

# Genervision Cape

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### How Green is the Winter Olympics?

1. The Beijing Olympic Winter Games Organizing Committee established a sustainable management system. For the first time in the history of the Olympic Games, the Beijing Winter Olympic Games has integrated three international standards, namely the "Large-scale Event Sustainability Management System, Environmental Management System and Social Responsibility Guidelines".

2. Green power supply for all venues was realized. According to the estimation, starting from the first green power transaction in June 2019, by the end of the 2022 Winter Paralympic Games, the green power of the venues in Beijing, Yanqing and Zhangjiakou is expected to use 400 million kWh, which can reduce the burning of 128,000 tons of standard coal and the emission of 320,000 tons of carbon dioxide.

3. Building ecological competition area: In view of the fact that snow sports are mainly located in mountainous areas, measures will be taken to reduce the environmental impact at the source of design. Planning and design before the plant background survey, environmental impact assessment, from avoidance, mitigation, reconstruction, compensation and other aspects to determine the protection measures. Through in-situ, near-situ and relocation measures to protect the plants in the race area, through the installation of animal channels, the deployment of artificial nests, regulate the construction behavior and other measures to reduce the impact on the animals in the race area, and the simultaneous development of ecological restoration. Various ways to collect, store and recycle rainwater and snowmelt water to make efficient use of water resources.

4. Strictly implementing low carbon management: we will make full use of the Beijing Olympic Games venues to reduce carbon emissions at source. At the same time, the Beijing Winter Olympic Games has built low-carbon venues, all of which have reached green building standards. Four ice venues have used new carbon dioxide refrigerants, over 50,000 square meters of ultra-low energy demonstration projects have been built, low-carbon energy is used across the board, and 100% of the regular energy used in all venues during the games is green electricity. The low-carbon transportation system was established, and energy-saving and clean energy vehicles accounted for more than 80% of the vehicles at the race. The governments of Beijing and Zhangjiakou have donated forestry carbon sinks to the Beijing Winter Olympics, and China National Petroleum Corporation, China National Power Grid and Sanxia Group have also sponsored carbon neutral products for the Beijing Winter Olympics. Through these measures, the Beijing Winter Olympics will be fully carbon neutral.

# Featured articles

## Want to improve your well-being?

Try this free online course offered by a Yale professor

Amid a new wave of COVID-19 cases, many people are looking for entertainments closer to home to pass their free time. As an integral part of health, mental health and psychological well-being are important foundation for us to function fully and live happily.



As many people are coping with pandemic and its collateral impacts, a free online course has become widely popular for people seeking to improve their well-being. The course, "The Science of Well-Being", is offered by one of Yale's top professor Laurie Santos, and it has already admitted over 3 million people and received 98% approval rating. In 10 weeks' time, the course offers a professional take on happiness and suggestions on how to find things that make us happy.

During an interview with Business Insider, Professor Santos also offer a few tips to feel happier.

**問問自己在做某件事的時候是什麼感覺**  
「這讓我感覺如何？我更有活力了嗎？我覺得自己在有效地浪費時間，還是覺得很噁心、很冷漠？」

**Ask yourself how a particular activity really feels as you're doing it.**  
"How did this make me feel? Am I more energized? Do I feel like I've wasted some time productively or do I feel gross or apathetic?"

GENERVISION HOUSE 世望屋 原文出處 Source: Business Insider

If you want to know more about the course, visit this link: <https://bit.ly/33iDPzf>

**把心理健康想象成一種飲食—有些活動雖然是無害的垃圾食物，但有時你的大腦也需要一份沙律。**

有時候你真的需要看一場最愛的垃圾真人秀節目。但你也應該與朋友進行心靈的交談，去運動，甚至是出去散步來平衡一下。

**Think about mental health as a diet — some activities are harmless junk food, but sometimes your mind needs a salad.**

Some days you're going to need your junk reality television du jour. But you should also plan to balance it with quality conversations with friends, exercise, or even a walk outside.

GENERVISION HOUSE 世望屋 原文出處 Source: Business Insider

**你的大腦中最容易導向的方向不一定會帶來幸福感。我們經常找一些輕鬆的事情來做—看電視、滑社交媒體—但真正讓我們感到滿足、能提高我們幸福感的事情需要多一點努力。**

**Recognize that your brain's paths of least resistance don't necessarily lead to happiness.**

We often look to things that are easy — resting, watching TV, scrolling through social media — when really, the things that fulfill us and improve our happiness take a little bit of work.

GENERVISION HOUSE 世望屋 原文出處 Source: Business Insider

**寫下在一天中你會如何理想地利用一小段空閒的時間。**

我們的生活充滿了「時間碎片」：一天中分成5到10分鐘的小碎片。  
「利用時間碎片的策略是寫下你真正想做的事情，這樣在你休息的時候，你可以直接做。」

**Write down ideas for how you'd ideally spend random small pockets of free time (time confetti) in a day.**

One strategy for using time confetti is to scribble down the things that you really want to do so that if you get a break, you can say, "Oh, let me do this instead."

GENERVISION HOUSE 世望屋 原文出處 Source: Business Insider

**嘗試一些需要你參與的具有挑戰性的活動，比如學習一門新語言或冥想。**

「富有挑戰性的活動讓我們心馳神往。心流是一種我們真正感受到存在和參與的狀態。它並沒有簡單到無聊的程度。它們讓時間以一種愉悅而快速的方式流逝，你真的享受當下……只要我們做的事情令自己更享受當下，我們就會更喜歡這項活動。」

**Try challenging activities that require your presence — such as learning a new language or meditation.**

"Challenging activities give us flow. Flow is the state where we're feeling really present and involved... It's not so easy that it's boring. They make time pass in an enjoyable but quick way, you're really present... anytime we do things where we're more present, we enjoy that activity more."

GENERVISION HOUSE 世望屋 原文出處 Source: Business Insider

# Making buildings and infrastructure “circular”

Buildings and infrastructures consume up to 50% of the extracted natural resources each year while producing 40% of global carbon emissions. Built environment is a large consumer of energy and resources, as well as a big waste producer. As the world faces a growing population and rapid urbanization, it will increase the pressure on the environment. At the same time, environmental regulation continues to tighten surrounding the extraction of resources and discharge of waste. Therefore, it is critical that the built environment reduces its ecological footprint.



Embedding a circular economy during the construction of built environment will not only provide an opportunity to tackle climate change, but also allows the industry to increase its financial returns by improving resource efficiency. In a circular economy, there is no such thing as waste - which means that all materials must be used efficiently and again and again, feeding back to the natural environment and allowing resources to regenerate.

There are a few key factors to take into consideration when designing and constructing built environment:

1. Design for a lifecycle instead of a single end-use. This will ensure that circularity is embedded in every part of the built environment. For example, the structures of a building can be easily demounted and reconfigured based on the different demands for functions.
2. Opt for materials that are resilient, and can be reused and/or returned to the natural environment quickly and safely. For example, use concrete segments that are pre-casted so that they can be repaired and reused later.
3. Hold material manufacturers accountable for the product and its lifespan. Instead of a one-off purchase, a full lifecycle contract from design to operation and disassembly of the product can guarantee structures of built environment stay flexible without producing waste. This is also called the 'Products as service' model, which can increase the market size and provide more jobs.
4. Increasing modularity to reduce waste both at construction and deconstruction. Modularity is the degree to which a building/infrastructure is assembled by different standardized units. This is can make transportation of structural components easier at the same time make it possible for buildings to be redesigned using the same components.

Achieving a circular economy model for built environment will contribute greatly to the goal of net-zero carbon emissions, as well as waste reduction, both of which a part of the targets outlined in the governmental plans in Macao. However, those plans have yet to mention or address the opportunities that the model can provide. Therefore, it is suggested that the government should develop an official guideline (as they did for air pollution control) for embedding a circular economy into the built environment.

## Some reflection on the carbon neutrality of Macau

In order to cope with global climate change and to fulfill the responsibility, China has proposed the targets of carbon peaking by 2030 and carbon neutrality by 2060; Chief Executive of Macau He and Chief Secretary Lo have also said that Macau will reach carbon peaking by 2030 and carbon neutrality by 2060, earlier than the national targets.

For mainland China and most of the countries, the carbon peaking and carbon neutral plan lies in the socio-economic development of provinces and cities and greenhouse gas emissions "decoupling" , that is, while economic growth and energy demand increase, the new energy must be clean non-fossil energy, so that carbon dioxide emissions no longer increase with economic growth.

Therefore, mainland China is actively deploying low-carbon transformation and development of new energy and other low-carbon technologies, while promoting the peaking of carbon emissions from high-energy-consuming industries such as steel, cement, chemical and petrochemical industries in developed coastal areas during the 14th and 15th Five-Year Plan periods, so as to drive the nation to achieve peak CO<sub>2</sub> emissions by 2030.

Macau is an international free port, and light industry, tourism, hotel and gaming are the pillar industries of Macau. Macau's tertiary sector and transportation sector are the main consumers of end-use energy, among which the energy demand of the tertiary sector is mainly electricity, making it more difficult to apply the emission reduction method of the Mainland's industrial structural reform.

In the author's view, the carbon reduction problem faced by Macau can be compared to the "near carbon neutral" stage of many other regions. For industrial regions, according to the current research knowledge of cutting-edge technology, there are always certain "hard-to-reduce sectors" in the "near carbon neutral" stage, such as backup thermal power generation units to maintain the safety of the power grid, and petrochemical products, which are temporarily irreplaceable sources of carbon emissions, and the safety price or cost to avoid these emissions will be very high. Therefore, all regions basically plan to increase carbon sinks (the ability to absorb greenhouse gases) by planting trees and developing technologies such as carbon capture and storage (CCS) to achieve carbon neutrality.

In this regard, the author offers several insights and thoughts.

1. Saving energy and resources is a good thing and a virtue, but it is definitely not the key to carbon neutrality. For example, carbon neutrality does not focus on asking us to use less electricity, but on whether the source of our electricity is "clean". If renewable energy sources dominate the electricity supply in the future, and if more electricity is good for the economy and the quality of life of the people, then more electricity is not a bad thing. Of course, at a time when fossil fuels still dominate electricity generation and renewable energy systems are not yet mature, it is better to encourage electricity saving, at least to reduce unnecessary waste.

2. Emission reduction in the transportation sector is a promising area for Macau. Due to the legal system and land resources, the process of phasing out old cars and developing new energy vehicles in Macau is relatively slow, but there is no doubt that the replacement of new energy vehicles will be a major trend in the future, and many old car manufacturers are increasing their investment in new energy vehicles in order to maintain their competitiveness. The short commuting distance in Macau has essentially solved the problem of mileage, which is the main problem of new energy vehicles. The government should further accelerate the construction of supporting infrastructure such as charging piles to ensure that new parking garages have a quota for charging electric vehicles, and collaborate with old buildings to solve legal issues such as "deeds of subdivision".

3. Due to land resources, it is difficult for Macao to develop renewable energy such as wind and solar energy and plant trees on a large scale. Therefore, there are not many ways for Macao to become carbon neutral. After doing a good job of reducing emissions in the transportation sector, we can consider increasing investment in renewable energy in the Mainland or neighboring countries, or buying international carbon certificates to offset Macao's remaining carbon emissions, so as to achieve carbon neutrality. In fact, the total amount of carbon emissions in Macau is not high, so the purchase of international carbon permits can easily achieve carbon neutrality. However, Macau should also use international carbon permits to offset carbon emissions from "hard-to-reduce sectors" or to maintain economic and social security after making every effort to reduce emissions locally, instead of just "buying carbon neutrality with money", in order to demonstrate the responsibility and ability of an international city.

4. The planning of a carbon neutral route and the realization of carbon neutrality are not only to fulfill the national and international tasks, but also an opportunity for the economic transformation and sustainable development of Macau. Professor He Jiankun, Director of the National Expert Committee on Climate Change, has said that if we exclude the indirect carbon dioxide emissions from the purchase of electricity from the Mainland and only consider the emissions from local energy consumption and waste disposal, the Macao region is very likely to achieve carbon neutrality around 2035 and will be the first economic entity in the world to achieve carbon neutrality, which will undoubtedly greatly enhance the international image and influence of the Macao region.

# Can Cryptocurrency and NFT Advance Sustainable Development?

In the past year, cryptocurrency and Non-Fungible Token (NFT) have become global digital trends. What are cryptocurrency and NFT, and could these innovative technologies advance sustainable development?

The Relationship Between Cryptocurrency and Sustainable Development:

- Compared to fiat money (government-issued currency), cryptocurrency is a more stable currency choice for countries with vulnerable currency.
- Remittance not only helps reduce poverty for low-income migrant households, but also increase the GDP of the receiving country. Commission fee charged for crypto remittance is significantly lower for international transfer agencies (e.g. Western Union).

The Relationship Between NFT and Sustainable Development:

- NFT has the potential to develop digital property ownership for digital artists, thereby giving them the right to present, access and resell their creative products.
- Nonetheless, cryptocurrency and NFT make use of blockchain technology and data mining, and these processes would consume large amount of energy, thereby producing large amount of carbon emission. Also, these innovative technologies may exacerbate inequality in accessing and using digital technologies.

Ultimately, the potential of these technologies have not been realized at scale, and the international society still needs to establish clear digital technology supervision and regulations to overcome the challenges of the digital era.



## 什麼是NFT？ WHAT IS NFT?

NFT 是區塊鏈數位帳本上的資料單位，每個代幣可以代表一個獨特的數位資料，作為虛擬商品所有權的電子認證或憑證，所以是具有唯一性的數位資產。

NFT is a data unit stored on the blockchain digital ledger. Each token can represent a unique and non-interchangeable digital data, which serves as an electronic certification or certificate of ownership of virtual goods.



## 什麼是加密貨幣？ WHAT IS CRYPTOCURRENCY?

加密貨幣是由電腦產出、建立在區塊鏈上的數字貨幣，通過密碼學原理來確保交易安全及控制交易單位。它不需經過政府或機構的監管，所以是一種可自由移動的資產。

Cryptocurrency is a digital currency generated from computers and employs the blockchain technology. Through the use of cryptography, cryptocurrency ensures transaction security and controls transaction units. Because it does not require government or organizational supervision, it is a freely movable asset.





### 加密貨幣與可持續發展的關係：

The Relationship Between Cryptocurrency and Sustainable Development:



相比法定貨幣（政府發行的紙幣），加密貨幣在貨幣波動幅度大的國家（如正在經歷惡性通貨膨脹的委內瑞拉）更為穩定。



Compared to fiat money (government-issued currency), cryptocurrency is a more stable currency choice for countries with vulnerable currency (such as the hyperinflation-ridden Venezuela).

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匯款不但能夠讓低收入外勞家庭脫貧，還能增加接收國的國內生產總值（GDP）。用加密貨幣支付的匯款所收取的佣金遠低於如西聯（WESTERN UNION）的國際匯款公司。例如，如墨西哥的BITSO 的加密貨幣交易所公司收取的佣金低至每 1,000 美元匯款收取 1 美元佣金。



Remittance not only helps reduce poverty for low-income migrant households, but also increase the GDP of the receiving country. Commission fee charged for crypto remittance is significantly lower for international transfer agencies (e.g. Western Union). For example, commissions for companies like Mexican crypto exchange Bitso is as low as \$1 per \$1,000 sent.

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儘管如此，加密貨幣和NFT利用區塊鏈（Blockchain）和挖礦（Data Mining）技術，這些過程會消耗大量電力，因而產出大量碳排放。例如，劍橋大學的一項研究指出，全球比特幣挖礦每年消耗的電力比整個阿根廷更多。

Nonetheless, cryptocurrency and NFT make use of blockchain technology and data mining, and these processes would consume large amount of energy, thereby producing large amount of carbon emission. For example, a study from University of Cambridge shows that global Bitcoin mining each year consumes more electricity than the entire Argentina.

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另外，這些創新科技有可能加劇數字技術獲取和利用的不公平問題。藝術市場研究機構ArtTactic的報告指出，由2020年1月到2021年9月，女性藝術家僅佔 NFT 藝術品總銷售額的 5%。

Also, these innovative technologies may exacerbate inequality in accessing and using digital technologies. Art market research organization ArtTactic's report notes that female artists only contribute to 5% of all NFT sales from January of 2020 to September of 2021.

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不過，這些技術應用也開始把環境保護納入考量。值得關注的是，再生能源供應約39%比特幣挖礦所用的能源。另外，社會上亦出現更多科技公司嘗試解決這些技術對環境帶來的負面影響。例如，有一間叫 CurrencyWorks 的加拿大公司便把廢油轉化為環境友好的能源，為挖礦和發起NFT提供電力。

However, these technologies have also been increasingly applied with environmental protection in mind. It is worth noting that renewable energy comprises 39% of the energy used for Bitcoin mining. Also, more technology firms are trying to address the negative environmental influences brought by these technologies. For example, a Canadian company called CurrencyWorks turns oil waste into environmentally-friendly electrical energy for data mining and distributing NFT.

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**最終，這些技術的潛力仍未得到大規模應用，國際社會亦需要設立更清晰的數字技術監管和規定去應對數字化時代的挑戰。**

*Ultimately, the potential of these technologies have not been realized at scale, and the international society still needs to establish clear digital technology supervision and regulations to overcome the challenges of the digital era.*

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