WWF

HONG KONG

ABOUT LIFE SEPTEMBER 2023

OCEANS

BECOME A CORAL PROTECTOR

Restoring our local coral communities is not an impossible mission, but it does require effort and your support.

A Personalized E-Certificate

Receive a Personalized Coral Protector Certificate by email as an acknowledgement to your help in restoring our marine ecosystem. You can frame it or share it on social media.

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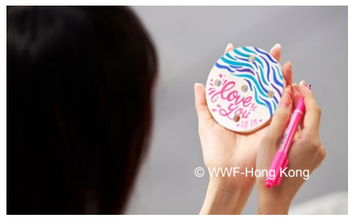
© WWF-Hong Kong

Regular Coral Updates

You will receive news by email about the coral restoration programme, from collecting coral fragments to returning them to their natural habitat, along with updates from the coral experts to learn more about how the programme is doing.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*A Coral Cookie Painting Workshop

Coral cookies are important for nurturing fragile coral fragments by providing substrate for them to grow onto. You will be invited to design your own coral cookie that will later be used for the coral restoration.


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*A Special Glass-Bottomed Boat Trip

You will be invited to take a guided tour on our glass-bottomed boat at the Hoi Ha Marine Life Centre to visit to observe the diversity of corals and fish that can be found in some special spots in Hoi Ha Wan Marine Park.


© WWF-Hong Kong

*An Exclusive Coral Nurturing Tour

As a Coral Protector, you will be invited to join an exclusive tour to follow the journey of coral restoration. You can witness the tangible impact you have brought to our ocean. Finally, the coral fragments will be transplanted to the designated restoration site by the CUHK research team.

Reviving Our Corals

* The coral-inspired activities will be offered once per annum if donors maintain the monthly donation active.

CHAIRMAN & CEO MESSAGE


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Public education and engagement are the keys to effective conservation. For decades, WWF-Hong Kong has cared for the city's natural wonders, sharing our excitement, concern and dedication with the public through our many education and engagement initiatives.

In mid-July, when we heard the news that a visiting Bryde's whale was sighted in Port Shelter, we also felt excitement and concern. The death of the whale saddened everyone and has prompted much soul-searching across Hong Kong. In addition to the government's pledge to review legislation, strengthen public education and create contingency plans for future cetacean arrivals; we all need to consider how we can make Hong Kong safer for biodiversity.

WWF-Hong Kong believes that a healthy marine ecosystem is part of the answer. We are urging the creation of more Marine Protected Areas, which provide greater protections and help establish sustainable fisheries; and asking the government to initiate marine spatial planning, which facilitates the sustainable management of competing marine interests. When implemented alongside responsible public behaviour in terms of wildlife observation and contact, these solutions can ensure that wildlife species thrive in their natural habitats and that Hong Kong has a holistic, sustainable marine ecosystem.

In this issue, we showcase the "Reviving our Corals" initiative, recently launched in collaboration with the Coral Academy of The Chinese University of Hong Kong, which aims to improve the coral coverage and diversity of the Tolo Harbour and Channel. We hope the passion of the project's two young leaders will inspire more people to safeguard our oceans.

We also highlight our long-running Mai Po Infrastructure Upgrade Project which is modernising this incredible education resource. WWF Jockey Club Mai Po Peter Scott Visitor Centre will officially open later this year, delivering enhanced facilities for wetland training and research and empowering everyone to learn about and cherish Mai Po's irreplaceable wetlands.

Enjoy this issue!

Daniel R Bradshaw
Chairman, Executive Council of WWF-Hong Kong

Nicole Wong
Chief Executive Officer, WWF-Hong Kong

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ABOUT LIFE

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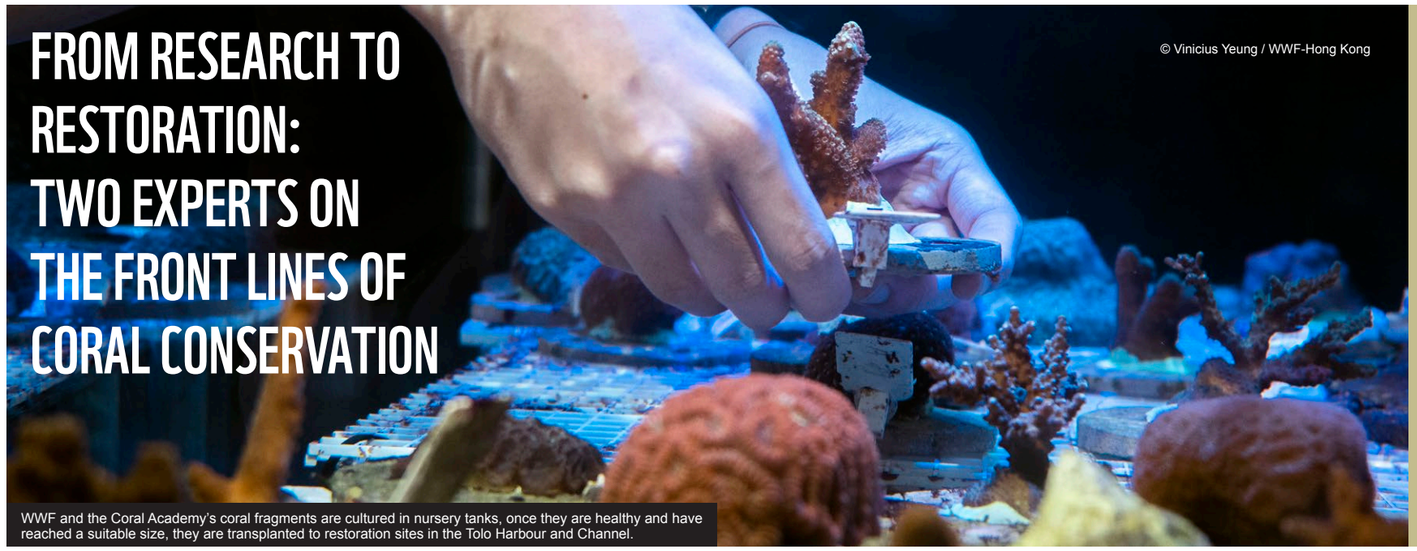
FROM RESEARCH TO RESTORATION: TWO EXPERTS ON THE FRONT LINES OF CORAL CONSERVATION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WWF and the Coral Academy's coral fragments are cultured in nursery tanks, once they are healthy and have reached a suitable size, they are transplanted to restoration sites in the Tolo Harbour and Channel.

This summer, WWF-Hong Kong (WWF) launched an exciting new initiative called "Reviving Our Corals" (RoC) in collaboration with the Coral Academy at the Chinese University of Hong Kong (CUHK). Aligning with WWF's global marine conservation efforts, this four-pronged initiative focuses on coral rescue and restoration, research and development, awareness raising, and policy advocacy. In this interview, we talk to the project's two masterminds – Apple at CUHK and Kelvin at WWF – as they discuss their work to make corals more resilient and their shared drive to create a better marine environment.


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Representatives of WWF and CUHK at the Memorandum of Understanding (MoU) signing ceremony.

Professor Apple Chui
Research Assistant Professor at
The Chinese University of Hong Kong's
School of Life Sciences, and
founder of the Coral Academy

1. Can you tell us about your love of corals – when did it start and why have corals become the focus of your study?

I've loved the ocean since I was a child, but it was only during my post-graduate studies that I developed a passion for corals. Choosing corals as the focus of my research was exciting and challenging, and as I delved deeper into the subject, I became increasingly dedicated to their preservation. I feel a strong responsibility to contribute to saving corals in Hong Kong – when you recognise a need and have the skills to address it, a sense of responsibility takes hold of you and compels you to act. My dedication to coral research has never wavered – I can still vividly recall the breath-taking beauty of Hong Kong's waters I experienced during my first dive. I saw an abundance of fish, fascinating corals and the awe-inspiring sight of corals spawning. These memories are what sustain my devotion to coral research.

2. Why are the Tolo Harbour and Channel the focus for your coral restoration work?

The Tolo Harbour and Channel are an ideal case study for coral conservation. Both areas have a well-documented history of habitat deterioration since the 1980s due to rapid urban development, followed by a gradual recovery. While the government's "Tolo Harbour Action Plan" has significantly improved the water quality, coral recovery is very slow, suggesting that natural recruitment of corals is not sufficient to restore the damaged coral communities. Urgent active coral restoration action is needed to restore these damaged habitats. Our team's coral restoration capabilities, coupled with our geographical proximity (the Simon F.S. Li Marine Science Laboratory (MSL) is next to Tolo Harbour), are facilitating our coral research and restoration efforts.

With funding support from the PEW Fellowship in Marine Conservation, and the Hong Kong government's Agriculture, Fisheries and Conservation Department and Environmental Conservation Fund, our team began pilot research in 2019, utilising multiple active coral restoration approaches in the Tolo Harbour and Channel. These included sexual and asexual coral propagation, an ex situ coral nursery, larval enhancement techniques, and micro-fragmentation and fusion approaches in degraded coral areas designed to mitigate population decline, enhance biodiversity, boost coral growth, and promote reef resilience. In 2022, our laboratory-bred out-planted corals were confirmed to be sexually viable at the restoration sites.

There are two key criteria for coral restoration. First, we need a source of corals. Sexual and asexual propagation methods require coral egg bundles collected during spawning periods and "corals of opportunity", naturally detached coral fragments that have a low chance of survival in the field. Second, the original cause of degradation must be addressed to create a favourable environment in which corals can thrive. It's crucial to remember that coral restoration is never a stand-alone strategy, and should be seen as a last part of a continuum of action. A favourite expression of mine is "there is no need to restore if there is no damage." Long-term monitoring, evaluation, and adaptive management throughout and beyond the project, as well as setting well-defined short-, medium- and long-term objectives and goals will also be vital to the initiative's success.


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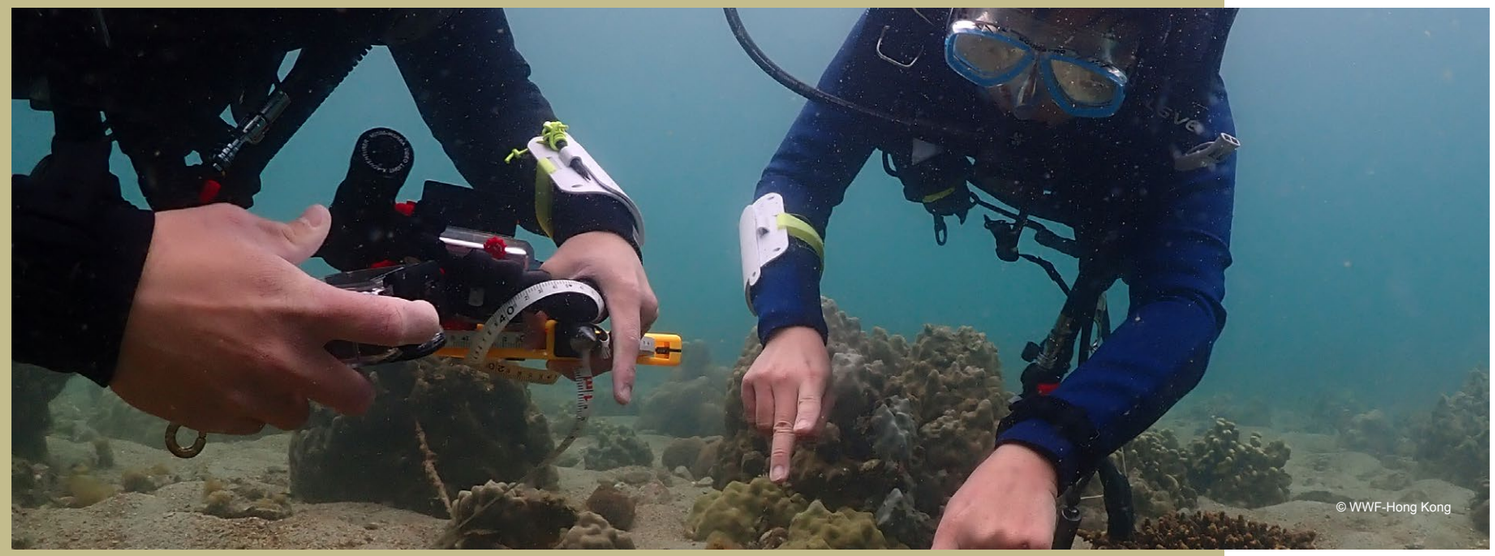
3. Take us behind the scenes of your coral conservation and research work. Which part do you love most?

Coral restoration is a challenging process. It requires that we pay careful attention and avoid mistakes, as these can lead to total failure. Despite the challenges, it's always enjoyable and never tedious for me. Watching the coral babies develop into juveniles after surviving their first few months is incredibly satisfying – they remind me of human babies! Every year, we eagerly anticipate the annual spawning period, but also feel anxious about whether or not it will succeed.

I am incredibly grateful for my passionate and devoted team, they've offered unwavering support throughout our research and restoration efforts. It's heartening to see our work gain support from across society – government, academia, schools, corporations, and the general public. Collaborating with WWF on this initiative has been a tremendous pleasure, as we share the same conservation vision: to raise public awareness about coral restoration and marine conservation. We are thrilled to take our collaboration since the "Coral Rescuer" programme to the next level and upscale the restoration efforts in Tolo Harbour and Channel. We hope this will become a successful model for other sites that have experienced similar degradation. If our efforts work, we will replicate them and restore coral populations elsewhere.

Coral restoration is a long, arduous and continuous process, but if we can gain public support we can drive behavioural changes that will reduce humanity's impact on the environment. By participating in coral education activities and taking small actions such as reducing our carbon footprint, plastic usage and choosing reef-friendly sunscreen, we can each make a significant difference. Saving our corals requires a concerted effort, and we must all do our part!



The Hoi Ha Marine Life Centre (HHMLC) was planned with space for nursery tanks for research and conservation – space now used by the RoC initiative. Seawater is directly extracted from under the Centre and then filtered and put in the tanks.

Kelvin So
Manager, Oceans Conservation at WWF-Hong Kong

1. When did you first join WWF and why? Tell us more about your WWF career path.

I joined WWF in August 2018. Up until then, my career had always been connected to ocean conservation. It's interesting to look back on how my path and connections led me to WWF – it had always been my dream to work there, so this is like a dream come true!

During my undergraduate days, I learned to dive and joined Dr. Cheang Chi Chiu's scuba diving team to conduct coral and seaweed surveys. That was when I fell in love with the marine world. After graduation, I worked as a research assistant under Professor Ang Put Jr.'s laboratory while pursuing a part-time master's degree in environmental management.

In my second year, I noticed a WWF job posting for a project officer role in conserving the sandflat in Shui Hau, Lantau. The role aligned exactly with my expertise and interests. I felt that this was perfect timing, so I applied and got the job. During my time working on the project, I became interested in one particular issue – the knowledge gap that was leading to environmentally detrimental clam-digging activities in the area. Therefore, I decided to select this as the focus of my thesis. The clam gauge we designed for the Shui Hau project actually used data from my thesis. I was really excited to start contributing to WWF's ocean conservation work!

2. Can you take us behind the scenes of the Reviving our Corals initiative?

2021's "Coral Rescuer Programme", jointly run by WWF-Hong Kong and the Coral Academy, laid the foundation for this new collaboration. Apple's vision for more public engagement in coral restoration aligned well with WWF's mission of coral conservation, making it a good starting point for the partnership. After assessing the feasibility of continuing our collaboration, a three-year MoU is signed to upscale the restoration efforts.

The infrastructure at the Marine Life Centre, built in the early 2000s after much advocacy work by the late Professor Brian Morton, was thoughtfully planned, with space for nursery tanks for future research and conservation initiatives. "Reviving Our Corals" maximises these advantages – earlier in the year, we set up nursery tanks to enable the project's launch, with the support from the Swire Group Charitable Trust.

WWF's culture of innovations and empowerment has been a constant blessing, as it helps us achieve the best conservation results. We formed a taskforce with subject experts from different teams and covered all aspects of the project – their dedication and support have been crucial to the project's success, and I'm grateful for their efforts. I'm also thankful to WWF's senior management team for their trust and encouragement.

I've been very fortunate to have been part of groundbreaking conservation projects like "Sustainable Shui Hau", the "Horseshoe Crab Counts" campaign, the "Mind Your Fins" campaign, and now the Reviving our Corals initiative – all trailblazing, first-of-their-kind initiatives. Being new projects, in each of them we encountered unexpected issues and challenges, meaning we have to take things one step at a time while holding on to our vision. Fortunately, the whole "Reviving Our Corals" team trusts each other, and we are able to openly discuss issues and seek advice to fine-tune and perfect our approach.

3. What do you enjoy most about your career in ocean conservation?

It's a tremendous honour to continue the legacy of legendary conservation pioneers like Professor Morton. His forward-thinking approach, planning two decades ahead for future research and conservation capacity, never ceases to amaze me. It brings me great satisfaction to see his legacy come to life through the positive impacts of my work.

In 2020, after reading an article on the Sustainable Shui Hau project in *About Life*, Professor Morton wrote to our team, telling us about his long-term interest in Shui Hai and requesting some clam samples from the area. We sent the clams and clam gauge to his lab in the United Kingdom, and we corresponded briefly via email. Sadly, before we could talk more, I learned of his passing in March 2021. However, his paper was later published, and my thesis on Shui Hai was cited as a reference. While I am honoured by this recognition, it is more important to me to continue this work through conservation projects like "Reviving our Corals". My greatest wish? To leave a lasting positive impact on marine conservation in Hong Kong.

HONG KONG'S CORAL REEFS: A WINDOW INTO THE PAST

Hong Kong is home to 84 species of hard corals, a higher hard coral diversity than the Caribbean Sea. Hoi Ha Wan Marine Park is Hong Kong's most famous coral location boasting incredible species diversity and richness. But over the years, human activities have led to a drastic reduction in overall coral coverage, especially in places like the Tolo Harbour and Channel. Members of the Tolo Harbour and Hoi Ha Wan communities share stories of these once-vibrant coral ecosystems and how in the past, corals were a source of revenue for various industries.

Q: You have lived near Tolo Harbour for about forty years. Can you tell us what the area was like in the past and what it's like now?

When I was a teenager, I started diving with my family around Tolo Harbour to earn a living. The water quality was great back in the 1980s – you could easily see huge underwater coral communities. Fishing resources were abundant as well and the income we generated from fishing supported our whole family. But in the years since, rapid urban development and reclamation have greatly changed the marine environment, leading to a sharp decrease in fish stocks and a decline in their quality. For instance, the mussels we catch today barely grow in size and often have black meat due to a lack of proper nutrients. As a result, many people in the fishing community have been forced to switch to other jobs, since fishing no longer provides them with a sustainable livelihood.

Tolo Harbour fisherman, Mr To Chun Cheung

Q: Corals were used to produce lime in Hoi Ha in the past, correct?

Back in the day, we got everything we needed to live from nature. Villagers collected seashells and coral bones from the seashore and fired them in lime kilns. The lime we produced was taken to Aberdeen and sold, then exported for construction use. Hoi Ha was once a prosperous place due to its lime production, so you can imagine how rich the Hoi Ha Wan corals must have been. Marine resources were plentiful in the old days, but sadly they have been in decline for a while now. We should all work together to protect the ocean!

Hoi Ha Village Representative, Mr Yung Wong Fat

CORAL TRIVIA

LIME – A TIMELESS, MULTI-USE INGREDIENT

Lime has played a vital role for people throughout history. Originally used as a binder on floors and in plaster used to coat walls, lime has also been utilised in boat repair and to remove impurities and bacteria from drinking water. In agriculture, lime serves as a valuable soil additive that neutralises acidic soils and improves soil quality. By increasing the availability of nutrients, lime can boost plant growth and enhance crop yields.

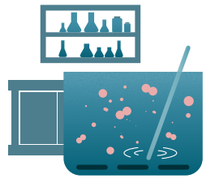
LIME KILNS IN HOI HA

When visiting Hoi Ha Wan Marine Park, many people express their curiosity about these piles of rocks. They are lime kilns – one of Hoi Ha Wan's most famous heritage spots! There are four lime kilns in the area but only two remain relatively intact. They are all located on the eastern shore of the marine park. As one of the first industries in the early days of Hong Kong (1800-1939), these sites reflect the city's once-glorious lime refining industry, and are a monument to the history and the once-great richness of coral communities in Hoi Ha Wan.

CORAL PROPAGATION

Sexual Reproduction

The research team of Coral Academy collects egg bundles from corals during coral spawning.



The egg-sperm bundles are then taken to the Simon F.S. Li Marine Science Laboratory (MSL) at CUHK and allowed to fertilise and develop into larvae.

The research team provides suitable substrates on which the coral larvae can settle and grow.

These "coral babies" are then cultured in nursery tanks at the MSL and the Hoi Ha Marine Life Centre (HHMLC) for at least two or three years.

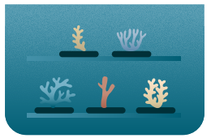
Healthy CoPs are transplanted back into the restoration sites of the Tolo Harbour and Channel.

Asexual Reproduction

Corals of Opportunity (CoPs) refers to detached living coral fragments that have broken off from a larger colony and have a low chance of survival in the wild.

A team made up of divers from the Coral Academy and WWF collect COPs and bring them to the MSL at CUHK and the HHMLC.

The Coral Academy research team carries out a series of processes, including cutting and anchoring the collected COPs onto locally-made, stable substrates.



These coral fragments are then carefully nurtured in the nursery tanks at the MSL and HHMLC.

The research team regularly monitors the health of the transplanted coral juveniles.

THE NORTHERN METROPOLIS: A STAGE TO DEMONSTRATE NATURE-POSITIVE DEVELOPMENT

The Hong Kong government announced the ambitious Northern Metropolis Development Strategy (NM) in 2021, aiming to address Hong Kong's chronic housing shortage while developing a new economic engine in the northern New Territories. This massive development plan will drastically transform 300 square kilometres of land, equivalent to around one-third of Hong Kong's unprotected rural landscape, including the internationally-important Mai Po and Inner Deep Bay wetlands.

To ensure the newly developed areas are climate resilience and the ecological functions of Deep Bay wetlands are preserved, WWF calls for the government to retain the integrity of statutory wetland conservation areas and wetland buffer areas surrounding Mai Po Nature Reserve, and adopt a holistic management plan for the Deep Bay wetlands using the concept of "*Gei Wai* for the South, Fishponds for the North"; brackish fishponds southwest of Mai Po should be restored into functional *gei wais*, while those to the northeast should be retained for commercial fish farming.

The government has pledged to establish a network of wetland conservation parks within the NM, and we recommend the application of cutting-edge technology to effectively manage the expanded wetland protection areas, as the benefits of these modern technology has been demonstrated by WWF's "Smart Wetlands" pilot project being implemented in Mai Po Nature Reserve. The Deep Bay wetlands are also the last stronghold for Hong Kong's endangered Eurasian otter, it is thus essential to maintain ecological connectivity between the wetland areas in land-use planning and infrastructure development in NM.

Eco-recreation/tourism has been highlighted by the planning principles of NM, it is crucial all tourism programmes/ infrastructures are compatible with the ecologically-sensitive habitats and vibes of the rural landscape; the key is to engage ecologists and the local communities throughout the conceptualisation, planning and implementation phases of such projects.

WWF urge the government to adopt nature-based solutions as far as possible in urban development, integrating the preservation and restoration of (peri-)urban wetlands with green infrastructures, and strive to make NM a Ramsar-accredited "Wetland City" for the benefit of the Greater Bay Area.

Read Our Recommendations on San Tin Technopole here

Excerpted and condensed from our article in Hong Kong Institute of Architects' publication, "25.50 Hong Kong's Urban Development: Review and Way Forward"

ENRICH PEOPLE'S LIVES ENRICH YOUR LIVES

At Jebsen Group, we build and invest in premium brands that bring new products, services and experiences to the changing consumer in Greater China. A family-owned private company with over 125 years of continuous presence in the region, Jebsen is committed to supporting our partners' needs in building market demand, generating sales, and connecting local customers. As a strategic co-pilot, Jebsen elevates the value of partnering brands and helps them achieve success.

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We integrate people, innovation, social, environmental, and corporate governance considerations into every aspect of our strategic and operational decisions. Our main goals are to distribute quality products and services to customers, sustain business growth, and improve the environment and well-being of the local communities.

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#NATURE

SEA CHANGE:
THE NEED FOR MARINE PROTECTED AREAS

The ocean is a defining feature of Hong Kong – for many of us, it is essential to our lives and livelihoods. But its continued health and vibrancy is not guaranteed: WWF believes that to keep ourselves, our ocean and all its ecosystems healthy and thriving, it is vital to balance development with marine conservation. This is why, for years, we have advocated robust, forward-looking, ecosystem-based coastal and marine spatial planning that integrates development with conservation and includes the establishment of effective marine protected areas (MPAs).

A new global mission to protect 30% of land, freshwater and ocean environments globally by 2030, to which 196 parties agreed at COP15 last December. While Hong Kong as a part of China and a world city, we should contribute to the achievement of global targets and national obligations. This means taking proactive measures to conserve and manage our marine areas, today. Our longstanding call for at least 30% of Hong Kong waters to be made into MPAs is resonating with the COP15 agreement.

Let's define MPAs: they are zones designated and managed to protect marine habitats and species for the good of the ocean, societies, economies, and cultures. Within MPAs, human activities such as fishing, vessel traffic and tourism are managed or regulated to ensure that ecologically sensitive species and habitats are protected. MPAs come in different forms: fully-protected marine reserves, moderately-protected marine parks and no-take zones, among others. The IUCN says that MPAs "offer nature-based solutions to support global efforts towards climate change adaptation and mitigation", emphasising them as a win-win solution for nature and people.

Hong Kong currently has seven marine parks and one marine reserve, but these only cover 3.7% of our waters, while fishing and vessels are banned from less that 0.1% of that area. This level of protection falls short of what is needed to protect Hong Kong's marine resources, especially after decades of intense coastal development. WWF believes this figure should be at least 30%, and we have identified seven priority areas that require immediate protection and the establishment of sustainable fisheries. We are also advocating that the government take a proactive, precautionary approach and develop a specific, time-bound roadmap to ensure that targets are met on time.

SNAPSHOTS

"Where's Otter?"- Our World Otter Day Celebration

Riding on the great success from WWF's first Otter Festival held in May last year at the Island House Conservation Studies Centre. We re-ran the exhibition on 26-28th May this year to celebrate World Otter Day. Showcasing the exhibition panels, interactive game and otter sculptures designed by our Otter Education Design Team from the Wetland Incubator project. The team put together evidence of the presence of otters, including spraint (otter faeces), footprints and camera-trap photos, and turned this information into an interactive display which helped visitors "discover" the rarely seen Eurasian otter with their own eyes and immerse themselves in the beauty of the Deep Bay wetlands.

Hosted at Central Market, we wanted to raise broader public awareness about wetland conservation and realise that Deep Bay is home to the mysterious and near-threatened Eurasian otter. A total of around 6,100 visitors enjoyed the three days "Where's Otter? – Come Join World Otter Day!" exhibition learning about Eurasian otter through the different activities interpreted by our staffs and volunteers, as well as attending a meet-and-greet with our special ambassador, Lutra.

Flag Day 2023

WWF's annual Flag Day 2023 was held on 24 June. This year's event was dedicated to Hong Kong's precious corals, calling for public support to save our corals and protect our marine ecosystems.

The day's weather was cloudy with sudden rainstorms, but this had little impact on the event and our spirits were not dampened. Our 1,500 passionate volunteers were joined by their friends and family members who actively raised funds on every corner of Hong Kong Island, happily engaging people from all walks of life. WWF is grateful for their enthusiasm and support. All proceeds raised from Flag Day 2023 will go towards our coral conservation work – thank you everyone!

Hoi Ha Wan Snorkelling and Fish ID Course

WWF's Hoi Ha Marine Life Centre organised a new activity this summer – a snorkelling and fish identification course. The first class was held on 8 July. To start, they learned how to identify commonly-seen marine animals and coral fish in a tutorial run by our eco-guides. After that, they took a ride on our glass-bottomed boat to practice their fish identification skills and witness the vibrant biodiversity below the ocean's surface. Then came the highlight of the course: the snorkelling section, during which our participants snorkelled in clear blue waters and appreciated the beauty of Hoi Ha Wan's incredible marine life up close.

FINANCING GREEN: SCALING UP A BAMBOO MANUFACTURING BUSINESS

Bamboo is a wonder crop that sustains its surrounding environment. When it rains, bamboo can retain huge amounts of water which it then releases during dry periods, nurturing the ground around it and promoting crop growth for sustainable income. Grown on the hillside, the bamboo plantations provide protection against landslides, while also creating a sustainable business for local farmers. Bamboo is also an extremely useful raw material that can be manufactured into a wide variety of products, from structural materials to a myriad of household items. This creates social and economic benefits to communities, something in which WWF-Hong Kong sees great potential. The PT Indobamboo Lestari (PT Indobamboo) project, one of several supported by the Dutch Fund for Climate and Development (DFCD) and led by WWF-Hong Kong, showcases how to make sustainable bamboo bankable. The DFCD is a consortium of four partners – WWF, SNV, FMO and Climate Fund Managers – enabling private sector investment in climate adaptation and mitigation projects in developing countries. The role of WWF-Hong Kong is to source, incubate and make projects business-ready.

PT Indobamboo is an Indonesian firm established in 2012 that sources bamboo from smallholders spread across 10,000 hectares of sustainably-managed plantations on the island of Flores. Their bamboo is high-quality and high-yield, making it increasingly attractive to the global market. They currently produce sturdy bamboo building materials and dunnage – a product used by the shipping industry to fix heavy cargo in place while in transit.

In 2021, the DFCD gave a €350,000 development grant to PT Indobamboo, allowing the company to expand their bamboo manufacturing operations and making them more attractive to investors. The support includes the acquisition of licenses and permits, and preliminary environmental and social impact assessments. Growing investor interest will bolster PT Indobamboo's sustainable agroforestry practices, and improve the lives and livelihoods of local farmers and workers.

The next step will see the WWF team and PT Indobamboo scale up operations and prepare agreements, a finance model and a business plan for approval. When the company successfully meets certain impact and financial deliverables, they will complete the development phase, unlocking debt financing from FMO.

IDEAS TO IMPACTS: UPDATES FROM THE WETLAND INCUBATOR PROJECT

Launched in July 2021, WWF's Wetland Incubator project is developing conservation solutions for the future thriving flyways and environments. Thanks to a generous donation from The Hongkong Bank Foundation, Wetland Incubator brings together stakeholders to nurture future-focused solutions that can be implemented at Mai Po and potentially replicated across the East Asian-Australasian Flyway (EAAF) wetlands. The project's multi-pronged approach aims to secure the future of wetlands and the iconic species they support. With the full support from The Hongkong Bank Foundation, we have launched an array of programmes and actions which engage teams of passionate individuals to contribute creative ideas on wetland conservation in the past two years. As we enter our third year, let's take a look at some of the project's exciting updates!

1. Migratory Birds

Wetland Incubator is focused on protecting precious migratory birds, creating suitable habitats and raising awareness on securing wintering and stop-over sites. On top of the project's shorebird satellite tracking work discussed previously, there are other actions:

- The Migratory Bird Education Team has been divided into three groups that are devising migratory bird action plans. Group 1 has prototyped an online Hong Kong Shorebirds Leg Flag Reporting Scheme to report migratory bird sightings. Groups 2 and 3 focused on the significance of wetlands and migratory birds by engaging young audiences through social media and interactive stories and games.
- Started from September 2022, the Water Caltrops Fostering Programme and seedling planting have engaged HSBC volunteers and students from three secondary schools to participate in an experimental research to restore suitable habitat for Pheasant-tailed jacana. The programme has helped in increasing our understanding on growing water caltrops in Hong Kong. The successful reproduction of water caltrops seeds in our nursery has provided the feasibility and sustainability of planting water caltrops within the rain-fed pond in Mai Po Nature Reserve and other Hong Kong wetlands.

Students transferring growing plants to Mai Po Nature Reserve

Students with their otter spraint floating platform in Mai Po

The finalists and judges at the Walk and Pitch final pitch event

2. Mammals

Rampant human development and activities in wetlands are threatening the lives and habitats of Eurasian otters that inhabit the Deep Bay areas, but very few research or awareness raising activities have been done. Therefore, our teams are addressing this through conducting research, enhancing research methods, and educating the public on this near-threatened species.

- The joint study on Hong Kong otter ecology in collaboration with Kadoorie Farm and Botanic Garden is currently in full swing. Through long-term monitoring and research, the latest discovery reveals the presence of otter pups in Mai Po, indicating the successful reproduction of the local population.
- The third phase of the Otter Citizen Scientists Programme is underway. Several previous participants have been promoted to group leaders, transferring knowledge and experience to new joiners. Camera traps set up by the team have captured rare and precious footage, which is especially important to on-going studies of mammal distribution in Mai Po.
- After successfully holding the "Little Otter Painters Colouring Competition 2022" and the "Oh My Otter" Festival at Island House Conservation Studies Centre last year. The educational materials produced by the team are reused this year at the Central Market, which educated over 6,000 guests about the local otter species.
- The Otter Spraint Floating Platform programme has engaged students from Lok Sin Tong Wong Chung Ming Secondary School in designing and building platforms to enhance our otter systematic sign survey. Additionally, camera traps have been set up to record otter behaviour. Field tests are in progress to ascertain their effectiveness – we can't wait for the results!

3. Future-Proofing Wetland Stewardship

Hong Kong's local fishponds serve as an important habitat for migratory birds and buffer area for climate mitigation. By utilising design thinking and social innovation skills, Wetland Incubator action teams are working to save traditional fishponds or aquaculture ponds by turning their operations into promising, profitable sustainable businesses.

As an extension to our Year 1 Youth Innovator Programme in Wetland Incubator, the "Walk and Pitch" Competition encouraged participants from diverse backgrounds and expertise to incubate solutions to sustain fishponds or aquaculture pond operations into a promising and profitable sustainable business. The winning proposal by Team Edge Effect, a team of landscape architects, suggested reprofiling semi-abandoned fishpond edges to create space for educational and community engagement activities and ecological corridors. They also proposed a self-sustaining economic system for fishpond operators. The team was awarded HK$50,000 to implement their plan.

4. Climate Change Mitigation and Adaptation

Climate change has led to an increase in sudden heavy rainstorms and floods, which affected the survival and breeding rate of Black-winged stilts and their nests within Mai Po Nature Reserve. A team of students from HKICC Lee Shau Kee School of Creativity has assisted in designing and construction of a floating breeding platform that allows Black-winged stilts to nest in Mai Po without being disturbed by floods or heavy rainstorms. The students worked under the guidance of their teachers from data collection to prototype production. The final product is now deployed and field tests are in progress!

THINK TWICE, SAVE LIVES: CURBING THE EXOTIC PET TRADE

Exotic animals – non-native species that include small mammals like rodents and hedgehogs, reptiles, amphibians, birds, arthropods – are becoming increasing popular in Hong Kong. At the same time, there have been several alarming cases of exotic animal abandonment reported in the media, illustrating a general lack of understanding about exotic species in the local context. A public survey conducted by the ADM Capital Foundation (ADMCF) and WWF- Hong Kong revealed numerous local concerns about the prevalence of threatened species. Based on the results, both organisations are calling on people to think twice before purchasing an exotic pet, and urging the government to take action to enhance trade regulati ons and educate the public.

In the broader context, our Earth is undergoing an unprecedented loss of biodiversity. WWF's latest *Living Planet Report* describes how global wildlife populations have declined by 69% since 1970. One significant contributing driver of these declines is the large-scale extraction of exotic animals from their natural ecosystems to cater to the global pet trade. Figures from the ADMCF show that between 2015 and 2019, Hong Kong imported at least 5.2 millions of exotic animals, with reptiles topping the list. These figures also exclude fish and marine species like seahorses, corals and giant clams. Exacerbating this situation is the fact that the market currently lacks proper regulation and monitoring.

Respondents to the WWF/ADMCF survey, conducted last year, had acute concerns around the impacts of the trade. Over half thought that keeping exotic species as pets has contributed to the risk of extinction in the wild, while only a few felt that keeping threatened species as pets was acceptable. Most respondents expressed support for efforts to develop and standardise information on animal care and welfare and to provide lists of qualified veterinarians and pet shops to be shared with exotic pet owners. Around half considered current regulations to be too lenient and a majority supported tightening pet trade-related regulations. Most respondents also supported restrictions on the trade of certain species of exotic pets, and agreed that documentation demonstrating the legality of owning a threatened species should be required before purchase.

These concerns are well-founded. Currently, a patchwork of at least seven ordinances governs Hong Kong's pet trade. These can be difficult to understand and have several loopholes. In some cases, they provide only minimal protections despite the complex husbandry needs of exotic pets; while government guidance to private exotic pet owners is limited.

There are other dimensions too: many exotic pets, especially birds and some mammals, carry pathogens with the potential for zoonosis. Other species simply should not be kept as pets, like the green iguana and the alligator snapping turtle. Such species should be prohibited from being traded as pets on public health and safety grounds.

WWF-Hong Kong and the ADMCF are urging the government to take action to enhance trade several actions that will help develop a responsible and sustainable trade in exotic animals that protects individual animals and the balance of local ecosystems:

1. Establish a "positive list" of that are permitted to be imported or sold in Hong Kong.
2. Enhance traceability to better understand what is happening to exotic pets imported into Hong Kong.
3. Introduce schemes that positively incentivise the trade to improve practices.

WWF-Hong Kong has also launched several initiatives to increase public awareness about the exotic pet trade, including social media posts and a joint video with the ADMCF focusing on highlighting species of the utmost concern, such as African grey parrot, sugar glider, green iguana, scorpion, and African spurred tortoise. The video sheds light on Hong Kong's role as a trade hub for exotic animals and the impacts of the exotic pet trade on our ecosystems.

View the video here

Green, or common iguanas, are among the largest lizards in the Americas

The endangered African grey parrot is the species facing extinction due to poaching

VISIT OUR CENTRES

Our visitor centres are open with small group activities. We have enhanced our health precautions and adjusted opening hours to welcome your family and friends to Mai Po, Hoi Ha Wan, Island House in Tai Po, and our premise in Central!

Mai Po Nature Reserve

Island House Conservation Studies Centre

Hoi Ha Marine Life Centre

Central Sustainable Living Hub

GET INVOLVED!

WWF hosts an array of activities for you to join.

KEY EVENTS

Check out the upcoming activities at our centres!

Open for Bookings

HOI HA WAN SNORKELLING AND FISH ID COURSE
16 September

CENTRAL SUSTAINABLE LIVING HUB
15 October Sustainable Lifestyle Bagel Workshop

WALK FOR NATURE
2-3 December

ISLAND HOUSE FESTIVAL
16-17 December

BECOME A CORAL PROTECTOR

Reviving Our Corals

Restoring our local coral communities is not an impossible mission, but it does require effort and your support. Join us now to restore corals in Hong Kong by becoming a Coral Protector!

JOIN OUR CORPORATE SUSTAINABILITY PROGRAMME

Book Now

Corporate members can join eco-guided visits and activities at our centres. Contact our team to organize eco-guided activities, shoreline clean-ups and sustainability workshops in a safe, outdoor environment.

WWF

Working to sustain the natural world for people and wildlife
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