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FEATURED ARTICLES

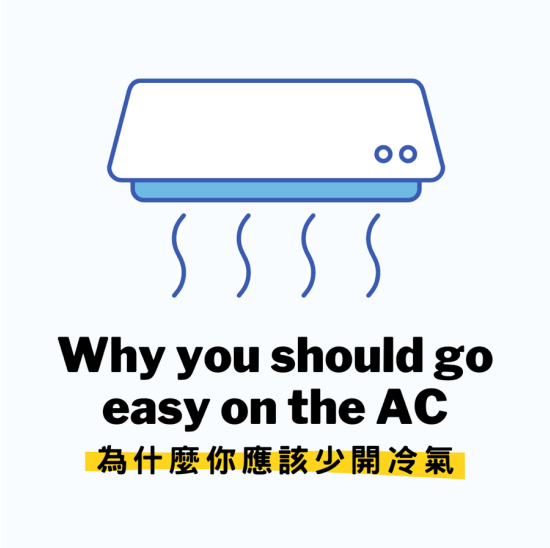
CHINA TOURISM DAY: GREEN DEVELOPMENT, BETTER LIFE

Since 2011, May 19 is the "China Tourism Day" every year. This year's theme is "Green Development, Better Life". In response to the "China Tourism Day", 69 scenic spots and museums in Shanghai launched half-price activities to attract tourists.

Macau is famous for tourism. Since Macau's tourism industry has been severely hit by the epidemic, how to achieve high-quality development of the tourism industry in the long run is more worthy of attention. The government expects that there will be between 6 million and 10 million tourists visiting Macau this year. It is necessary to adhere to the concept of green development and allow people and the environment coexist harmoniously, so as to provide residents and tourists with a quality life and travel experience. Meanwhile, it can be useful to learn from other cities in terms of tourism strategies and develop innovative tourism products to boost the tourism industry.

Climate Literacy Series - Why You Should Go Easy On The AC?

It's 30C outside and you can't wait to turn on the AC the second you get home. But did you know that at the same time you are cooling down, the Earth is heating up? We probably have heard the advice of keeping the AC temperature at 25C or not using it at all before, but not everyone knows the reason besides conserving electricity.



Depends on where and how electricity is produced, consumption of energy can be a major contribution to global warming. For example, electricity production and transmissions accounted for ~4.2 million tons of CO2-equivalent (CO2-e) emissions in Macau during 2019.

Unless we switch to renewables entirely, the advice is legitimate in terms of mitigating greenhouse gas emissions. Although it is called CO2-equivalent emissions, it is not just CO2. During the process of electricity production and transmissions, other gases like methane (CH4), nitrous oxide (N2O), and sulfur hexafluoride (SF6) are also emitted and they are way more powerful than CO2. For instance, SF6 that is used in electrical transmission is 23,500 times more powerful than CO2 in warming the Earth and will linger for 32 times longer. Using CO2 as a baseline, emissions of other gases are calculated as the equivalent amounts of CO2, hence the unit CO2-e. When you turn on the AC, another powerful gas is also seeping out quietly. That is the hydrofluorocarbons (HFCs), which are the refrigerant that makes the air so cool. They are about 1,300 times as potent as CO2. Fortunately, there are now many alternatives to make cooling cooler (climate-friendly) in development. But as the logic goes, collectively lowering our energy demand should be the priority regardless

Climate Literacy Series: What We Eat Matters

One-third of the global food production may collapse if we leave greenhouse gases (GHG) emissions uncut. The solution? May lie in how we choose our food.

From farm to table, our food releases GHG at every stage. Agriculture accounts for ~12% of the global GHG emissions each year. This is because industrial agriculture practices, such as monoculture farming and Concentrated Animal Feeding Operations require lots of energy to maintain and are fossil-fuel intensive.

Unsustainable agricultural practices - along with other human activities - drive climate change, which in turn threatens the stability of food production. If we fail to limit GHG emissions and thus global warming to 1.5 - 2C, one-third of the global food production will fall out of the safe climate conditions that the current system is accustomed to. We might not be farmers or corporate executives to change the way food is produced now, but there are ways we can help in our everyday life.

Here are two suggestions:

1. Reduce our carbon footprint, which includes buying local and seasonal food that doesn't take a lot of energy to grow and transport.

2. Reduce food waste as much as possible. By simply buying and ordering what we need, we can reduce the energy and emissions associated with food production and transportation

Recycling food waste can be very useful

In 2019, the amount of municipal solid waste in Macau exceeded 55 metric tons, of which more than one-third was food waste. Due to the high moisture content of the food waste, it will affect the incineration temperature of the incinerator and increase the pressure on the facility, while disposal of it in the landfill will generate a large amount of greenhouse gases and highly polluting sewage.

Therefore, it is very important to reduce and recycle food waste. Generally, the processed food waste will be turned into compost/feed/soil amendment for municipal greening and plant fertilization. Food waste can also be processed by anaerobic decomposition technology to produce biogas (renewable energy similar to natural gas). The electricity generated can also be used for facility operations. The four recycle stations under the Environmental Protection Bureau have been collecting household food waste since April, with an upper limit of 3 kg each time.

Food waste recycling steps:

1. Sort out the food waste that can be recycled
2. Drain the water
3. Put it in a container
4. Send to the recycling station

Note: If you can't send it to the collection point in time, remember to refrigerate it to prevent food rot~ Want to know how to classify food waste?

Plant-based Diet and Sustainable Development

Last month, the Macau Vegetarian Culture Association (ACVM) released a research report on vegetarianism, which further highlights the significance of the report against the backdrop that vegetarianism is gaining attention and becoming a social trend.

Over 30% of respondents are on plant-based diet on a regular basis

According to the data released by Euromonitor International, a UK-based market research firm, "flexible vegetarians" account for 42% of the global population. According to the research report published by ACVM, 31% of the respondents said they have the habit of consuming vegetarian products regularly, and 1.3% of the respondents are vegetarian, which shows that the vegetarian population in Macau is not a minority. When it comes to the reason for plant-based diet, 60% of the respondents said it was because of their personal health. As for the reasons why other respondents did not eat vegetarian food, the most common reason was that vegetarian food was not delicious enough (18%).

On the day when the research report was released by the ACVM, I felt that there is a growing awareness of plant-based diet in the community, and was pleased to see some restaurants trying to introduce vegetarian menus, which may be just one more step for the restaurants, but has great significance for vegetarians. The perception that vegetarian food is not tasty enough could be changed if one learns more about it and try it, and one will find that vegetarian food is not boring, but very tasty and healthy.

Plant-based Diet and Sustainable Development

Sharing the concept of Sustainable Development

Another statistic in the report is also worthy of attention. On the issue of plant-based diet, 42% and 41% of the respondents somewhat/completely agreed that "raising livestock and poultry increases greenhouse gas emissions, so meat aggravates the greenhouse effect" and "raising livestock and poultry consumes a lot of land and water resources" respectively. It should be noted that among regular vegetarians, 47% and 44% of them agreed somewhat/completely respectively. This shows that regular vegetarians have a higher level of agreement on the relevant issues.

Both the overall respondents and the regular vegetarians agree with more than 40% of the Sustainable Development issues, which reflects the respondents' recognition of the concept of Sustainable Development, which is a major global issue, and many countries are actively making efforts to achieve the United Nations' SDGs. In the Report on the Work of the Government this year, China has clearly stated to work hard in achieving carbon peaks and carbon neutrality. As a member of the global community, China will make its best contribution to the global fight against climate change with practical actions.

As the trend of plant-based diet keeps advancing, the Macau residents' understanding of plant-based diet will become more comprehensive, and the flexible vegetarians in Macau will further expand. Looking ahead, I hope that the government and all sectors of the community can think one more step forward before studying policies or making decisions and give more consideration to the vegetarian community in Macau, to promote the culture of green diet and provide greater assistance to the progress of Sustainable Development.

Sustainable Development is not just a slogan, it is in every choice we make in our daily lives.

(Published in Click2Macau)

The world is on the brink of a climate crisis, what is our best hope?

Carbon dioxide in the air is at a record high! Some climate scientists suggest that if we want to preserve the "normal" environment that our civilization has accustomed to, the CO2 level must remain under 350 ppm. That level has reached 420 ppm today, the highest in human history. Once passed 450ppm, the warming level can melt the entire Antarctica. What can we do to stop this?

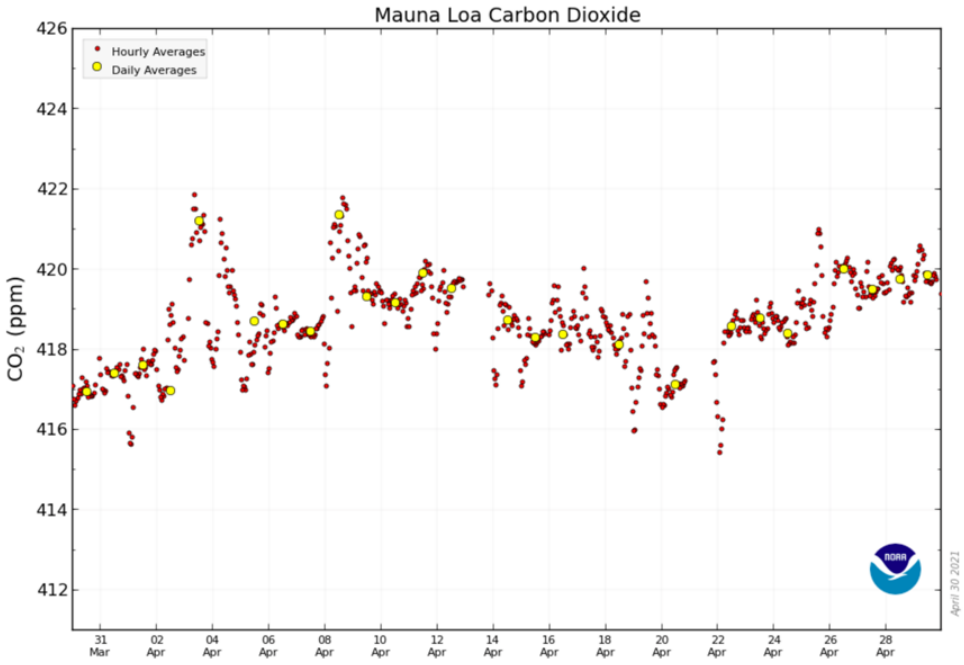


Photo 1 Average carbon dioxide in the air in April recorded by Mauna Loa Laboratory (Source: Mauna Loa Laboratory)

Since the ratification of the historic Paris Agreement in 2015, countries have made carbon reduction pledges to limit global warming to 1.5C. To meet the target, countries must balance their greenhouse gas emissions with the removal of the gases from the atmosphere. This is also where net-zero emissions sprung from.

The world is on the brink of a climate crisis, what is our best hope?

By logic, if your bathtub is overflowing and flooding the whole floor, you will turn off the tab before finding ways to drain the water or soak it up. It is how net-zero emissions is supposed to work. Emissions reduction should be a priority over removal, not the other way around. The world's leading scientists suggest that we must drop emissions to 25 Gigatonne of carbon dioxide equivalent (GtCO2-e) by 2030 in order to meet the 1.5C target. The current annual global emissions sit around 59 GtCO2-e. The emission data from this past decade shows that carbon emissions have not decreased but jumped. Except for 2020, greenhouse gas emissions (excluding land-use change) have increased by an average of 1.3% per year. In another word, the window for reaching the target is closing.

The sense of urgency has spurred the quest for a silver bullet that can rapidly take carbon out of the atmosphere. And many are betting their hopes on technological fixes. For example, the US government has allocated US$60 million to fund carbon removal technology, while billionaire Elon Musk offered almost double the amount for such technology through competition. But this is no panacea, and sole or over-reliance on technology without first turning off the tap will only lure us to emit even more. So the priority remains curbing our emissions by altering the way we live.

However, even if we stop emitting greenhouse gases today, we still need to remove a large amount of CO2 from the atmosphere - because this stubborn gas stays around for hundreds of years. So carbon sinks are necessary for us to reach the target.

The world is on the brink of a climate crisis, what is our best hope?

Carbon sinks are defined in the Paris Agreement as any process or mechanism that removes greenhouse gases from the atmosphere. There are two kinds of carbon sinks, one is natural and the other is artificial.

The natural carbon sinks include forests, soils, and oceans. These ecosystems absorb two-thirds of our annual carbon emissions. They also provide everything that is essential to human life, including air, clean water, food, and recreational and aesthetic pleasure. They also act as a buffer, protecting us from extreme weather such as storm surges and heatwaves.

The two most common types of artificial carbon sinks are bioenergy with carbon capture and storage and direct air capture. The former extracts energy by burning things like trees or crops, while simultaneously capturing carbon dioxide directly from the source and storing it underground. The latter, which is similar in nature, uses machines to capture and sequester carbon dioxide from the air. Both technologies are developed but have yet to be deployed on a global scale due to cost, energy consumption, and land use issues.

Natural carbon sinks, unlike artificial ones, are already there and helping us mitigate climate change every day. Mangroves, for example, are only about 30% of the size of the Amazon forest, but they can absorb between 8.4 and 11.2 kilotons of carbon dioxide per year.

(Source: Jay Park from Pixabay)

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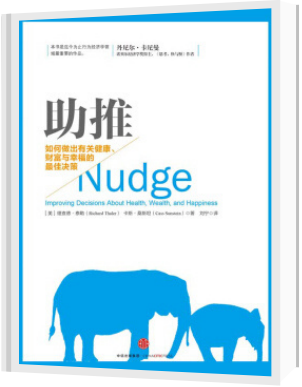
They also provide at least US$1.6 billion worth of ecosystem services annually, such as seawater purification, habitat for fish and shrimp, and shoreline protection. Artificial carbon sinks currently cost between US$65 ~ $600 per ton, and they are likely to change the existing land use, creating competition and conflict. Comparatively, natural carbon sinks cost less to none at all, and they provide a range of ecosystem services. All we need to do is protect, strengthen and restore these valuable systems. Natural carbon sequestration is a win-win solution and the panacea we should embrace.

Although the crisis of climate change seems too big to solve, I believe the best hope rests on us. I know many of us think that only governments have the resources and power to mobilize change on a scale that matters. But every one of us has the power to change. As with net-zero emissions, it is imperative to reduce emissions by changing the way we live. If we had collectively brought climate change upon ourselves, we can collectively pull ourselves out of this crisis. If you don't know what you can do, start by caring. Understand what we are doing contributes to climate change, ask yourself if your current lifestyle is really the best you could do to help, appreciate and talk more about nature.

Just like the Lorax says, "unless someone like you cares a whole awful lot, nothing is going to get better."

(Published in Plataforma Media)

Editor's Pick:
A 'must' for decision-makers



Apply the concept of "nudge" to sustainable development policy-making

Life is full of things that require decision-making, whether they are big or small. However, we tend to fall into prejudice and irrationality that we are not aware of, and make absurd judgments. “Nudge: Improving Decisions About Health, Wealth, and Happiness”, written by Nobel Prize winners in Economics Richard Thaler and Cass Sunstein, examines how people make decisions, the prejudices that exist, and the limitations of human use of rationality from different perspectives. The concept of nudge is proposed, aiming to cleverly guide people to make more rational thinking and choices without requiring coercive means and giving full will and freedom.

Many methods and suggestions on "nudging" in the book are very practical and meaningful, not only worthy of everyone who studies public policy, but also applicable to everyone's daily life. The book mentions that there are five ways to optimize the decision-making environment by reducing intuition confusion, providing fault tolerance, optimizing default options, providing sufficient information and simplifying the selection system when designing a decision-making environment. For example, in some European countries, organ donation needs to go to the government to actively register. For a long time, many countries have faced the pressure of insufficient organ sources.

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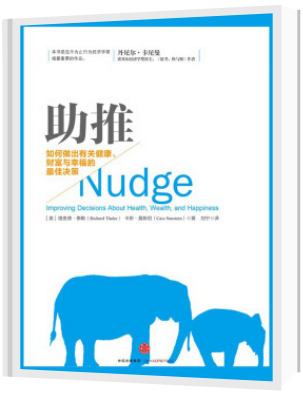

Apply the concept of "nudge" to sustainable development policy-making

According to some social surveys, most of the population are willing to donate. In order to increase the organ donation rate, some governments have made organ donation the default option, and those who do not want to donate need to register with the government. Using this method, many countries have rapidly increased their organ donation rates.

We believe that the concept of 'nudge' can also be used more in sustainable development policy-making. For example, in order to promote the public to reduce the use of disposable cutlery, take-out shops and electronic platforms for ordering take-out can make the non-included cutlery the default option. If disposable cutlery is needed, customers can make a request. This is a way to optimize the decision-making environment through default options. In addition, providing more information can also help to promote policies. For example, if you want more people to choose vegetarian food, the restaurant can indicate the health benefits of vegetarianism on the vegetarian menu, the comparison of the carbon emissions generated by the meal and meat, and the source of the ingredients, etc.

What do you think the concept of nudge can be applied to sustainable development? Let's brainstorm ideas~