



# GENERVISION CAPE



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## **GENERVISION HOUSE BECOMES THE FIRST MEMBER ORGANIZATION FROM MACAU TO ADVOCATE FOR THE 17 UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS TO BE ADMITTED TO UNITED NATIONS SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK YOUTH INITIATIVE**

On 27th of October, 2021, Genervision House officially becomes the first Member Organization to advocate for the 17 United Nations Sustainable Development Goals (SDGs) from Macau under United Nations Sustainable Development Solutions Network Youth Initiative (SDSN Youth), aspiring to continue their work in the localization of and education for the UN SDGs.

SDSN Youth is a program under Sustainable Development Solutions Network (SDSN). In 2012, former United Nations Secretary General Ban Ki Moon established SDSN to mobilize global expertise around the SDGs through education, research, policy analysis and global cooperation. Currently, this youth network is made up of over 750 Member Organizations, covering 127 countries.

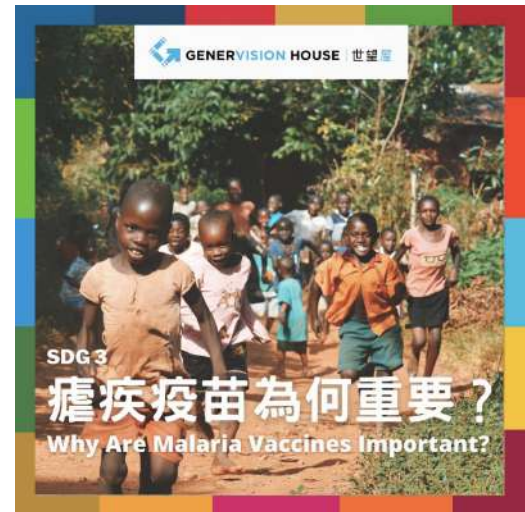
Upon receiving this delightful news, Christy Un, Co-founder and Chief Operation Officer of Genervision House, expressed, "Genervision House is honoured to have become one of the members under this youth network. We will make good use of the resources and assistance provided by this network, cooperate with other youth organizations worldwide to conduct knowledge-sharing, and also hope to promote education and research concerning SDGs." Arianna U, Co-founder and Chief Executive Officer of Genervision House also added: "Becoming a member of SDSN Youth has been one of the main goals for Genervision House in 2021, and we are pleased to have achieved it before the end of the year. We look forward to engaging with this international network in the future to share more international perspectives on sustainable development with people in Macau."

Genervision House is a knowledge exchange and advocacy platform established in Macau as well as an organization promoting the 17 UN SDGs, providing the local community with sustainable development related knowledge, videos, events and projects.

In their current phase of development, Genervision House engages in online content production as well as offline community events to advocate for the 17 UN SDGs. In the future, Genervision House hopes to collaborate with policy implementers and cooperates, provide workshops and constructive solutions in order to improve the social, economic and environmental aspects of local development.

## How was it like living in malaria-affected areas?

In the past month, one of the most significant news was the long-awaited approval by the World Health Organization of the first malaria vaccine for general use in children in sub-Saharan Africa and other areas at high risk of malaria transmission.



Malaria is caused by a parasite called Plasmodium, which is spread by the bite of an infected mosquito. Symptoms include fever, headache, vomiting and, in severe cases, death. According to WHO data, malaria remains one of the deadliest diseases in the world. Of the estimated 229 million malaria cases worldwide in 2019, more than 90% occurred in Africa, and children under the age of 5 accounted for 67% (about 260,000) of the 409,000 deaths that year, the age group at greatest risk of life-threatening complications. For decades, humans have been searching for an effective way to prevent malaria. Since 1987, GlaxoSmithKline, a British multinational pharmaceutical company, has begun developing a vaccine against *P. falciparum*, the deadliest and most prevalent malaria in Africa. Therefore, the successful development and approval of a malaria vaccine today is extremely remarkable and groundbreaking for the scientific, medical and health fields in human history.

As a witness of many vicious outcomes caused by malaria, I was excited and full of tribute to science. Having lived in a country in sub-

**Saharan Africa where malaria was rampant, I had heard about the danger of malaria long before I arrived in that country. Before leaving for that country, I was vaccinated against many infectious diseases, such as typhoid, cholera, and yellow fever. However, there was no vaccine for malaria worldwide, and I could only take medication that could help prevent it. The common anti-malaria medications are quinine, mefloquine, and doxycycline, which should be taken one to two weeks before arriving at the area with high risk of malaria.**

**These medications are expensive and difficult to get in developing countries. I was living in Belgium before my stay in sub-Saharan Africa. Before my flight, I bought almost the entire hospital stock of 8 boxes of malaria prevention medications, which was about 8 months' supply, and cost several thousands of RMB. As a student then, I was a bit shocked by the price, but I regarded it as an insurance. After starting the meds for about two to three weeks, I was hit by the strong side effects: dizziness, nausea and vomiting, nightmares, and even worse, occasional hallucinations, which could be very damaging to the mental health. I had no choice but to stop and live with the risk from then on. After all, in sub-Saharan Africa, it is neither possible to protect oneself from mosquitoes with long sleeves and long pants on long hot days of 38 degrees; nor to spray mosquito repellent all the time. The worse was that I had to travel to rural areas for work where malaria was most serious. Every time I prayed that I would not encounter malaria-infected mosquitoes, or that I would be in somewhere close to a hospital when infection happens. After all, I heard that many people's children got infected and died of the disease, and despite some Chinese and Europeans survived from malaria infection, they could barely get out of bed for weeks and were much weaker than before.**



**Because malaria has an incubation period, whenever I have similar symptoms, my mind will be in an alert mode and would keep searching for memories of any place I had been in the past week could have mosquitoes. This kind of fear and anxiety repeatedly shuttle in a year of life. Since it would be hard to feel the bites of these mosquitoes, and mosquitoes are most active at night, there was literally no effective resort to prevent. When I went to bed during business trip, I always looked at every corner of the mosquito net with my eyes wide open, trying to find the "missed mosquitoes" like I have OCD. This is a matter of life and death! Even so, after checking to make sure there are no mosquitoes, I still had to pull open the mosquito net to get out of bed and rushed to turn off the lights and then got back into the mosquito net, fearing that in that moment a mosquito would fly in and I would "win the lottery". These details seem vivid and funny, but it also reflects the horror of malaria and the helplessness to deal with it.**

**I was extremely blessed and privileged to be able to afford the preventive medicine, and even if I get malaria, treatment will be not impossible to access. However, millions of African families are unable to do anything about it. Every year, many children leave the world because of tiny mosquitoes, and every year, people who are the breadwinners of the family die from malaria, leaving behind their grieving families. Many volunteers and tourists are also plagued by malaria. Nowadays, vaccine is the hope of many lives!**

**I hope that such a good thing can be distributed to those who need it most as soon as possible, fairly and effectively. I also hope that in my lifetime, malaria, like smallpox, will never exist again.**

# Final Fantasy of E-cars - From Singapore to Macau

Ray Wong

We may all agree that the electric car will be the tendency in the future. Like in the last November, State Council of the People's Republic of China they promulgate the development plan for the new energy vehicle industry (2021-2035), the sale of electric car must comprise at least 20% of cars by 2025. In order to reduce the emissions, the Japanese government announce the same plan but a 100% by 2035. Main European countries like England, Germany, France, Sweden and Denmark will stop selling the petrol car from 2030. The states, announced the sale will be made up 40 to 50% by 2030 and they proposed a protocol about emission reduction.

As for Macau, according to the administrative regulation no. 5, 2002, for those motor vehicles only using alternative energy. When making a new motor vehicle transfer, we can apply to Finance Services Directorate for an exemption of motor vehicle tax. This is similar to the Early Bird system in Singapore, but in Macau we did not prescribe the deadline of it. On the other hand, Macau can definitely refer to the VES in Singapore, using reward and punishment system to draw more attention of electric cars.



**So, how come the normalization of electric cars is still stagnated? The main reason would probably be profit. Macau has more or less 100 thousands of motor vehicles. Let's say 50mop per week and the revenue would be 5 millions per month and it is only based on the lease usage. We can imagine that the oil companies will not support the development of electric cars. However, if the government can be a leader, such as encouraging car companies to hold test-drive day, elaborating the profit of using electric cars and establishing more chargers, those may a great motivation for the consumers to consider buying electric cars.**

**Singapore has only 1500 electric cars but 2000 chargers, however the government is still planning to construct 60000 more charges that 40000 in public and 20000 in private. For the great success, the government allocate funds for the setup to condos and private apartments and it cuts off half the price of the installation. From the bureau of environmental protection services, there are 1489 light electric vehicles in Macau but only 200 chargers until 2021-8-31, it means that more than 7 people are sharing one charger. For Tesla 3, 6 hours on normal chargers and 1 on the super chargers, 200 charges should absolutely be enough by numbers. But the problem is that the location of charges is not well distributing and the sleeping time would be the peak, so the waiting time is also an issue.**

**The habit of charging is another topic. As far as we know, a big amount of users they leave their cars there even the charging process is over and It makes the situation worse. In addition, some chargers are not**

**working and nobody deals with it. The issues above are those deter the electric cars developments. Hence, something we can do to deter the situation such as exploiting the parking meter or implementing hierarchy(charing cars receive a discount of fees).**

**The SG government established NEVC (National electric vehicle centre) to promote the benefits, it includes building more electric cars infrastructures, formulate laws and standards, as a result of cultivating a complete eco system. NEVC cooperates with related governed organisations and industry stackholders, and starts off some related events. This boosts up the safety and innovation development of the novel technology. Thus, Macau can follow Singapore, having an independent organization to execute all of the works, this may also benefit the people for looking up informations.**

**We, Macau is a city that is well-known small, dense but having a relative large population. We have more than 200k cars in such a 33km<sup>2</sup> tiny territory. A great development of e-cars can absolutely beneficial of noise and air pollutions over a long time. In contrast, Mainland China is rushing, thus in the future it would teetotally be more convenient for the commuting. In summation, there are both short and long term benefits to expand it, while the government is the one who plays the most important role to lead the industry.**

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# Innovative thinking to promote carbon reduction

Andy Ho

Last year, President Xi Jinping pointed out during the general debate of the 75th United Nations General Assembly that China would increase its national contribution, adopt more vigorous policies and measures, and strive to reach peak carbon dioxide emissions by 2030, and strive to achieve carbon neutrality by 2060. Since this commitment, President Xi has repeatedly made important remarks on carbon peaking and carbon neutrality. In this year's National People's Congress, the Government's Work Report clearly states that the Government will strive in achieving carbon peaking and carbon neutrality. This is the first time that carbon peaking and carbon neutrality have been mentioned in the Government Work Report, revealing its importance again.

It is worth pointing out that the Chief Executive of the Hong Kong SAR, Mrs. Carrie Lam, has recently delivered a new Policy Address, in which she mentioned that the Environment Bureau will also set up a new Office of Climate Change and Carbon Neutrality to strengthen co-ordination and promote deep decarbonisation. Also, a dedicated advisory committee on combating climate change will be formed to encourage different sectors in the community, including young people, to participate actively in climate actions. The measures are worthy of recognition, carbon reduction work can not be easily carried out by a particular department, it requires continuous innovation and exploration, and "combination of punches", in order to better and sustainably promote the relevant work.

In fact, Carrie Lam has made it clear in the last Policy Address that the Hong Kong SAR will strive to achieve carbon neutrality by 2050. Since this year, the "Waste Blueprint for Hong Kong 2035", "Clean Air Plan for Hong Kong 2035" and "Hong Kong's Climate Action Plan 2050" have been introduced one after another, taking an important step towards achieving the goal of carbon neutrality.

Back to Macao, Chief Executive Mr Ho Iat Seng has clearly pointed out that the Macao SAR Government will cooperate with the national environmental protection development strategy, seriously strive to achieve carbon peaking and neutrality, gradually realize clean energy substitution, and strive to achieve carbon peak by 2030. The Secretary for Transport and Public Works, Mr. Raimundo Arrais do Rosário, also said that the environmental planning of Macao will follow the national carbon peak and carbon neutral targets. The goal will be earlier than the time set by the state by 2030 and 2060.

The realization of the carbon peak and carbon neutral targets will not be achieved easily, and the relevant work needs to be implemented one by one, with the joint efforts of the whole society. We are pleased to see that the Second Five-Year Plan for the Economic and Social Development of the Macao Special Administrative Region (2021-2025), which is currently under public consultation, clearly states that the formulation of the Macao Environmental Protection Plan (2021-2025) should be completed, that the work of achieving carbon peaking and carbon neutrality should be seriously carried out. So that, clean energy substitution should be gradually realized, and that the goal of achieving carbon peaking should be achieved by 2030, relevant action plans should also be formulated.

It is worth emphasizing that when formulating the action plan, the government should further strengthen its innovative thinking, consider the overall situation, integrate the concept of sustainable development, and promote high-quality development. By further strengthening communication and cooperation with various sectors of the community, a consensus can be widely forged to create a better social environment for carbon reduction efforts.

## Renewable energy - Solar energy

8 minutes and 20 seconds - this is how long it takes for sunlight to travel from the Sun to the Earth, accomplishing its mission when it reaches objects. Besides lighting up our planet, sunlight also provides energy to all living creatures. Plants need sunlight for photosynthesis, whereas we humans would be unable to survive here without sunlight. We benefit from sunlight, including solar energy - a topic that we will delve into today.



Solar energy has been utilized by humans for decades. Back in 1884, an American inventor, Charles Fritts, already attempted placing the first photovoltaic panel using selenium cells on his rooftop. Subsequently, throughout the 20th century, solar photovoltaic technology had experienced a short period of popularity. However, due to the energy and falling price of oil, the technology has again begun to wane in popularity.

In recent years, China had begun harvesting energy from the sun. At the end of 2020, China has a total of 253 gigawatts of installed solar power capacity, which is 100 times more than the whole European Union. So far, China has the world's largest solar power capacity.

**A representative from the China Photovoltaic Industry Association (CPIA) forecasted that 55 GW-65 GW of new capacity will be added this year and that new solar capacity installation is expected to be about 70 GW-90 GW a year over 2021-2025 on average.**

**Besides building on the domestic capacity, China also exports solar modules. The solar module exports were 36.9GW in the first five months this year, which is a 35% increase from the same period last year.**

**What about Macau? Macau receives a lot of sunlight and has many rooftops. However, due to a variety of reasons, such as the high-rise buildings shadowing the adjacent buildings and relatively small areas of rooftops, the development of solar energy in Macau has certain obstacles. Moreover, Macau lacks places inland and offshore to provide steady electricity. In fact, up to 90% of Macau's electricity is supplied by mainland China.**

**Apart from the topic of generating clean electricity, there may be actions we can take to help cities grow faster. For example, we can explore Macau's transformation into a low-carbon city, and even develop water source heat pumps, geothermal energy, and other new energy sources to move towards a "zero-carbon" community.**

# Is climate change influencing the formation and impacts of super typhoon?

The answer is yes. Scientific literature points out that climate change can make stronger typhoons due to the higher temperature of the oceans and raising sea levels. Tropical cyclones form by drawing energy from the ocean. When temperatures of the ocean surface rise, more energy is available for tropical cyclone to form. When the glaciers melt at both poles, higher seas will create storm surges that can reach farther inland when tropical cyclones take place.

Coastal cities, like Macau, are susceptible to the threats of climate change and stronger typhoons. As population grows in cities, it can overload the capacity of the existing infrastructure which was designed long times ago for a smaller population. Therefore, it is important

to take into account resilience when planning urban development projects. According to the recommendations of Royal Society, governments must develop and implement policy frameworks that cover climate change, disaster risk reduction and development. Identical or comparable metrics should be used in those policy frameworks to coordinate action and compare the effectiveness of different resilience-building measures. When developing resilience strategies, focus on minimising the consequences of the infrastructure failure, instead of avoiding failure completely, will be most effective.

當海洋表面溫度上升時，就會有更多的能量形成熱帶氣旋

When temperatures of the ocean surface rise, more energy is available for tropical cyclone to form



當兩極的冰川融化令海平面上升，熱帶氣旋發生時會令風暴潮可以覆蓋更遠的內陸

When the glaciers melt at both poles, higher seas will create storm surges that can reach farther inland when tropical cyclones take place.



# Genervision House X World GBC: MENA Green Urban Renewal

Today, we are experiencing again the effects of typhoon and heavy rain that greatly affect our daily living in Macau. Climate change causes these extreme weather events to occur more frequently, and effective building designs and urban planning are key to address this issue.

♻️ Climate change is closely related to urban construction. Buildings result in around 39% of emissions causing climate change, of which 11% of those are in the form of embodied carbon in buildings. As the leading international organization in supporting sustainable buildings, the World Green Building Council strives to realize the United Nations' Sustainable Development Goals.

Genervision House is honoured to invite Mohammad Asfour, who was the former head of the MENA and Africa Regional Networks in the World Green Building Council, to share his experiences working on green buildings. Mohammad has over 10 years of working experience in this organization. If you are interested in working for the green construction industry or understanding sustainable city development, don't miss out this video!

In this video we will share with you:

- Situation in the MENA region
- How the World GBC realize the SDGs
- How coastal cities like Macau could develop into green cities
- Mohammad's green habits



Also, feel free to check out our previous video on how Mohammad participated in converting the Jordan Trail into eco-tourism as the board member of the Jordan Trail Association!

