



WWF®

雜誌 MAGAZINE

春季 SPRING

2015

About Life

生命之延

The Warmest Year

With the effects of climate change beginning to hit, the world needs to embrace green energy. Hong Kong has incredible renewable energy generation potential – but do we have the will to make it a reality?

ALSO IN THIS ISSUE:

Five years of low carbon success

Coastal Watch celebrates
its first anniversary

Saving the Great Barrier Reef



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CHIEF EXECUTIVE OFFICER'S MESSAGE



With the change of seasons, the weather is getting warmer again in Hong Kong, signalling the start of summer and the typhoon season. With extreme weather events becoming more frequent around the world, for some this is a season of worry. This year has seen storm activity occur unusually early in the western Pacific, with large storms already battering Micronesia and the Philippines. Will we be impacted by severe weather again this year? As climate change is now an undeniable phenomenon, nobody can make accurate predictions.

Climate change is a direct result of humanity's insatiable appetite for the natural capital of our planet. We are using more resources each year, with demand far outweighing the limits of what our planet can provide. Our rampant consumption is not only leading to the destruction of habitats and a loss of biodiversity all around the world, one by-product of our excessive consumption is an increase in carbon emissions which directly contributes to global warming and climate change. Looking ahead, the Hong Kong Observatory predicts that by 2050 the average temperature in Hong Kong will have risen dramatically, with extreme hot weather becoming more common.

Needless to say, continuing on this path will create problems not only for ourselves but for future generations as well. However, if we strive to change our ways and hence create positive change, WWF-Hong Kong sees another, brighter future for humanity. Our vision is to transform Hong Kong into Asia's most sustainable city where resources are consumed in a sustainable, responsible manner; reducing the impact on future generations.

An excellent place to start changing the way we use resources is to re-evaluate our relationship with energy. WWF's recently-released Hong Kong Energy Vision 2050 targets reducing our electricity usage by one to two per cent annually while progressively increasing renewable energy sources. The lead story in this issue explores ways to move in this direction.

We must all act, and act now, to create a brighter future for ourselves and our planet. This is possible – by adopting greener and less wasteful lifestyles. Together, we can make the changes necessary to build a future in which humans live in harmony with nature.

This issue also explores a fish survey conducted in our unique Hoi Ha Wan Marine Park which collected baseline ecological data for a future fish database plus a fascinating interview with the project manager of our ground-breaking Coastal Watch project.

I hope you enjoy reading all the articles in this issue – hopefully they will inspire you to change direction and start consuming less and consuming more wisely!

Adam Koo,
Chief Executive Officer
WWF-Hong Kong

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 FOOTPRINT

 EDUCATION

 CONSERVATION

For comments, email aboutlife@wwf.org.hk

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GLOBAL CONSERVATION NEWS



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WORLD'S RAREST WILD CAT DOUBLES IN NUMBER RUSSIA

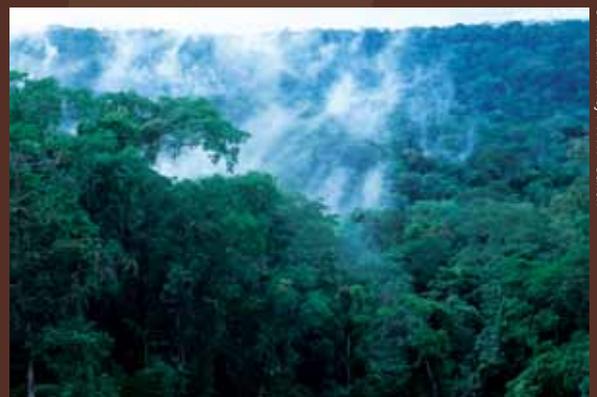
Primorye, Russia – At least 57 Amur leopards now exist in Russia's Land of the Leopard National Park, up from just 30 cats counted in 2007, according to new census data announced last week. An additional 8-12 leopards were counted in adjacent areas of China, meaning the number of Amur leopards, a rare subspecies considered the world's rarest wild cat, has more than doubled over the past seven years.



© Omar Vidal

LIFELINE EXTENDED FOR CRITICALLY ENDANGERED PORPOISE - MEXICO

Mexico's recent decision to buy out gillnet fisheries in the upper Gulf of California may give one of the world's rarest species the breathing space it needs to survive. The population of vaquita – Spanish for 'little cow' – has declined dramatically in recent years to fewer than 100 due to the extensive use of legal and illegal gillnets. A series of successful initiatives led by the Mexican government beginning in 2008 has helped to slow the vaquita's decline.



© Martin Harvey / WWF-Canon

LARGEST FOREST CONCESSION IN THE CONGO BASIN RECEIVES FSC CERTIFICATION

The largest contiguous forest concession in the tropics is now certified by the Forest Stewardship Council (FSC). Industrie Forestière d'Ouessou (IFO), which operates as a subsidiary of hardwood company Danzer in the Republic of Congo, received the Forest Management and Chain of Custody certificates at the end of 2014, following a successful independent evaluation.



© Bernard De Weter / WWF

CHINA'S PANDA POPULATION ON THE RISE AS HABITAT PRESERVATION EFFORTS CONTINUE

The worldwide population of wild giant pandas increased by 268 over the last decade according to a new survey conducted by the government of China. The population increase brings the total number of wild giant pandas to 1,864, representing a 16.8 per cent rise compared to the last panda survey in 2003. Wild giant pandas, a global symbol of wildlife conservation, are found only in China's Sichuan, Shaanxi and Gansu provinces.



© WWF-Hong Kong

GLOBAL OCEAN WEALTH VALUED AT US \$24 TRILLION

The value of the oceans' riches rivals the size of the world's leading economies but these resources are rapidly eroding, according to a WWF report. The report estimates that the world's oceans are worth US\$24 trillion – compared to the world's top 10 economies, the ocean ranks seventh, with its goods and services worth US\$ 2.5 trillion annually. But this wealth is at risk from collapsing fisheries, disappearing corals and other threats – we hope the report will help business leaders and policymakers make better decisions to protect our ocean resources. As a way of turning the tide, WWF-Hong Kong is urging our government to designate 10% of our waters as marine protected areas.



*More than 35,000 walrus
crowd onto a beach in Alaska.
This may look like a happy
gathering of mammals, but it
was actually deadly.*

THE WORLD
METEOROLOGICAL
ORGANIZATION
RECENTLY RANKED
2014 AS THE
HOTTEST YEAR
ON RECORD

A BURNING ISSUE



© Corey Accardo / NOAA

This unusual image was captured by the National Oceanic and Atmospheric Administration (NOAA) last September. It shows more than 35,000 walrus crowded onto an Alaskan beach. While this large-scale gathering may look beautiful, it was actually deadly. At least 50 walrus, mostly smaller calves and females, were trampled by males and later found dead on the coast.

This is one example of what happens when the summer sea ice shrinks due to climate-induced warming in the Arctic. Walrus depend on these frigid platforms, using them as places to rest between feeding dives. Without the ice, they are forced to make long swims to shore. This photo provides us with a strong image of the impacts of climate change.

The World Meteorological Organization recently ranked 2014 as the hottest year on record. Given that levels of greenhouse gases in the atmosphere are continuing their rise, it is expected that global warming will continue – ushering in a warmer future for all of us.

At the end of last year, an assessment report by the Intergovernmental Panel on Climate Change warned that rapid and decisive action to limit carbon emissions is necessary in order to keep global temperature increases under two degrees Celsius, with two degrees being the threshold limit after which an irreversible climate disaster cannot be avoided.

Greenhouse gas emissions are the key driver of climate change, and Hong Kong is just as susceptible to the effects of global warming as the rest of the world. We also contribute to the problem through our own emissions. Power generation is the largest local source of greenhouse gases, making up nearly 70 per cent of these local emissions.

Over 70 per cent of our electricity supply is generated through the burning of fossil fuels, with more than half coming from carbon-intensive coal. At the same time, renewable energy – which is relatively clean and produces lower emissions – makes up less than one per cent of our supply. When our demand for electricity rises, more fossil fuels must be burned to meet our needs, and thus we pump more greenhouse gases into the atmosphere.

The Hong Kong Observatory predicts that by 2050, the average temperature in Hong Kong will rise by one or two degrees Celsius with extreme hot weather and hot nights occurring more frequently. Hong Kong appears to be headed into a vicious cycle: as it gets hotter, we use more electricity to make us cooler, generating more greenhouse gases and aggravating the problem of global warming. The most obvious solution is for us to break this cycle by proactively fighting climate change. Renewables are one way to do this.

CAN WE GENERATE OUR OWN ELECTRICITY?

Here's an investment opportunity: install solar panels on your rooftop or in your garden and connect the system to the electricity grid. On most days, you'll be able to generate electricity for your own use. On the days when solar energy is low, your power utility will feed electricity back to you, ensuring that you have a stable supply of electricity. When your system generates more power than you need, you can sell the excess power to your utility and earn a little income. If that opportunity appears, would you be interested?

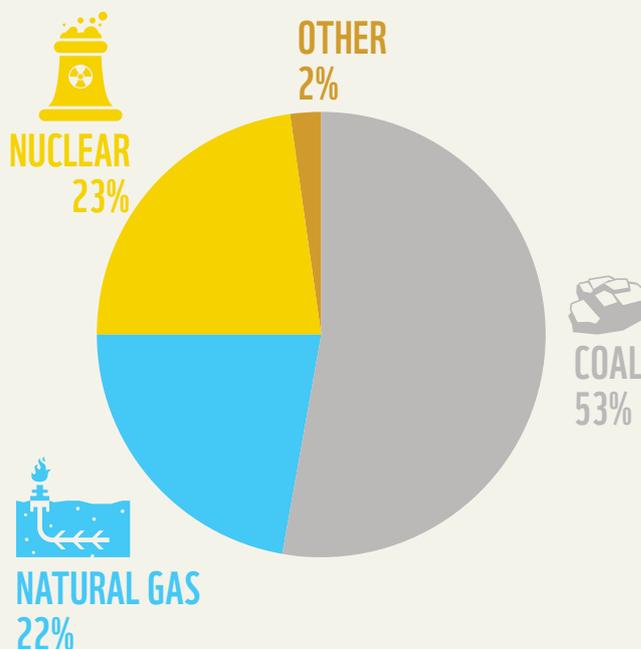
This scheme is already happening in at least 98 countries, provinces and states – it's called the "Feed-in Tariff". For example, in the year 2000 Germany passed the German Renewable Energy Act, encouraging citizens to participate in the generation of renewable energy from sources like the sun, the wind and biomass. Utilities are required to offer a purchase agreement for 15 to 20 years, and pay for the electricity generated by renewable energy projects at a specific rate. This means that citizens can become small-scale "power suppliers", selling electricity to utilities at a below-market price.

Feed-in tariffs are also in place in Taiwan. According to the island's Bureau of Energy, it costs about TWD 500,000 (HKD 125,000) to build a five kilowatt-peak photovoltaic system in Chiayi, southwestern Taiwan. The feed-in tariff rate in 2013 was between TWD 6.98 and 7.07 (HKD 1.74-1.76) per kilowatt hour, making the payback period around 10 years.

ARE RENEWABLES "DOABLE" IN HONG KONG?

A PolyU study released in 2013 estimated that rooftop solar photovoltaic systems could generate more than 14 per cent of Hong Kong's energy consumption. Although we cannot rely on solar energy for all our electricity at the moment, developing renewable energy is the way forward if we want to tackle the climate-induced environmental impacts of power generation.

The Future Fuel Mix for Electricity Generation consultation document issued by the Hong Kong government's Environment Bureau in March 2014 proposes two options: "importing more electricity through purchase from the mainland power grid" and "using more natural gas for local generation". The document does not mention much at all



about renewable energy, missing a golden opportunity to begin a conversation on clean energy sources for our city.

This is at odds with reality, as some public housing blocks, public hospitals and government buildings have already installed solar photovoltaic systems. One – the Zero Carbon Building developed by the Construction Industry Council in collaboration with the Hong Kong government – is actually self-sufficient in terms of power use, with the building feeding excess energy back to the grid in a real-world example of what is possible.

2015 will be the year of climate change and energy issues. The 21st Session of the Conference of the Parties to United Nations Framework Convention on Climate Change will be held in Paris at the end of year, where a new agreement is set to be finalized. Here in Hong Kong, the current Scheme of Control Agreement with the two power utilities is set to expire soon. It is vital that any discussion of the electricity market regulatory regime also includes climate change and carbon reduction.

WWF-Hong Kong believes that the Hong Kong government should set a target for improving energy efficiency, while progressively increasing its use of renewable energy sources. The Hong Kong public will then be able to enjoy clean, stable and affordable electricity, while the carbon emissions from power generation can be greatly reduced. This is the key to changing climate change. ■



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SHAPE UP! HONG KONG NEEDS A "FITTER" ELECTRICITY MARKET

Hong Kong's electricity market prides itself on its safety, reliability and affordability. However an overestimated electricity demand and the use of carbon-intensive fuels has led to poor environmental performance.

The government has kicked off a public consultation on the future development of our electricity market, which will influence Hong Kong's future ability to combat climate change. We believe that the following two mechanisms are vital to our new electricity market:

1. Setting a peak demand control target and a higher energy-saving target in the incentive/penalty scheme of the Scheme of Control Agreements.
2. Including terms for distributed generation and the associated grid connection.

These changes will help reduce Hong Kong's future electricity demand and allow more individuals and corporations to develop renewable energy. In the long term, we will see a healthier and "fitter" electricity market. Join us and sign the petition letter. Your opinion will be sent to the Environment Bureau.

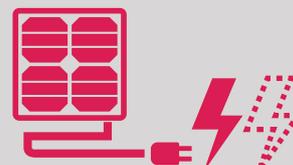
PETITION PAGE: [HTTP://WWW.WWF.HK/FITELECTRICITYE](http://www.wwf.hk/fitelectricitye)

DE-MYSTIFYING MYTHS ABOUT RENEWABLES



⊗ RENEWABLE ENERGY IS TOO EXPENSIVE

Yes, the amount needed to invest in renewable energy equipment is relatively high. But given the low or zero "fuel" price, the total cost of electricity generation may not be higher than that of fossil fuels. Investment bank Deutsche Bank is predicting that by 2017 – even if electricity prices remain stable – two-thirds of the world will find solar cheaper than their current conventional energy supply.



⊗ SOLAR PANELS ARE UNRELIABLE

This problem can be solved by building a smart grid and ensuring effective grid management to achieve a stable supply of electricity.



⊗ HONG KONG DOES NOT HAVE ENOUGH SPACE FOR SOLAR PANELS

While we do not have enough land to mount a large-scale solar energy project, the many rooftops in our city are severely under-utilized and have a lot of space available for solar photovoltaic systems. The rooftops of many industrial and residential buildings hold great potential for the development of solar energy. For example, the rooftop solar PV installed capacity in Singapore is 15MWp, or five times higher than Hong Kong's figure (about 3MWp in 2013).

BCD Travel

Datum Group

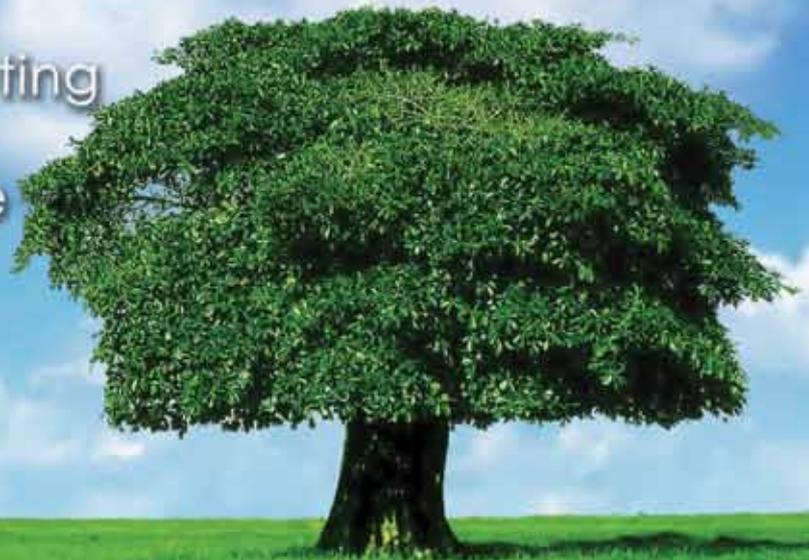
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We engage in a **broad range of business** activities and investments.

We contribute to the sustainability of our **global environment**

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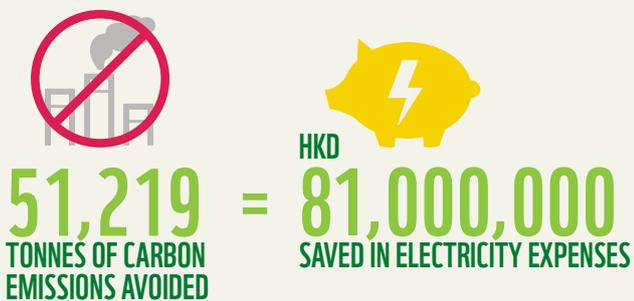
We aim to provide **rewarding work environments** for our staff, and support
peaceful, non-confrontational environmental initiatives around the world.



FIVE YEARS OF LOW CARBON WINS

At the end of 2014, WWF-Hong Kong's pioneering low-carbon business engagement initiatives celebrated five years of success.

Since 2009, the Low-carbon Office Operation Programme (LOOP) and the Low Carbon Manufacturing Programme (LCMP) have helped participating companies collectively avoid 51,219 tonnes of carbon emissions. This equates to a staggering cut in electricity expenses – over HKD 81 million – despite the fact that these businesses grew by 58 per cent during the same period.



With carbon trading schemes up and running in China, Europe, the U.S. and other parts of the world, the idea that “lowering carbon emissions is good for business” is going mainstream, with the global business community becoming increasingly aware of the benefits of market-based emissions reduction schemes.

Here in Hong Kong, companies are becoming increasingly concerned about making their businesses sustainable. In fact, Hong Kong Exchanges and Clearing Ltd. (HKEx) announced plans to raise the obligation level of some items in its Environmental, Social and Governance (ESG) reporting guidelines to “comply or explain” by 2015 – placing the onus on companies to calculate, justify and reduce their carbon emissions. This is the “first wave” of sustainability disclosure in Hong Kong and part of a wider trend of green business practices.

“Businesses need to operate in a sustainable manner and create long-term value for shareholders and other stakeholders by integrating responsible and sustainable practices into their operations. One of the key drivers for adopting ESG practices, disclosure and reporting is part of the growth of responsible investment.”

- Ms Karen Ho, Business Engagement Leader, Climate for WWF-Hong Kong

Companies participating in the LOOP and the LCMP are at the cutting edge of these practices. Let's look at two cases:



© Dah Chong Hong Holdings Limited

DAH CHONG HONG (DCH)

is a Hong Kong-based group focused on motor, food and consumer products and has been a LOOP member since 2011. In addition to the many active carbon reduction measures they have taken in their offices, the company goes above and beyond by creating real and lasting employee engagement. The company formed a “green committee”, comprised of staff members from different departments. This committee organizes eco-tours and environmental campaign to teach staff more about low-carbon living. They have also developed a clear “1/2/3” emissions reduction target, committing to reduce company carbon emissions by at least one per cent annually.

SUPER PERFORMANCE TEXTILE (SHENZHEN) CO., LTD.

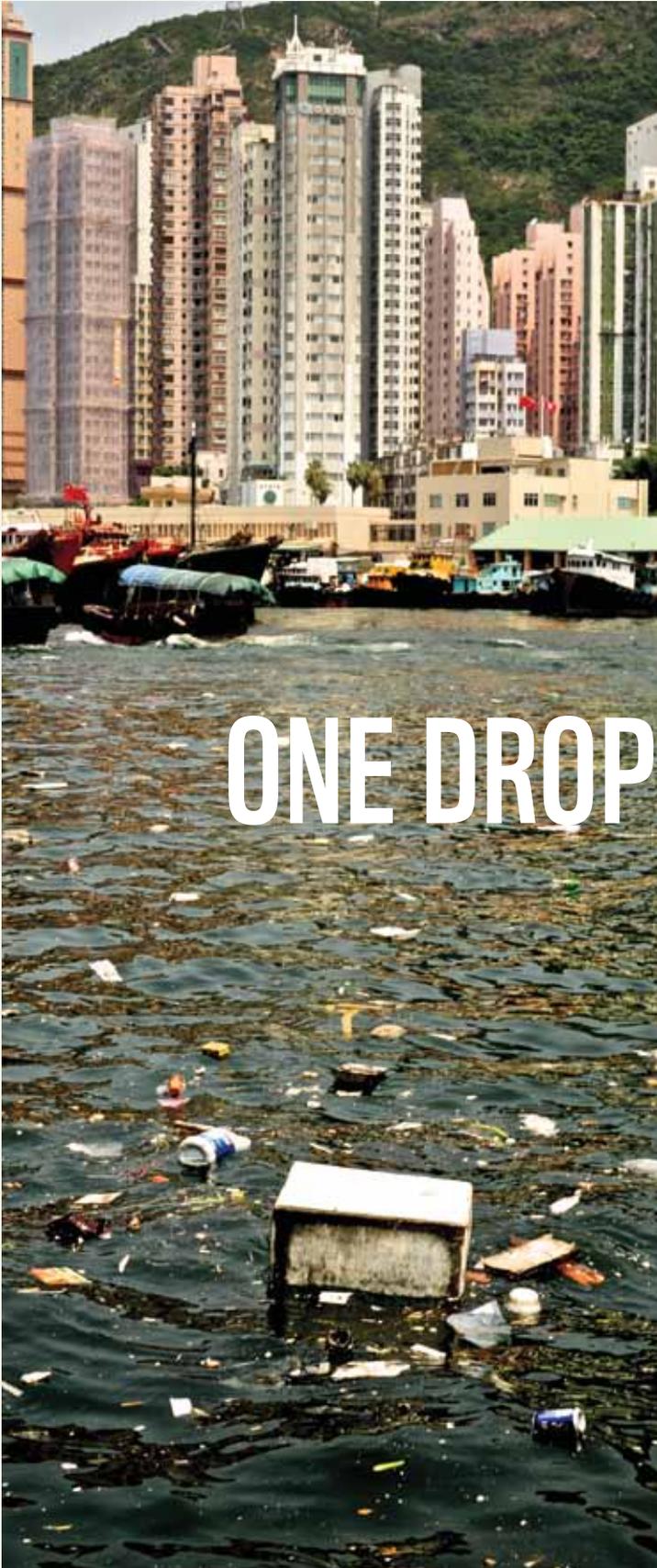
specializes in the manufacture of sweaters. Its factory joined the LCMP in 2010, working progressively to improve its environmental performance. Beginning in 2011, Super Performance invested over USD 45 million on new weaving and knitting machines. These machines have increased production capacity by over 30 per cent, reduced the demand for air conditioning and cut electricity consumption by 40 per cent. Other active carbon reduction measures include replacing their natural gas/electric water heater with a solar energy hot water system; replacing their natural gas combustion chamber with an air-to-water heat pump which absorbs heat energy from the air; and adopting mirror reflectors in their production lines to better reflect light sources – using reflectors, a single fluorescent light tube can become as bright as two normal tubes.

Super Performance is also breaking new ground and paving the way for other like-minded companies in Shenzhen by taking part in the city's pilot carbon trading scheme. Covering 635 companies responsible for 38 per cent of the city's total emissions, the scheme aims to reduce carbon emissions by offering companies financial incentives to reduce emissions, allowing these companies and other investors to purchase and trade carbon credits over the course of the two-year scheme. Annual emissions quotas are given to each company which are reviewed every year, with a total quota of 100 million tonnes of carbon available to all firms.

As Mr Milton Ho, Assistant General Manager for Super Performance says, “Carbon has a price. By controlling the company's carbon emissions, we are at the same time gaining more customers and improving employee satisfaction.”

Schemes like this will become increasingly important in the future. Companies with strong ESG profiles that practice full disclosure will fare particularly well in the new environment.

Ms Karen Ho, Business Engagement Leader, Climate for WWF-Hong Kong says, “Businesses need to operate in a sustainable manner and create long-term value for shareholders and other stakeholders by integrating responsible and sustainable practices into their operations. One of the key drivers for adopting ESG practices, disclosure and reporting is part of the growth of responsible investment.” ■



© Coastal Watch Project

ONE DROP IMPROVING HONG KONG'S MARINE ECOLOGY - AT A TIME

The pioneering Coastal Watch project has been running for almost a year now. Organized by WWF-Hong Kong and partnering with other local green groups, Coastal Watch is first and foremost a scientific research project in which citizen scientists tackle our marine litter problem. The project's aim is to raise public awareness by engaging people in data collection through surveys of different coastal habitats, and by organizing education activities.

The 2012 plastic pellet spill incident raised public concern about the impacts of marine pollution, bringing people together in a mass collaborative effort to remove the spilled pellets from our shorelines. Even now, over two years later, the pellets are still being found on Hong Kong's beaches. This is the physical manifestation of an ugly truth – since plastic takes hundreds of years to decompose and is hard to remove, whenever it enters the sea it poses a persistent, long-lasting threat to the environment.



Marine litter is generated by many human activities.



Team Scientist training workshop



Volunteers performing a marine litter survey (above) and a coastal ecological survey (below).

Photos: © Coastal Watch Project

According to a recent study – *Plastic Pollution in the World's Oceans* – a minimum of 5.25 trillion plastic particles weighing 268,940 tonnes are now adrift in the sea. The scale is almost unimaginable – weight-wise this is equivalent to 36,000 elephants, 33,750,000 bowling balls or 1,125 freight trains. It gets worse: analysis of 2013 International Coastal Cleanup data reveals that an average of 5.9 tonnes of litter was collected per kilometer along Hong Kong's coastlines, making us third among the participating countries.

This severe level of pollution is seriously impacting Hong Kong's marine wildlife. Globally, scientists report that 663 species of marine animals are affected by marine litter. All sea turtle species, half of all marine mammals and one-fifth of seabird species suffer from entanglement or ingestion of marine debris. In Hong Kong, although no systematic study is available, evidence of terns, dolphins, corals, fish and turtles ingesting or becoming entangled in different forms of marine debris is everywhere.

Coastal Watch aims to trace the origin of marine litter across Hong Kong, seeking to tackle it at source. While the perception is that marine litter is only generated by marine-related activities, it actually has many sources: cutlery, toys, bottles, diapers, televisions, bicycles...anything you can think of can be found in the ocean, entering through rivers, drainage systems, coastal activities or during typhoons and heavy rainstorms. Indeed, even if you've never been to the coast in your life, you could still be contributing to the problem.

Though we are taught to put litter in the right place as children, not everyone does. To address the root of this problem, we first need to ensure everyone responsibly disposes of their garbage. Reducing our use of plastic by switching to alternative materials and avoiding single-use items is the next step. You can also contribute further by reporting marine litter black spots and spontaneously organizing cleanup activities. Let's all work together to save the ocean! ■



We go
beyond
building



KERRY PROPERTIES

Aspiring to Excellence



EARTH HOUR - LIGHTS OUT AND BEYOND

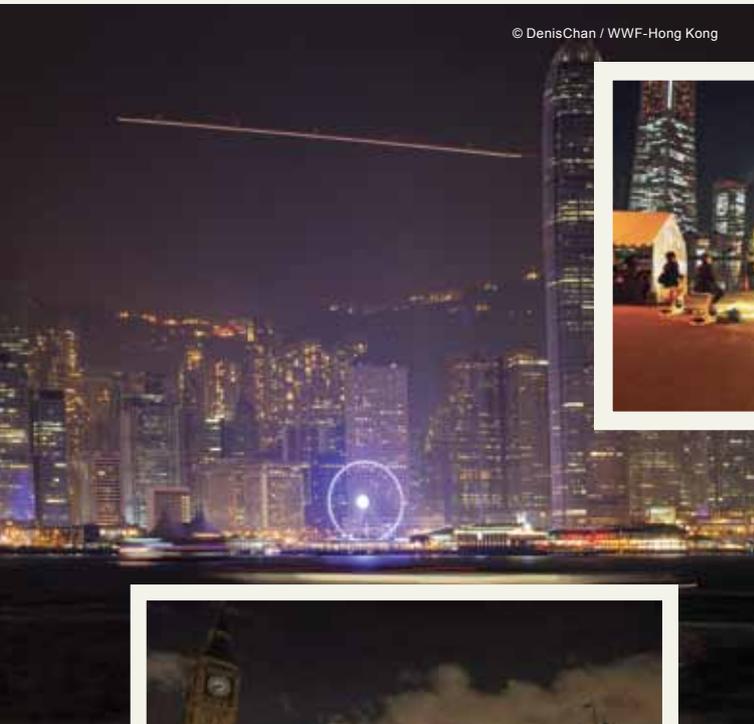
The spirit of Earth Hour is about much more than turning off the lights. At its heart, the message of the event is that we, as human beings, need to make meaningful changes to our lifestyles to sustain our planet.

Earth Hour is the largest global environmental event in history. The premise is simple: everyone turns off all non-essential lights for one hour at the appointed time to show their commitment to the sustainable future of our planet. Earth Hour 2015 saw record participation, with individuals, businesses, governments, city skylines and landmarks in 172 countries and territories switching off their lights, all around the world.

This year marked the seventh time Earth Hour has been held in Hong Kong. Since its inception in 2009, the Hong Kong event has been an ever-growing success, with millions of people taking part every year. Turning off our lights during Earth Hour not only raises awareness about the importance of energy saving and carbon reduction,

it directly and dramatically yields real results. This year, during the “lights-out” hour from 8:30 to 9:30pm on 28 March, Hong Kong saw a drop in electricity usage of more than four per cent – resulting in 137.8 tonnes of carbon emissions being avoided, which would have taken 5,991 trees a full year to absorb. This fact demonstrates how small, personal actions can actually create huge impacts on our world.

The latest research by WWF and Global Footprint Network shows that if everyone on Earth lived the lifestyle we lead in Hong Kong, we would need 3.1 Earths to fulfill our needs. The natural resources used by Hong Kong people exceed the resources available in the territory by an astounding 540 times. But – obviously – we only have one planet. To lift ourselves out of “ecological overshoot”, we need to start consuming less and consuming wisely. To address this issue and extend the spirit of Earth Hour, in 2015 WWF-Hong Kong re-



© DenisChan / WWF-Hong Kong



© Earth Hour



© WWF / Nina Mun



© Earth Hour

ran our “One Earth Mission” – a series of post-Earth Hour activities designed to enhance awareness of sustainable living and the low-carbon lifestyle.

Partnering with four non-profit organizations in Hong Kong – Redress, Food Angel, Chu Kong Plan and the Hong Kong Girl Guides Association – we asked people in Hong Kong to examine their lifestyles in four categories: clothing, food, living and transportation, over a period of four weeks. At the end of each week, people were invited to join activities and volunteer services jointly presented by WWF and each organization and put what they had learned into practice. By recycling their own clothes into a new tote bag, making meal boxes with food that would otherwise have been wasted, visiting a recycling centre and enjoying camping in the wild, participants made great strides towards developing a sustainable lifestyle. ■

ONE EARTH MISSIONS



WEEK 1: CLOTHING

Instead of constantly buying new clothes, let’s use our creativity and transform the clothes we already have into something unique and trendy!



WEEK 2: FOOD

It’s time to change our eating habits and learn to appreciate food more. Reduce food waste by ordering the appropriate amount of food when dining and transform any leftovers into something useful!



WEEK 3: LIVING

Let’s reduce the amount of waste we produce by restoring and reusing old pieces of furniture – many of which are still usable.



WEEK 4: TRANSPORTATION

Instead of spending your time shopping or travelling abroad, why not explore Hong Kong’s beautiful and spectacular natural environment with your family and friends?



FISHING FOR GREATER UNDERSTANDING

Hong Kong's extensive and world-famous country park network covers around 40 per cent of the territory's land area. However, the protection of our sea area lags far behind – less than 0.5 per cent of the SAR's marine environment is properly protected by no-take zones. This lack of protection combined with decades of ineffective fisheries management, marine pollution and on-going reclamation, is not making things easy for marine life in Hong Kong.

Despite the odds being stacked against them, a large number of species can still be found in Hong Kong waters. Well over 320 fish species live among our coral communities and rocky reefs, and fish diversity is generally higher in protected areas than areas that are heavily fished.

WWF-Hong Kong recently conducted a series of surveys to investigate reef fish species in Hoi Ha Wan Marine

Park, aiming to further increase knowledge of marine life amongst WWF staff and establish a database of reef fish at Hoi Ha – both of which will be highly valuable for education and conservation purposes.

Last summer, 10 members of our Education and Conservation teams joined forces to conduct four underwater surveys at several spots within Hoi Ha Wan Marine Park. Each surveyor needed to keep an eye out for fish species, while simultaneously taking photos and video – all within a one-hour time span! After surfacing, the surveyors then verified the fish they had identified and compiled all their data.

The four surveys recorded 64 reef fish species – over half of the 120-plus species reported by the Agriculture, Fisheries and Conservation Department as living in the area.



© Allen To

Cryptocentrus polyopthalmus



© Allen To

Hippocampus kuda

The ocean in Hong Kong is still rich in marine life, an improved management and awareness towards more sustainable use of our marine resources would allow our next generation to be able to enjoy our beautiful underwater world.

FISH SURVEY SHARING SESSION

This survey was a unique and wonderful opportunity for our team members to gain an in-depth understanding of Hoi Ha Wan Marine Park. Before we started the survey, we had to do some warm-up exercises. Four air tanks and few diving weights (totaling about 70kg) needed to be taken from Hoi Ha village to our Centre on each trip. Walking for 15 minutes with these heavy things was no easy task, but we were still pleased to do it.

After the warm up, we needed to study our fish identification charts to refresh our memories about the fish species we might encounter. When everything was prepared, we geared up and got ready to explore the beautiful marine world beneath Hoi Ha Wan.

Most people focus on the coral communities at Hoi Ha Wan, which is understandable. However, there are still lots of other marine creatures living here, and there is always a chance for an unexpected encounter! Two of the most exciting finds were a spotted seahorse called *Hippocampus kuda* hiding inside some withered leaves, and an unidentified black puffer fish hiding near a sea cucumber.

These types of experiences are hugely valuable – they build up the capacity of our staff and create a closer relationship between ourselves and nature.

The survey allowed us to collect baseline ecological data at Hoi Ha Wan Marine Park, which will help us set up a fish database in the future. We also hope this experience will allow our staff to better understand this marine park and thus deliver a more holistic conservation message to students and visitors alike. ■



© Ellen Shek



© Ellen Shek



© Ellen Shek

FROM TERRESTRIAL TO MARINE

Patrick Yeung is WWF-Hong Kong's Coastal Watch Project Manager. As the team leader, he helps his team use scientifically sound methodologies to study, protect and provide year-round monitoring for Hong Kong's ecologically-valuable coastal habitats.



"This task is very challenging yet very meaningful. Conducting surveys for hours on the beach sounds exhausting, but it also gives us great satisfaction."

What made you devote yourself to marine conservation?

It sounds unbelievable since I'm a marine researcher, but I didn't even know how to swim before my final year at university! I was always a "terrestrial animal" before that.

Like most Hong Kong people, I never knew that Hong Kong had such a high diversity of corals, fish and invertebrates. Luckily, there was a marine science laboratory at my university where researchers who were investigating coral communities. As a "stranger" to the underwater world, I became amazed by the fascinating marine creatures beneath the surface. I decided to leave my comfort zone, learned to dive and began my life as a marine ecology researcher.

I now understand the importance of marine conservation. As global citizens, we are connected to the ocean and responsible for the associated pollution, habitat destruction and resource over-exploitation. For instance, after over-exploiting our own fish stocks in Hong Kong, we now import seafood – in other words, we exploit the resources of the other countries, contributing to the vicious cycle of further habitat destruction. After realizing how consumption in Hong Kong indirectly impacts beautiful reefs overseas, I decided to devote myself to marine conservation work.

What does conservation mean to you?

To me, conservation means regulating the harmful behaviours of human beings. Only if we re-connect with nature and lead low-footprint lifestyles can we save the planet, and every of us can play a key role!

WWF's mission – to build a future in which humans live in harmony with nature – reflects what I believe our relationship with the environment should be. We don't really understand this in Hong Kong, as for us, "living" and "nature" seem to be two completely separate concepts.

In the past, I participated in several conservation projects in Southeast Asia. Staying with local fishing communities, I realized how simple their lives are and how much they treasure nature. Actually, their original lifestyles were totally in harmony with nature, and they created few environmental impacts; it's modernization and globalization which have driven them to pollute the sea and harvest seafood unsustainably. It's hilarious that we then go back to these people to teach them how they ought to live; while we so-called "modern" people continue with our unsustainable lifestyles.



Photos: © Coastal Watch Project

1. Hong Kong has a wide range of wonderful marine biodiversity
2. "I believe humans should live in harmony with the natural environment."
- 3&4. "Whenever I see that a volunteer understands the root of problem, I know that our efforts are worth it and that there is hope for a clean marine environment and healthy ecosystem."

What do you do for the Coastal Watch Project?

We all know that marine litter is generated by our daily disposal of synthetic materials, yet most people refuse to take responsibility for this. The Coastal Watch project engages people to assist in recording coastal biodiversity and tracing marine litter sources in Hong Kong, and gives them first-hand experience of how we pollute our environment. I give people real evidence, help them make changes in their daily lives and teach them to spread the marine conservation message to their communities.

Do you think Hong Kong is facing a serious marine litter problem?

Most Hong Kong people do not encounter marine litter. They don't see the problem, since popular beaches are frequently cleaned by government contractors. I have seen many remote, un-cleaned shorelines in Hong Kong with tonnes of litter. I've also observed many bite marks on this litter, indicating that marine and bird species are consuming this litter. Think about it – are we actually eating fish with plastic in it? What is all that plastic doing to our ecosystems? Seeing is believing. Go to some out-of-the-way beaches, make your own observations and evaluate what you should do next. ■



香港觀鳥大賽 BIG BIRD RACE 2015

2015 Big Bird Race theme bird - Collared Crow

Due to the overuse of pesticides and rodenticides, Collared Crow's population has been continually dropping in mainland China and Southeast Asia. In fact, it was listed as "near threatened" on the IUCN Red List in 2008. However, regular monitoring at Mai Po has indicated a gradual increase in Collared Crow numbers over the past 10 years, and the Mai Po population now boasts one of the highest counts anywhere in the world for this species in recent times. This underlines the importance of the wetland conservation work performed at Mai Po over the past 31 years.



Scan the QR code and donate to the Big Bird Race! All raised funds will fully support Mai Po's upcoming conservation programmes.



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Thanks to tremendous support from our sponsors, donors, supporting organizations, participants and volunteers, Big Bird Race 2015 was a huge success. All the funds raised will go towards supporting Mai Po Nature Reserve's conservation programmes, which will help us build a future in which humans live in harmony with nature.



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SAVING THE GREAT BARRIER REEF

Sprawling off the northeast coast of Australia is one of the world's greatest and oldest natural wonders: the Great Barrier Reef. Its extensive network of interlinked reefs and islands – at 348,000 sq. km, it covers an area as big as Japan or Malaysia – is home to 1,500 species of fish, 400 species of coral and 4,000 species of mollusc, and are frequently visited by whales, dolphins, porpoises and 215 shorebird and seabird species. The Reef provides feeding grounds for the endangered dugong and nesting grounds for endangered green and loggerhead sea turtles.

The Reef is also extremely valuable in human terms, injecting US\$5.8 billion into the Australian economy every year and providing over 68,000 jobs. Eco-tourism, fishing and other sustainable industries depend on a healthy and undamaged reef.

Unfortunately today, 25 per cent of coral reefs worldwide have been damaged beyond repair by human activity, with a further 66 per cent experiencing serious threats. The Great Barrier Reef is no exception – its size offers no protection from the cumulative impacts of these threats. UNESCO, the agency responsible for World Heritage sites, is now considering listing the Reef as “world heritage under threat”.

Why is the reef in such danger? A host of reasons. The greatest threat to the Great Barrier Reef is climate change. If the water temperature is too high, corals simply cannot survive. Global warming has already begun to increase

coral bleaching events, which will increase in frequency and severity in the future.

Destructive fishing practices like cyanide or dynamite fishing and bottom trawling wreak havoc on the Reef's coral structures and fish populations, while overfishing throws the ecological balance of its many communities off kilter, affecting the food chain and every species in the area.

Careless boaters, divers and snorkelers are also responsible for damage, with tourists touching reefs, collecting coral and dropping anchors onto coral structures. Onshore activities affect the Reef too, with urban and industrial waste, pesticides and agricultural chemicals washing down river systems and poisoning reefs out at sea. Erosion caused by activities like construction, logging and farming increase sediment flow, smothering corals by depriving them of light.

Another kind of sediment has stirred up controversy and attracted the attention of WWF-Australia recently, with the proposed construction of a coal mega-port in Queensland. This would involve billions of tonnes of dredge spoil being dumped in and around the Reef's waters during the creation of a “shipping superhighway” which would ultimately see as many as 7,500 ships pass through the Reef waters each year by 2020.

WWF has mounted a global campaign calling for “a line to be drawn” to stop the industrial destruction of the Great Barrier Reef. The #SOSreef campaign has so far attracted over 350,000 and they aim at getting 500,000 global supporters who are calling for WWF’s list of solutions for the Reef to be implemented, including:



BAN DUMPING AND MINIMIZE DREDGING



STOP FARM POLLUTION FROM HARMING THE REEF



PROTECT PRECIOUS WETLANDS AND PRISTINE AREAS OF THE REEF COAST FOREVER



PROTECT RIVERS, BUSHLAND AND COMMUNITY RIGHTS THROUGH STRONG AND FAIR LAWS



BRING BACK FISH, TURTLES, DUGONG AND PRECIOUS WILDLIFE



“TURN DOWN THE HEAT” ON THE REEF BY MAKING QUEENSLAND A RENEWABLE ENERGY STATE.

PLEDGE ON THE PETITION SITE



Polar bears: Our climate change wake-up call

Between 2001 and 2010 a 40 per cent drop in polar bear populations was recorded in northeast Alaska and Canada’s Northwest Territories.

Population numbers fell *from 1,500 to 900.*

Behind this substantial fall lies a lessening of sea ice cover caused by **climate change**. Polar bears rely on sea ice to rest, breed and hunt seals.

Join us in the fight to save this beautiful and important creature before it is too late.

Donate NOW!

We need your support:



Enquiry: 2526 1011
wwf.org.hk

wwf.org.hk/savepolarbear/en

Renewable Energy

14%

Installing solar panels on all usable rooftops in our city could generate more than 14 per cent of Hong Kong's energy needs (based on energy consumption figures for 2011).

0

Renewable energy electricity generation involves low or zero "fuel" cost.



5

The installed capacity of rooftop solar PV panels in Singapore in 2013 was five times higher than in Hong Kong.

98

At least 98 countries, provinces and states in the world have already implemented the "Feed-in Tariff" scheme.

	<p>Why we are here To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.</p> <p>wwf.org.hk</p>
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