Economy and Spiritual Circulation

4.1. Circular Economy

One of the most daunting challenges the world faces today is the global waste problem, responsible for a plethora of negative impacts on all life and the environment. To bring awareness, as well as to empower and shift the consumption habits of individuals towards a more climate-friendly alternative, Tzu Chi reutilize trash disposed by the consumer and transformed into Eco-products such as blankets, garments, and stationeries using the collected recycled plastic bottles, which in turn becomes utilized during humanitarian aid assistance missions. With the Circular Economy cycle, Tzu Chi ensures that the natural resources exploited by human can be in use for as long as possible.

Through the Trash into eco-friendly products initiative, Tzu Chi has, in addition to addressing environmental and waste issues plaguing communities, empowered those left behind to stand at the forefront of the fight for a sustainable living, providing education, space, and resources to change makers of all ages to learn through action.

4.2. Spiritual Circulation

Through community-building initiatives, Tzu Chi inspires global citizens to achieve a sustainable and responsible waste reduction.

By selling Eco-products from recycled goods, Tzu Chi utilizes the revenue gained from selling recycled materials to fund and

support DaAi Television, a non-profit television station focused on spreading virtuous humanistic culture through broadcasting programs that highlight the positive work being done around the world by Tzu Chi volunteers. Through the power of broadcasting, Tzu Chi raises individual awareness on restoring the planet's health and continuously establishes community-based recycling programs focusing on Refuse, Reduce, Reuse, Repair, Recycle (5R), promoting a lifestyle of sustainable and responsible consumption.

Tzu Chi's *Eco-Awareness Recycling Centers* and *Recycling Points* around the world serve as platforms for citizen engagement and participation in recycling work, with a particular focus on engaging those typically left behind, such as elderly volunteers, strengthening community environmental awareness, fostering social capital, and initiating individual behavior change.

5. FORGING AHEAD TOWARDS MUTUAL ACTIONS

Tzu Chi is focusing on the following three major directions and encourages everyone to implement into daily life by:

- Environmental protection
- Ethical Eating
- Support 5R (Refuse, Reduce, Reuse, Repair, Recycle)

Starting from grassroots movements to support the Post-Paris Agenda in mitigation and adaptation, Tzu Chi involves civil society, enterprises and decision makers to effect on a local, regional, national and international level.

Why can Tzu Chi's recycling model especially help in improving mitigation practices? The main asset of Tzu Chi is that individuals can personally get involved in recycling work. In a further step, they may often even become grassroots environmental teachers. Many of the volunteers are able to transform profound environmental knowledge into their daily lives. Hence, they are able to share knowledge on environmental protection with others. In support of the 'Advancing towards Zero Waste' declaration, as well as the 'Ocean-Climate Action' agenda, Tzu Chi commits to bringing its recycling program expertise and 'know-how' to those most impacted by ocean plastic pollution, small island nations.

Tzu Chi grassroots movement and community-based solutions not only offers mitigation action on a personal level but also, and more importantly, raises awareness of the issue through collective involvement. It is human behavior which determines the market trends, and the demands of the people which sway the governments to take action. It is people which form governments, and people who build businesses. As a non-profit non-governmental organization based on faith, Tzu Chi believes that by shifting the human perception of value, society as a whole can be transformed.

In short, the Tzu Chi's complete recycling system can be applied globally and the host countries and communities who implement this system can benefit in many ways. The system allows for more direct investment, technology transfer, higher rates of employment, improved health care and increased tax revenues which is aligned with the "Responsible Consumption and Production" of SDGs' Goal 12. For the sustainable development of our planet, Tzu Chi is ready to help other stakeholders to leverage off our experience and make it happen.

6. THE FOUR MISSIONS AND EIGHT FOOTPRINTS OF BUDDHIST TZU CHI FOUNDATION

The Buddhist Tzu Chi Foundation is an international humanitarian NGO with Special Consultative Status in the United Nations Economic and Social Council (ECOSOC). It is operated by a worldwide network of volunteers and employees, with over 10 million members in 58 countries. Up to the present day, Tzu Chi has delivered relief to those in need in 98 countries. Tzu Chi Foundation's "Four Missions" consist of Charity, Medicine, Education, and Humanistic Cultural. Furthermore, considering ongoing efforts in Bone Marrow Donation, Environmental Protection, Community Volunteerism, and International Relief, these eight concurrent campaigns are collectively known as "Tzu Chi's Eight footprints". Tzu Chi's four missions contribute to the 17 SDGs.



Figure 2: Tzu Chi Four Missions contribute to all 17 SDGs

Crucially, Tzu Chi faces the global issue to question individual lifestyle and ethics. Thus, it aims to overcome policy dilemmas as well as individual unwillingness to become engaged in the movement against climate change. If we lead a simpler life, we will help reduce the amount of garbage and protect our environment, thus improving the quality of life on earth. We should have a grateful heart toward our planet which provides for us and sustains us. It is a simple concept, but if we all put it into practice, the impact can be profound and far-reaching. The following diagram gives a broad overview of Tzu Chi’s environmental protection campaigns.

The Tzu Chi Foundation Founder Dharma Master Cheng Yen has three resolutions: may all minds be purified, may there be peace in the community, and may there be no disasters in this world. Let us inspire more people to join in the environmental effort by protecting our environment, and making the planet a safer and better place to live.

Always remember: We have only one earth, let us coexist with Mother Earth.

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